Science

5th & 6th Class

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Make an Egg Float in Salt Water

An egg sinks to the bottom if you drop it into a glass of ordinary drinking water but what happens if you add salt? The results are very interesting and can teach you some fun facts about density.

What you'll need:

- One egg
- Water
- Salt
- A tall drinking glass

Instructions:

1. Pour water into the glass until it is about half full.
2. Stir in lots of salt (about 6 tablespoons).
3. Carefully pour in plain water until the glass is nearly full (be careful to not disturb or mix the salty water with the plain water).
4. Gently lower the egg into the water and watch what happens.

What's happening?

Salt water is denser than ordinary tap water, the denser the liquid the easier it is for an object to float in it. When you lower the egg into the liquid it drops through the normal tap water until it reaches the salty water, at this point the water is dense enough for the egg to float. If you were careful when you added the tap water to the salt water, they will not have mixed, enabling the egg to amazingly float in the middle of the glass.

Melting Chocolate

Enjoy this simple melting chocolate experiment for kids. You've no doubt experienced chocolate melting on a hot day, so let's do some experiments to recreate these conditions as well as a few others before comparing results and coming to some conclusions.

At what temperature does chocolate go from a solid to a liquid? Is it different for white and dark chocolate? Give this fun science experiment a try and find out!

What you'll need:

- Small chocolate pieces of the same size (chocolate bar squares or chocolate chips are a good idea)
- Paper plates
- Pen and paper to record your results

Instructions:

1. Put one piece of chocolate on a paper plate and put it outside in the shade.
2. Record how long it took for the chocolate to melt or if it wasn't hot enough to melt then record how soft it was after 10 minutes.
3. Repeat the process with a piece of chocolate on a plate that you put outside in the sun. Record your results in the same way.
4. Find more interesting locations to test how long it takes for the chocolate pieces to melt. You could try your school bag, hot water or even your own mouth.
5. Compare your results, in what conditions did the chocolate melt? You might also like to record the temperatures of the locations you used using a thermometer so you can think about what temperature chocolate melts at.

What's happening?

At a certain temperature your chocolate pieces undergo a physical change, from a solid to a liquid (or somewhere in between). On a hot day, sunlight is usually enough to melt chocolate, something you might have unfortunately already experienced. You can also reverse the process by putting the melted chocolate into a fridge or freezer where it will go from a liquid back to a solid. The chocolate probably melted quite fast if you tried putting a piece in your mouth, what does this tell you about the temperature of your body? For further testing and experiments you could compare white chocolate and dark chocolate, do they melt at the same temperature? How about putting a sheet of aluminium foil between a paper plate and a piece of chocolate in the sun, what happens then?

Mixing Oil and Water

Some things just don't get along well with each other. Take oil and water as an example, you can mix them together and shake as hard as you like but they'll never become friends.....or will they? Take this fun experiment a step further and find out how bringing oil and water together can help you do your dishes.

What you'll need:

- Small soft drink bottle
- Water
- Food colouring
- 2 tablespoons of cooking oil
- Dish washing liquid or detergent

Instructions:

1. Add a few drops of food colouring to the water.
2. Pour about 2 tablespoons of the coloured water along with the 2 tablespoons of cooking oil into the small soft drink bottle.
3. Screw the lid on tight and shake the bottle as hard as you can.
4. Put the bottle back down and have a look, it may have seemed as though the liquids were mixing together but the oil will float back to the top.

What's happening?

While water often mixes with other liquids to form solutions, oil and water does not. Water molecules are strongly attracted to each other, this is the same for oil, because they are more attracted to their own molecules they just don't mix together. They separate and the oil floats above the water because it has a lower density.

If you really think oil and water belong together then try adding some dish washing liquid or detergent. Detergent is attracted to both water and oil helping them all join together and form something called an emulsion. This is extra handy when washing those greasy dishes, the detergent takes the oil and grime off the plates and into the water, yay!

Make Your Own Quick Sand

Quick sand is a fascinating substance, make some of your own and experiment on a safe scale. Amaze your friends by demonstrating how it works

What you'll need:

- 1 cup of maize cornflour
- Half a cup of water
- A large plastic container
- A spoon

Instructions:

1. This one is simple, just mix the cornflour and water thoroughly in the container to make your own instant quick sand.
2. When showing other people how it works, stir slowly and drip the quick sand to show it is a liquid.
3. Stirring it quickly will make it hard and allow you to punch or poke it quickly (this works better if you do it fast rather than hard).
4. Remember that quick sand is messy, try to play with it outside and don't forget to stir just before you use it.
5. Always stir instant quicksand just before you use it!

What's happening?

If you add just the right amount of water to cornflour it becomes very thick when you stir it quickly. This happens because the cornflour grains are mixed up and can't slide over each other due to the lack of water between them. Stirring slowly allows more water between the cornflour grains, letting them slide over each other much easier.

Poking it quickly has the same effect, making the substance very hard. If you poke it slowly it doesn't mix up the mixture in the same way, leaving it runny. It works in much the same way as real quick sand.

Baking Soda & Vinegar Volcano

Use baking soda and vinegar to create an awesome chemical reaction! Watch as it rapidly fizzes over the container and make sure you've got some towels ready to clean up.

What you'll need:

- Baking Soda (make sure it's not baking powder)
- Vinegar
- A container to hold everything and avoid a big mess!
- Paper towels or a cloth (just in case)

Instructions:

1. Place some of the baking soda into your container.
2. Pour in some of the vinegar
3. Watch as the reaction takes place!

What's happening?

The baking soda (sodium bicarbonate) is a base while the vinegar (acetic acid) is an acid. When they react together they form carbonic acid which is very unstable, it instantly breaks apart into water and carbon dioxide, which creates all the fizzing as it escapes the solution.

For extra effect you can make a realistic looking volcano. It takes some craft skills but it will make your vinegar and baking soda eruptions will look even more impressive!

Raw or Boiled Egg?

Surprise your friends and family with an easy science experiment that answers an otherwise tricky question. Two eggs look and feel the same but there is a big difference, one is raw and the other hard boiled, find out which is which with this fun experiment.

What you'll need:

- Two eggs, one hard boiled and one raw. Make sure the hard boiled egg has been in the fridge long enough to be the same temperature as the raw egg.

Instructions:

1. Spin the eggs and watch what happens, one egg should spin while the other wobbles.
2. You can also lightly touch each of the eggs while they are spinning, one should stop quickly while the other keeps moving after you have touched it.

What's happening?

The raw egg's centre of gravity changes as the white and yolk move around inside the shell, causing the wobbling motion. Even after you touch the shell it continues moving. This is because of inertia, the same type of force you feel when you change direction or stop suddenly in a car, your body wants to move one way while the car wants to do something different. Inertia causes the raw egg to spin even after you have stopped it, this contrasts with the solid white and yolk of the hard boiled egg, it responds much quicker if you touch it.

This is a good experiment to test a friend or someone in your family with, see if they can figure out how to tell the difference between the eggs (without smashing them of course) before showing them your nifty trick.

Make Glowing Water

Make glowing water with the help of a black light in this fun science experiment for kids.

Tonic water doesn't look very strange under normal light but what happens when you look at it under a black light? Does the dye from a highlighter pen do the same thing? Find out what happens and why it happens with this cool experiment that you can do at home.

What you'll need:

- A black light
- Tonic water or a highlighter pen.
- A dark room to do the experiment.

Instructions:

1. If you are using a highlighter pen carefully break it open, remove the felt and soak it in a small amount of water for a few minutes.
2. Find a dark room.
3. Turn on the black light near your water, how does it look?

What's happening?

Simple explanation:

The ultra violet (UV) light coming from your black light lamp excites things called phosphors. Tonic water and the dye from highlighter pens contain phosphors that turn UV light (light we can't see) into visible light (light we can see). That's why your water glows in the dark when you shine a black light on it.

Black lights are used in forensic science, artistic performances, photography, authentication of banknotes and antiques, and in many other areas.

Detailed explanation:

Black light (also known as UV or ultra violet light) is a part of the electromagnetic spectrum. The electromagnetic spectrum also includes infrared, X-rays, visible light (what the human eye can see) and other types of electromagnetic radiation. A black light lamp such as the one you used emits a UV light that can illuminate objects and materials that contain phosphors. Phosphors are special substances that emit light (luminescence) when excited by radiation. Your water glowed under the black light because it contained phosphors. If you used a highlighter pen then the UV light reacted with phosphors in the dye. If you used tonic water then the UV light reacted with phosphors in a chemical used in tonic water called quinine.

There are different types of luminescence, they include fluorescence (used in this experiment, it glows only when the black light is on), phosphorescence (similar to fluorescence but with a glow that can last even after the black light is turned off), chemiluminescence (used to create glow sticks), bioluminescence (from living organisms) and many others.

Relax with Beautiful Bath Salts

Whether you're making a special present for someone else, experimenting at home or just want to relax in a hot bath, give this experiment a go. Create your own bath salts with a variety of refreshing fragrances, experiment with different essential oils to see which you like best.

What you'll need:

- 1 cup of washing soda
- A plastic bag
- A rolling pin (or something similar that can crush lumps)
- A bowl
- A spoon for stirring
- Essential oil
- Food colouring

Instructions:

1. Take the cup of washing soda and put it into a plastic bag. Crush the lumps with a rolling pin or similar object.
2. Empty the bag into a bowl and stir in 5 or 6 drops of your favourite essential oil such as rosemary, lavender or mint.
3. Stir in a few drops of food colouring until the mixture is evenly coloured.
4. Put the mixture into clean dry containers and enjoy as you please.

What's happening?

Bath Salts are typically made from Epsom salts (magnesium sulfate), table salt (sodium chloride) or washing soda (sodium carbonate). The chemical make up of the mixture makes it easy to form a lather. Bath salts are said to improve cleaning and deliver an appealing fragrance when bathing.

Grow Your Own Bacteria

Bacteria are a fascinating type of microorganism that play a large role in our lives whether we like it or not. Try growing your own sample of bacteria while monitoring how it reproduces in a short space of time. Compare your original sample with others and get proof that bacteria truly are everywhere!

What you'll need:

- Petrie dish of agar
- Cotton buds
- Some old newspaper (to wrap petrie dish when disposing)

Instructions:

1. Prepare your petrie dish of agar.
2. Using your cotton bud, swab a certain area of your house (i.e. collect a sample by rubbing the cotton bud on a surface of your choice).
3. Rub the swab over the agar with a few gentle strokes before putting the lid back on and sealing the petrie dish.
4. Allow the dish to sit in a warm area for 2 or 3 days.
5. Check the growth of the bacteria each day by making an observational drawing and describing the changes.
6. Try repeating the process with a new petrie dish and swab from under your finger nails or between your toes.
7. Dispose of the bacteria by wrapping up the petrie dish in old newspaper and placing in the rubbish (don't open the lid).

What's happening?

The agar plate and warm conditions provide the ideal place for bacteria to grow. The microorganisms on the plate will grow into individual colonies, each a clone of the original. The bacteria you obtained with the cotton bud grows steadily, becoming visible with the naked eye in a relatively short time. Different samples produce different results, what happened when you took a swab sample from your own body?

You will find bacteria throughout the Earth, it grows in soil, radioactive waste, water, on plants and even animals too (humans included). Thankfully for us, our immune system usually does a great job of making bacteria harmless.

Dissolving Sugar at Different Heats

Learn about solutions as you add more and more sugar cubes to different temperature water. This easy experiment shows that you can only dissolve a certain amount and that this changes as the water gets hotter.

What you'll need:

- Sugar cubes
- Cold water in a clear glass
- Hot water in a clear glass (be careful with the hot water)
- Spoon for stirring

Instructions:

1. Make sure the glasses have an equal amount of water.
2. Put a sugar cube into the cold water and stir with the spoon until the sugar disappears. Repeat this process (remembering to count the amount of sugar cubes you put into the water) until the sugar stops dissolving, you are at this point when sugar starts to gather on the bottom of the glass rather than dissolving.
3. Write down how many sugar cubes you could dissolve in the cold water.
4. Repeat the same process for the hot water, compare the number of sugar cubes dissolved in each liquid, which dissolved more?

What's happening?

The cold water isn't able to dissolve as much sugar as the hot water, but why? Another name for the liquids inside the cups is a 'solution', when this solution can no longer dissolve sugar it becomes a 'saturated solution', this means that sugar starts forming on the bottom of the cup.

The reason the hot water dissolves more is because it has faster moving molecules which are spread further apart than the molecules in the cold water. With bigger gaps between the molecules in the hot water, more sugar molecules can fit in between.

Making Music with Water

Have you ever tried making music with glasses or bottles filled with water? I bet you favourite band hasn't. Experiment with your own special sounds by turning glasses of water into instruments, make some cool music and find out how it works.

What you'll need:

- 5 or more drinking glasses or glass bottles
- Water
- Wooden stick such as a pencil

Instructions:

1. Line the glasses up next to each other and fill them with different amounts of water. The first should have just a little water while the last should almost full, the ones in between should have slightly more than the last.
2. Hit the glass with the least amount of water and observe the sound, then hit the glass with the most water, which makes the higher sound?
3. Hit the other glasses and see what noise they make, see if you can get a tune going by hitting the glasses in a certain order.

What's happening?

Each of the glasses will have a different tone when hit with the pencil, the glass with the most water will have the lowest tone while the glass with the least water will have the highest. Small vibrations are made when you hit the glass, this creates sound waves which travel through the water. More water means slower vibrations and a deeper tone.

Use a Balloon to Amplify Sound

Small sounds can still make a big noise when you use a good sound conductor. Experiment with a balloon, compressed air and your own ears to find out how it works and the science behind it.

What you'll need:

- Balloon

Instructions:

1. Blow up the balloon.
2. Hold the balloon close to your ear while you tap lightly on the other side.

What's happening?

Despite you only tapping lightly on the balloon your ears can hear the noise loudly. When you blew up the balloon you forced the air molecules inside the balloon closer to each other. Because the air molecules inside the balloon are closer together, they become a better conductor of sound waves than the ordinary air around you.

Make a Ping Pong Ball Float

Can you control a ping pong ball as it floats above a hair dryer? Put your hand-eye coordination skills to the test while learning the important role that forces such as gravity and air pressure play in this simple experiment for kids.

What you'll need:

- At least 1 ping pong ball (2 or 3 would be great)
- A hair dryer

Instructions:

1. Plug in the hair dryer and turn it on.
2. Put it on the highest setting and point it straight up.
3. Place your ping pong ball above the hair dryer and watch what happens.

What's happening?

Your ping pong ball floats gently above the hair dryer without shifting sideways or flying across the other side of the room. The airflow from the hair dryer pushes the ping pong ball upwards until its upward force equals the force of gravity pushing down on it. When it reaches this point it gently bounces around, floating where the upward and downward forces are equal.

The reason the ping pong ball stays nicely inside the column of air produced by the hair dryer without shifting sideways is due to air pressure. The fast moving air from the hair dryer creates a column of lower air pressure, the surrounding higher air pressure forces the ping pong ball to stay inside this column, making it easy to move the hair dryer around without losing control of the ping pong ball.

See if you can float 2 or even 3 ping pong balls as an extra challenge.

Crazy Putty

Using some everyday household items such as borax, water, PVA glue and food colouring, make some crazy putty that you can squish in your hands, mould into shapes or even bounce on the ground.

What you'll need:

- 2 containers (1 smaller than the other, preferably a film canister)
- Water
- Food colouring
- PVA glue
- Borax solution (ratio of about 1 Tbsp of borax to a cup of water)

Instructions:

1. Fill the bottom of the larger container with PVA glue.
2. Add a few squirts of water and stir.
3. Add 2 or 3 drops of food colouring and stir.
4. Add a squirt of borax (possibly a bit more depending on how much PVA glue you used).
5. Stir the mixture up and put it into the smaller container. By now the mixture should be joining together, acting like putty, crazy putty!

What's happening?

The PVA glue you use is a type of polymer called polyvinyl acetate (PVA for short), while the borax is made of a chemical called sodium borate. When you combine the two in a water solution, the borax reacts with the glue molecules, joining them together into one giant molecule. This new compound is able to absorb large amounts of water, producing a putty like substance which you can squish in your hands or even bounce.

Experience Gravity Free Water

What goes up must come down right? Well try bending the rules a little with a cup of water that stays inside the glass when held upside down. You'll need the help of some cardboard and a little bit of air pressure.

What you'll need:

- A glass filled right to the top with water
- A piece of cardboard

Instructions:

1. Put the cardboard over the mouth of the glass, making sure that no air bubbles enter the glass as you hold onto the cardboard.
2. Turn the glass upside down (over a sink or outside until you get good).
3. Take away your hand holding the cardboard.

What's happening?

If all goes to plan then the cardboard and water should stay put. Even though the cup of water is upside down the water stays in place, defying gravity! So why is this happening? With no air inside the glass, the air pressure from outside the glass is greater than the pressure of the water inside the glass. The extra air pressure manages to hold the cardboard in place, keeping you dry and your water where it should be, inside the glass.

What is Your Lung Volume?

Do you think you're fit and healthy? Let's test your lung volume to find out. Just how much air can your lungs can hold? With the help of a few simple household objects, some scientific know how and a dash of curiosity you can make this experiment look easy.

What you'll need:

- Clean plastic tubing
- A large plastic bottle
- Water
- Kitchen sink or large water basin

Instructions:

1. Make sure the plastic tubing is clean
2. Put about 10cm of water into your kitchen sink.
3. Fill the plastic bottle right to the top with water.
4. Put your hand over the top of the bottle to stop water escaping when you turn it upside down.
5. Turn the bottle upside down. Place the top of the bottle under the water in the sink before removing your hand.
6. Push one end of the plastic tube into the bottle.
7. Take a big breath in.
8. Breathe out as much air as you can through the tube.
9. Measure the volume of air your lungs had in them.
10. Make sure you clean up the area to finish.

What's happening?

As you breathe out through the tube, the air from your lungs takes the place of the water in the bottle. If you made sure you took a big breath in and breathed out fully then the resulting volume of water you pushed out is equivalent to how much air your lungs can hold. Having a big air capacity in your lungs means you can distribute oxygen around your body at a faster rate. The air capacity of lungs (or VO2 max) increases naturally as children grow up but can also be increased with regular exercise.

Make a Crystal Snowflake!

Learn how to make a snowflake using borax and a few other easy to find household items. Find out how crystals are formed in this fun crystal activity, experiment with food colouring to enhance the look and keep your finished crystal snowflake as a great looking decoration!

What you'll need:

- String
- Wide mouth jar
- White pipe cleaners
- Blue food colouring (optional)
- Boiling water (take care or better still get an adult to help)
- Borax
- Small wooden rod or pencil

Instructions:

1. Grab a white pipe cleaner and cut it into three sections of the same size. Twist these sections together in the centre so that you now have a shape that looks something like a six-sided star. Make sure the points of your shape are even by trimming them to the same length.
2. Take the top of one of the pipe cleaners and attach another piece of string to it. Tie the opposite end to your small wooden rod or pencil. You will use this to hang your completed snowflake.
3. Carefully fill the jar with boiling water (you might want to get an adult to help with this part).
4. For each cup of water add three tablespoons of borax, adding one tablespoon at a time. Stir until the mixture is dissolved but don't worry if some of the borax settles at the base of the jar.
5. Add some of the optional blue food colouring if you'd like to give your snowflake a nice bluish tinge.
6. Put the pipe cleaner snowflake into the jar so that the small wooden rod or pencil is resting on the edge of the jar and the snowflake is sitting freely in the borax solution.
7. Leave the snowflake overnight and when you return in the morning you will find the snowflake covered in crystals! It makes a great decoration that you can show your friends or hang somewhere in your house.

What's happening?

Crystals are made up of molecules arranged in a repeating pattern that extends in all three dimensions. Borax is also known as sodium borate, it is usually found in the form of a white powder made up of colourless crystals that are easily dissolved in water.

When you add the borax to the boiling water you can dissolve more than you could if you were adding it to cold water, this is because warmer water molecules move around faster and are more spread apart, allowing more room for the borax crystals to dissolve.

When the solution cools, the water molecules move closer together and it can't hold as much of the borax solution. Crystals begin to form on top of each other and before you know it you have your completed crystal snow flake!

Invisible Ink with Lemon Juice

Making invisible ink is a lot of fun, you can pretend you are a secret agent as you keep all your secret codes and messages hidden from others. All you need is some basic household objects and the hidden power of lemon juice.

What you'll need:

- Half a lemon
- Water
- Spoon
- Bowl
- Cotton bud
- White paper
- Lamp or other light bulb

Instructions:

1. Squeeze some lemon juice into the bowl and add a few drops of water.
2. Mix the water and lemon juice with the spoon.
3. Dip the cotton bud into the mixture and write a message onto the white paper.
4. Wait for the juice to dry so it becomes completely invisible.
5. When you are ready to read your secret message or show it to someone else, heat the paper by holding it close to a light bulb.

What's happening?

Lemon juice is an organic substance that oxidizes and turns brown when heated. Diluting the lemon juice in water makes it very hard to notice when you apply it the paper, no one will be aware of its presence until it is heated and the secret message is revealed. Other substances which work in the same way include orange juice, honey, milk, onion juice, vinegar and wine. Invisible ink can also be made using chemical reactions or by viewing certain liquids under ultraviolet (UV) light.

Make an Easy Lava Lamp

Learn how to make an easy lava lamp with this fun science experiment for kids. Use simple household items such as vegetable oil, food colouring, Alka-Seltzer and a bottle to create chemical reactions and funky balls of colour that move around like a real lava lamp.

What you'll need:

- Water
- A clear plastic bottle
- Vegetable oil
- Food colouring
- Alka-Seltzer (or other tablets that fizz)

Instructions:

1. Pour water into the plastic bottle until it is around one quarter full (you might want to use a funnel when filling the bottle so you don't spill anything).
2. Pour in vegetable oil until the bottle is nearly full.
3. Wait until the oil and water have separated.
4. Add around a dozen drops of food colouring to the bottle (choose any colour you like).
5. Watch as the food colouring falls through the oil and mixes with the water.
6. Cut an Alka-Seltzer tablet into smaller pieces (around 5 or 6) and drop one of them into the bottle, things should start getting a little crazy, just like a real lava lamp!
7. When the bubbling stops, add another piece of Alka-Seltzer and enjoy the show!

What's happening?

Oil and water don't mix very well. The oil and water you added to the bottle separate from each other, with oil on top because it has a lower density than water. The food colouring falls through the oil and mixes with the water at the bottom. The piece of Alka-Seltzer tablet you drop in after releases small bubbles of carbon dioxide gas that rise to the top and take some of the coloured water along for the ride. The gas escapes when it reaches the top and the coloured water falls back down. The reason Alka-Seltzer fizzes in such a way is because it contains citric acid and baking soda (sodium bicarbonate), the two react with water to form sodium citrate and carbon dioxide gas (those are the bubbles that carry the coloured water to the top of the bottle).

Adding more Alka-Seltzer to the bottle keeps the reaction going so you can enjoy your funky lava lamp for longer. If you want to show someone later you can simply screw on a bottle cap and add more Alka-Seltzer when you need to. When you've finished all your Alka-Seltzer, you can take the experiment a step further by tightly screwing on a bottle cap and tipping the bottle back and forth, what happens then?

Will the Ice Melt and Overflow?

At first thought you might think that an ice cube sitting at the very top of a glass would eventually melt and spill over the sides but is this what really happens? Experiment and find out!

What you'll need:

- A clear glass
- Warm water
- An ice cube

Instructions:

1. Fill the glass to the top with warm water.
2. Gently lower in the ice cube, making sure you don't bump the table or spill any water over the edge of the glass.
3. Watch the water level carefully as the ice cube melts, what happens?

What's happening?

Even though the ice cube melted the water doesn't overflow. When water freezes to make ice it expands and takes up more space than it does as liquid water (that's why water pipes sometimes burst during cold winters). The water from the ice takes up less space than the ice itself. When the ice cube melts, the level of the water stays about the same.

Test Your Dominant Side

Check out this cool experiment that will teach you more about how your body and brain work together. Test your dominant side by completing a series of challenges. Which hand do you write with? Which foot do you kick with? Do you have a dominant eye? Do you throw with one side of your body but kick with the other? Are you ambidextrous? Answer these questions and much more with this fun science experiment for kids.

What you'll need:

- A pen or pencil
- Paper or a notepad to write your findings on
- An empty tube (an old paper towel tube is good)
- A cup of water
- A small ball (or something soft you can throw)

Instructions:

1. Write ‘left’ or ‘right’ next to each task depending on what side you used/favored.
2. When you’ve finished all the challenges review your results and make your own conclusions about which is your dominant eye, hand and foot.

Eye tests:

1. Which eye do you use to wink?
2. Which eye do you use to look through the empty tube?
3. Extend your arms in front of your body. Make a triangle shape using your fore fingers and thumbs. Bring your hands together, making the triangle smaller (about the size of a coin is good). Find a small object in the room and focus on it through the hole in your hands (using both eyes). Try closing just your left eye and then just your right, if your view of the object changed when you closed your left eye mark down ‘left’, if it changed when you closed your right eye mark down ‘right’.

Hand/Arm tests:

1. Which hand do you use to write?
2. Pick up the cup of water, which hand did you use?
3. Throw the ball, which arm did you use?

Foot/Leg tests:

1. Run forward and jump off one leg, which did you jump off?
2. Drop the ball on the ground and kick it, which foot did you use?

What's happening?

So what side do you favour? Are you left handed or right handed? Left footed or right footed? Is your right eye dominant or is it your left?

Around 90% of the world's population is right handed. Why most people favor the right side is not completely understood by scientists. Some think that the reason is related to which side of your brain you use for language. The right side of your body is controlled by the left side of your brain, and in around 90% of people the left side of the brain also controls language.

Others think the reason might have more to do with culture. The word 'right' is associated being correct and doing the right thing while the word 'left' originally meant 'weak'. Favoring the right hand may have become a social development as more children were taught important skills by right handed people and various tools were designed to be used with the right hand.

Around 80% of people are right footed and 70% favour their right eye. These percentages are lower than those who are right handed and this could be because your body has more freedom of choice in choosing its favoured foot and eye than that of its favoured hand. In other words you are more likely to be trained to use your right hand than your right foot and even more so than your right eye.

It's not strange to find people who favour the opposite hand and foot (e.g. left hand and right foot), and some people are lucky enough to be ambidextrous, meaning they can use their left and right sides with equal skill.

Try testing others and coming to your own conclusions about what side the human body favours and why.

Extra: Are you more likely to be left handed if one of your parents is left handed? What are some of the possible disadvantages for left handed people? (Tools, writing materials etc) Do left handed people have an advantage in sports?

Interesting fact: In 2009, only 7% of the players in the NBA were left handed while in 2008 around 26% of MLB pitchers were left handed.

Is it better to be left handed in some sports than others? What do you think?

Design and Test a Parachute

Learn about air resistance while making an awesome parachute! Design one that can fall slowly to the ground before putting it to the test, making modifications as you go

What you'll need:

- A plastic bag or light material
- Scissors
- String
- A small object to act as the weight, a little action figure would be perfect

Instructions:

1. Cut out a large square from your plastic bag or material.
2. Trim the edges so it looks like an octagon (an eight sided shape).
3. Cut a small whole near the edge of each side.
4. Attach 8 pieces of string of the same length to each of the holes.
5. Tie the pieces of string to the object you are using as a weight.
6. Use a chair or find a high spot to drop your parachute and test how well it worked, remember that you want it to drop as slow as possible.

What's happening?

Hopefully your parachute will descend slowly to the ground, giving your weight a comfortable landing. When you release the parachute the weight pulls down on the strings and opens up a large surface area of material that uses air resistance to slow it down. The larger the surface area the more air resistance and the slower the parachute will drop.

Cutting a small hole in the middle of the parachute will allow air to slowly pass through it rather than spilling out over one side, this should help the parachute fall straighter.

Make a Big Dry Ice Bubble

Have fun making a dry ice bubble that will grow and grow as it fills with fog. This experiment is a great one for adults to do with kids. Add water to the dry ice, cover it with a layer of soapy water and watch your bubble grow, how big will it get before it bursts? Give it a try and find out!

What you'll need:

- Water
- A large bowl with a lip around the top (a smaller bowl or cup will work too)
- A strip of material or cloth
- Soapy mixture for making bubbles (water and some dishwashing liquid should do the trick)
- Dry ice - one piece for a cup, more for a bowl.

Safety first! Be careful with dry ice as it can cause skin damage if not used safely. Adults should handle dry ice with gloves and avoid directly breathing in the vapour.

Instructions:

1. Place your dry ice in the bowl and add some water (it should start looking like a spooky cauldron).
2. Soak the material in your soapy mixture and run it around the lip of the bowl before dragging it across the top of the bowl to form a bubble layer over the dry ice.
3. Stand back and watch your bubble grow!

What's happening?

Dry ice is carbon dioxide (CO_2) in its solid form. At temperatures above -56.4 °C (-69.5 °F), dry ice changes directly from a solid to a gas, without ever being a liquid. This process is called sublimation. When dry ice is put in water it accelerates the sublimation process, creating clouds of fog that fill up your dry ice bubble until the pressure becomes too much and the bubble explodes, spilling fog over the edge of the bowl. Dry ice is sometimes used as part of theatre productions and performances to create a dense foggy effect. It is also used to preserve food, freeze lab samples and even to make ice cream!

Make Lemonade Fizzy Drink

There's a lot of people out there that like drinking fizzy drinks, so why not do a fun science experiment that leaves you with your own lemon soda to drink afterwards!

A bit of lemon here and a bit of baking soda there and before you know it you'll be an expert at making your own fizzy drinks. Make your own lemonade soft drink with this fun experiment for kids.

What you'll need:

- Lemon
- Drinking glass
- Water
- 1 teaspoon of baking soda
- Some sugar to make it sweet

Instructions:

1. Squeeze as much of the juice from the lemon as you can into the glass.
2. Pour in an equal amount of water as lemon juice.
3. Stir in the teaspoon of baking soda.
4. Give the mixture a taste and add in some sugar if you think it needs to be sweeter.

What's happening?

The mixture you created should go bubbly and taste like a lemonade, soda, fizzy or soft drink, if you added some sugar it might even taste like a lemon flavoured soft drink you've bought at a store. The bubbles that form when you add the baking soda to the lemon mixture are carbon dioxide (CO_2), these are the same bubbles you'll find in proper fizzy drinks. Of course they add a few other flavoured sweeteners but it's not much different to what you made. If you are wondering how the carbon dioxide bubbles formed, it was because you created a chemical reaction when you added the lemon (an acid) to the baking soda (a base).

Diet Coke & Mentos Eruption

One of the most popular experiments of modern times is the Diet Coke and Mentos Geyser. Made popular by Steve Spangler, this experiment is a lot of fun and sure to amaze your friends and family (assuming you do it outside rather than in the living room).

What you'll need:

- Large bottle of Diet Coke
- About half a pack of Mentos
- Geyser tube (optional but makes things much easier)

Instructions:

1. Make sure you are doing this experiment in a place where you won't get in trouble for getting Diet Coke everywhere. Outside on some grass is perfect, please don't try this one in your family lounge!!
2. Stand the Diet Coke upright and unscrew the lid. Put some sort of funnel or tube on top of it so you can drop the Mentos in at the same time (about half the pack is a good amount). Doing this part can be tricky if you don't have a specially designed geyser tube, I recommend buying one from a local store such as Natures Discoveries (NZ) or online.
3. Time for the fun part, drop the Mentos into the Diet Coke and run like mad! If you've done it properly a huge geyser of Diet Coke should come flying out of the bottle, it's a very impressive sight. The record is about 9 metres (29 feet) high!

What's happening?

Although there are a few different theories around about how this experiment works, the most favoured reason is because of the combination of carbon dioxide in the Diet Coke and the little dimples found on Mentos candy pieces.

The thing that makes soda drinks bubbly is the carbon dioxide that is pumped in when they bottle the drink at the factory. It doesn't get released from the liquid until you pour it into a glass and drink it, some also gets released when you open the lid (more if you shake it up beforehand). This means that there is a whole lot of carbon dioxide gas just waiting to escape the liquid in the form of bubbles.

Dropping something into the Diet Coke speeds up this process by both breaking the surface tension of the liquid and also allowing bubbles to form on the surface area of the Mentos. Mentos candy pieces are covered in tiny dimples (a bit like a golf ball), which dramatically increases the surface area and allows a huge amount of bubbles to form.

The experiment works better with Diet Coke than other sodas due to its slightly different ingredients and the fact that it isn't so sticky. I also found that Diet Coke that had been bottled more recently worked better than older bottles that might have lost some of their fizz sitting on shop shelves for too long, just check the bottle for the date.

Blowing Up Balloons With CO2

Chemical reactions make for some great experiments. Make use of the carbon dioxide given off by a baking soda and lemon juice reaction by funnelling the gas through a soft drink bottle. Blowing up balloons was never so easy!

What you'll need:

- Balloon
- About 40 ml of water (a cup is about 250 ml so you don't need much)
- Soft drink bottle
- Drinking straw
- Juice from a lemon
- 1 teaspoon of baking soda

Instructions:

1. Before you begin, make sure that you stretch out the balloon to make it as easy as possible to inflate.
2. Pour the 40 ml of water into the soft drink bottle.
3. Add the teaspoon of baking soda and stir it around with the straw until it has dissolved.
4. Pour the lemon juice in and quickly put the stretched balloon over the mouth of the bottle.

What's happening?

If all goes well then your balloon should inflate! Adding the lemon juice to the baking soda creates a chemical reaction. The baking soda is a base, while the lemon juice is an acid, when the two combine they create carbon dioxide (CO2). The gas rises up and escapes through the soft drink bottle, it doesn't however escape the balloon, pushing it outwards and blowing it up. If you don't have any lemons then you can substitute the lemon juice for vinegar.

Make Your Own Fake Snot

As disgusting as it might sound to some people, let's make some fake snot! Snot actually serves an important purpose in our body so this experiment is not all about grossing out our friends, although that's certainly part of the fun.

What you'll need:

- Boiling water (be careful with this)
- A cup
- Gelatin
- Corn syrup
- A teaspoon
- A fork

Instructions:

1. Fill half a cup with boiling water.
2. Add three teaspoons of gelatin to the boiling water.
3. Let it soften before stirring with a fork.
4. Add a quarter of a cup of corn syrup.
5. Stir the mixture again with your fork and look at the long strands of gunk that have formed.
6. As the mixture cools slowly add more water, small amounts at a time.

What's happening?

Mucus is made mostly of sugars and protein. Although different than the ones found in the real thing, this is exactly what you used to make your fake snot. The long, fine strings you could see inside your fake snot when you moved it around are protein strands. These protein strands make snot sticky and capable of stretching.

Make a Tornado in a Bottle

Learn how to make a tornado in a bottle with this fun science experiment for kids. Using easy to find items such as dish washing liquid, water, glitter and a bottle you can make your own mini tornado that's a lot safer than one you might see on the weather channel. Follow the instructions and enjoy the cool water vortex you create!

What you'll need:

- Water
- A clear plastic bottle with a cap (that won't leak)
- Glitter
- Dish washing liquid

Instructions:

1. Fill the plastic bottle with water until it reaches around three quarters full.
2. Add a few drops of dish washing liquid.
3. Sprinkle in a few pinches of glitter (this will make your tornado easier to see).
4. Put the cap on tightly.
5. Turn the bottle upside down and hold it by the neck. Quickly spin the bottle in a circular motion for a few seconds, stop and look inside to see if you can see a mini tornado forming in the water. You might need to try it a few times before you get it working properly.

What's happening?

Spinning the bottle in a circular motion creates a water vortex that looks like a mini tornado. The water is rapidly spinning around the centre of the vortex due to centripetal force (an inward force directing an object or fluid such as water towards the centre of its circular path). Vortexes found in nature include tornadoes, hurricanes and waterspouts (a tornado that forms over water).

Cut Ice Cubes in Half Like Magic

Speed up the melting process of ice with the help of a little pressure. Cut a piece of ice in half like magic while learning how the process relates to ice skating.

What you'll need:

- One ice cube
- A piece of fishing line with a weight (the heavier the better) tied to each end
- A container
- Some kind of tray to keep things from getting wet

Instructions:

1. Turn the container upside down and put it on the tray.
2. Place the ice cube on top of the upside down container.
3. Rest the fishing line over the ice cube so that the weights are left dangling over the side of the container.
4. Watch it for around 5 minutes.

What's happening?

The pressure from the two weights pulls the string through the ice cube by melting the ice directly under the fishing line. This is similar to ice skating where the blades of a skater melt the ice directly underneath, allowing the skater to move smoothly on a thin layer of water.

Static Electricity Experiment

They say opposites attract and that couldn't be truer with these fun static electricity experiments. Find out about positively and negatively charged particles using a few basic items, can you control if they will be attracted or unattracted to each other?

What you'll need:

- 2 inflated balloons with string attached
- Your hair
- Aluminium can
- Woollen fabric

Instructions:

1. Rub the 2 balloons one by one against the woollen fabric, then try moving the balloons together, do they want to or are they unattracted to each other?
2. Rub 1 of the balloons back and forth on your hair then slowly it pull it away, ask someone nearby what they can see or if there's nobody else around try looking in a mirror.
3. Put the aluminium can on its side on a table, after rubbing the balloon on your hair again hold the balloon close to the can and watch as it rolls towards it, slowly move the balloon away from the can and it will follow.

What's happening?

Rubbing the balloons against the woollen fabric or your hair creates static electricity. This involves negatively charged particles (electrons) jumping to positively charged objects. When you rub the balloons against your hair or the fabric they become negatively charged, they have taken some of the electrons from the hair/fabric and left them positively charged.

They say opposites attract and that is certainly the case in these experiments, your positively charged hair is attracted to the negatively charged balloon and starts to rise up to meet it. This is similar to the aluminium can which is drawn to the negatively charged balloon as the area near it becomes positively charged, once again opposites attract.

In the first experiment both the balloons were negatively charged after rubbing them against the woollen fabric, because of this they were unattracted to each other.

What Absorbs More Heat?

When you're out in the sun on a hot summers day it pays to wear some light coloured clothes, but why is that? Experiment with light, colour, heat and some water to find out.

What you'll need:

- 2 identical drinking glasses or jars
- Water
- Thermometer
- 2 elastic bands or some sellotape
- White paper
- Black paper

Instructions:

1. Wrap the white paper around one of the glasses using an elastic band or sellotape to hold it on.
2. Do the same with the black paper and the other glass.
3. Fill the glasses with the exact same amount of water.
4. Leave the glasses out in the sun for a couple of hours before returning to measure the temperature of the water in each.

What's happening?

Dark surfaces such as the black paper absorb more light and heat than the lighter ones such as the white paper. After measuring the temperatures of the water, the glass with the black paper around it should be hotter than the other. Lighter surfaces reflect more light, that's why people where lighter coloured clothes in the summer, it keeps them cooler.

Water Molecules on the Move

This experiment is great for testing if hot water molecules really move faster than cold ones. Pour some water, drop in some food colouring and compare results.

What you'll need:

- A clear glass filled with hot water
- A clear glass filled with cold water
- Food colouring
- An eye dropper

Instructions:

1. Fill the glasses with the same amount of water, one cold and one hot.
2. Put one drop of food colouring into both glasses as quickly as possible.
3. Watch what happens to the food colouring.

What's happening?

If you watch closely you will notice that the food colouring spreads faster throughout the hot water than in the cold. The molecules in the hot water move at a faster rate, spreading the food colouring faster than the cold water molecules which mover slower.

Plant Seeds & Watch Them Grow

Learn about seed germination with this fun science experiment for kids. Plant some seeds and follow the growth of the seedlings as they sprout from the soil while making sure to take proper care of them with just the right amount of light, heat and water. Have fun growing plants with this cool science project for children.

What you'll need:

- Fresh seeds of your choice such as pumpkins seeds, sunflower seeds, lima beans or pinto beans.
- Good quality soil (loose, aerated, lots of peat moss), if you don't have any you can buy some potting soil at your local garden store.
- A container to hold the soil and your seeds.
- Water.
- Light and heat.

Instructions:

1. Fill the container with soil.
2. Plant the seeds inside the soil.
3. Place the container somewhere warm, sunlight is good but try to avoid too much direct sunlight, a window sill is a good spot.
4. Keep the soil moist by watering it everyday (be careful not to use too much water).
5. Record your observations as the seeds germinate and seedlings begin to sprout from the seeds.

What's happening?

Hopefully after a week of looking after them, your seedlings will be on their way. Germination is the process of a plant emerging from a seed and beginning to grow. For seedlings to grow properly from a seed they need the right conditions. Water and oxygen are required for seeds to germinate. Many seeds germinate at a temperature just above normal room temperature but others respond better to warmer temperatures, cooler temperatures or even changes in temperature. While light can be an important trigger for germination, some seeds actually need darkness to germinate, if you buy seeds it should mention the requirements for that specific type of seed in the instructions.

Continue to look after your seedlings and monitor their growth. For further experiments you could compare the growth rates of different types of seeds or the effect of different conditions on their growth.

Taste Testing Without Smell

We all know that some foods taste better than others but what gives us the ability to experience all these unique flavours? This simple experiment shows that there's a lot more to taste than you might have first thought.

What you'll need:

- A small piece of peeled potato
- A small piece of peeled apple (same shape as the potato so you can't tell the difference)

Instructions:

1. Close your eyes and mix up the piece of potato and the piece of apple so you don't know which is which.
2. Hold your nose and eat each piece, can you tell the difference?

What's happening?

Holding your nose while tasting the potato and apple makes it hard to tell the difference between the two. Your nose and mouth are connected through the same airway which means that you taste and smell foods at the same time. Your sense of taste can recognize salty, sweet, bitter and sour but when you combine this with your sense of smell you can recognize many other individual 'tastes'. Take away your smell (and sight) and you limit your brains ability to tell the difference between certain foods.

Escaping Water

Water can certainly move in mysterious ways, get the water from one cup to make its way up hill and back down into a second empty cup with the help of paper towels and an interesting scientific process.

What you'll need:

- A glass of water
- An empty glass
- Some paper towels

Instructions:

1. Twist a couple of pieces of paper towel together until it forms something that looks a little like a piece of rope, this will be the 'wick' that will absorb and transfer the water (a bit like the wick on a candle transferring the wax to the flame).
2. Place one end of the paper towels into the glass filled with water and the other into the empty glass.
3. Watch what happens (this experiment takes a little bit of patience).

What's happening?

Your paper towel rope (or wick) starts getting wet, after a few minutes you will notice that the empty glass is starting to fill with water, it keeps filling until there is an even amount of water in each glass, how does this happen?

This process is called 'capillary action', the water uses this process to move along the tiny gaps in the fibre of the paper towels. It occurs due to the adhesive force between the water and the paper towel being stronger than the cohesive forces inside the water itself. This process can also be seen in plants where moisture travels from the roots to the rest of the plant.

Microscopic Creatures in Water

Water can be home to a lot of interesting creatures and microorganisms, especially if it's dirty water found in ponds or near plants. Take some samples, view them under a microscope and see what you can find. How clean is the water from your tap compared to the water found in a pond? Experiment and see what kind of microscopic creatures you can find!

What you'll need:

- A concave slide
- A dropper
- A microscope
- Different samples of water (tap water, pond water, muddy water etc). Near plants or in the mud are good places to take samples as they usually contain more microorganisms.

Instructions:

1. Set up you microscope, preferably using its highest setting.
2. Use the dropper to take some water from one of your samples and put it on the concave slide. Focus the microscope, what can you see? Be patient if you can't see anything. If you still can't see anything and have checked that you are in focus, try a different water sample.
3. Look at how the creatures move. After observing their movements you might like to record their behaviours and draw them.

What are you looking at?

Some of the creatures and microorganisms you might be able to see include:

- Euglenas - These are between a plant and an animal, they have a long tail called a flagellum which allows them to move.
- Protozoa - They have a flagella (tail) which can be hard to see, the difference between protozoa and algae is often hard to define.
- Amoebas - These microorganisms swim by wobbling. They also surround their food like a blob in order to eat it.
- Algae - Not considered to be plants by most scientists, these organisms might be coloured yellowish, greenish or reddish. They may also be found by themselves or in chains.
- There might even my larger creatures such as worms or brine shrimp in your water samples, depending on where you took them from.

Bend a Straw with Your Eyes

Using the power of your eyes, bend a straw sitting in half a glass of water without even touching it! It sounds like magic but it's really another amazing scientific principle at work.

What you'll need:

- A glass half filled with water
- A straw
- 2 eyes (preferably yours)

Instructions:

1. Look at the straw from the top and bottom of the glass.
2. Look at the straw from the side of the glass, focus on the point where the straw enters the water, what is strange about what you see?

What's happening?

Our eyes are using light to see various objects all the time, but when this light travels through different mediums (such as water & air) it changes direction slightly. Light refracts (or bends) when it passes from water to air. The straw looks bent because you are seeing the bottom part through the water and air but the top part through the air only. Air has a refractive index of around 1.0003 while water has a refractive index of about 1.33.

Make Your Own Rainbow

Learn how to make a rainbow with this fun science experiment for kids. Using just a few simple everyday items you can find out how rainbows work while enjoying an interactive, hands on activity that's perfect for kids.

What you'll need:

- A glass of water (about three quarters full)
- White paper
- A sunny day

Instructions:

1. Take the glass of water and paper to a part of the room with sunlight (near a window is good).
2. Hold the glass of water (being careful not to spill it) above the paper and watch as sunlight passes through the glass of water, refracts (bends) and forms a rainbow of colours on your sheet of paper.
3. Try holding the glass of water at different heights and angles to see if it has a different effect.

What's happening?

While you normally see a rainbow as an arc of colour in the sky, they can also form in other situations. You may have seen a rainbow in a water fountain or in the mist of a waterfall and you can even make your own such as you did in this experiment.

Rainbows form in the sky when sunlight refracts (bends) as it passes through raindrops, it acts in the same way when it passes through your glass of water. The sunlight refracts, separating it into the colours red, orange, yellow, green, blue, indigo and violet.

Warm Air Needs More Room (Heating Up Air)

As its temperature rises, air starts to act a little differently. Find out what happens to a balloon when the air inside it heats up with this fun science experiment for kids.

What you'll need:

- Empty bottle
- Balloon
- Pot of hot water (not boiling)

Instructions:

1. Stretch the balloon over the mouth of the empty bottle.
2. Put the bottle in the pot of hot water, let it stand for a few minutes and watch what happens.

What's happening?

As the air inside the balloon heats up it starts to expand. The molecules begin to move faster and further apart from each other. This is what makes the balloon stretch. There is still the same amount of air inside the balloon and bottle, it has just expanded as it heats up.

Warm air therefore takes up more space than the same amount of cold air, it also weighs less than cold air occupying the same space. You might have seen this principle in action if you've flown in or watched a hot air balloon.

Bending Water with Static

Here's an easy and fun science experiment that's great for helping kids learn about static electricity. Try bending water with static electricity produced by combing your hair or rubbing it with an inflated balloon, can it really be done? Give it a try and find out!

What you'll need:

- A plastic comb (or an inflated balloon)
- A narrow stream of water from a tap
- Dry hair

Instructions:

1. Turn on the water so it is falling from the tap in a narrow stream (just a few millimetres across but not droplets).
2. Run the comb through your hair just as you normally would when brushing it (do this around 10 times). If you are using a balloon then rub it back and forth against your hair for a few seconds.
3. Slowly move the comb or balloon towards the stream of water (without touching it) while watching closely to see what happens.

What's happening?

The static electricity you built up by combing your hair or rubbing it against the balloon attracts the stream of water, bending it towards the comb or balloon like magic!

Negatively charged particles called electrons jump from your hair to the comb as they rub together, the comb now has extra electrons and is negatively charged. The water features both positive and negatively charged particles and is neutral. Positive and negative charges are attracted to each other so when you move the negatively charged comb (or balloon) towards the stream, it attracts the water's positively charged particles and the stream bends!

Steel Wool & Vinegar Reaction

Soak steel wool in vinegar and watch what happens as the iron in the steel begins to react with the oxygen around it. This fun science experiment for kids is great for learning about chemical reactions.

What you'll need:

- Steel Wool
- Vinegar
- Two beakers
- Paper or a lid (something to cover the beaker to keep the heat in)
- Thermometer

Instructions:

1. Place the steel wool in a beaker.
2. Pour vinegar on to the steel wool and allow it to soak in the vinegar for around one minute.
3. Remove the steel wool and drain any excess vinegar.
4. Wrap the steel wool around the base of the thermometer and place them both in the second beaker.
5. Cover the beaker with paper or a lid to keep the heat in (make sure you can still read the temperature on the thermometer, having a small hole in the paper or lid for the thermometer to go through is a good idea).
6. Check the initial temperature and then monitor it for around five minutes.

What's happening?

The temperature inside the beaker should gradually rise, you might even notice the beaker getting foggy. When you soak the steel wool in vinegar it removes the protective coating of the steel wool and allows the iron in the steel to rust. Rusting (or oxidation) is a chemical reaction between iron and oxygen, this chemical reaction creates heat energy which increases the temperature inside the beaker. This experiment is an example of an exothermic reaction, a chemical reaction that releases energy in the form of heat.

Energy Transfer through Balls (Bouncing Balls)

Energy is constantly changing forms and transferring between objects, try seeing for yourself how this works. Use two balls to transfer kinetic energy from the the big ball to the smaller one and see what happens.

What you'll need:

- A large, heavy ball such as a basketball or soccer ball
- A smaller, light ball such as a tennis ball or inflatable rubber ball

Instructions:

1. Make sure you're outside with plenty of room.
2. Carefully put the tennis ball on top of the basketball, holding one hand under the basketball and the other on top of the tennis ball.
3. Let go of both the balls at exactly the same time and observe what happens.

What's happening?

If you dropped the balls at the same time, the tennis ball should bounce off the basketball and fly high into the air. The two balls hit each other just after they hit the ground, a lot of the kinetic energy in the larger basketball is transferred through to the smaller tennis ball, sending it high into the air.

While you held the balls in the air before dropping them they had another type of energy called 'potential energy', the balls gained this through the effort it took you to lift the balls up, it is interesting to note that energy is never lost, only transferred into other kinds of energy.

Science Projects

String Phone Project

What you'll need:

- 2 paper cups
- A sharp pencil or sewing needle to help poke holes
- String (kite string and fishing lines work well)

Instructions:

1. Cut a long piece of string, you can experiment with different lengths but perhaps 20 metres (66 feet) is a good place to start.
2. Poke a small hole in the bottom of each cup.
3. Thread the string through each cup and tie knots at each end to stop it pulling through the cup (alternatively you can use a paper clip, washer or similar small object to hold the string in place).
4. Move into position with you and a friend holding the cups at a distance that makes the string tight (making sure the string isn't touching anything else).
5. One person talks into the cup while the other puts the cup to their ear and listens, can you hear each other?

What's happening?

Speaking into the cup creates sound waves which are converted into vibrations at the bottom of the cup. The vibrations travel along the string and are converted back into sound waves at the other end so your friend can hear what you said. Sound travels through the air but it travels even better through solids such as your cup and string, allowing you to hear sounds that might be too far away when travelling through the air.

More about phones:

Landline telephones feature microphones that convert sound waves into electric currents that are then sent through wires and converted back into sound waves by an earphone inside the telephone at the other end. Modern mobile phones use radio waves (part of the electromagnetic spectrum that includes microwaves, infrared, visible light, X-rays and others) to communicate with base stations located throughout telephone networks.

Phones have come a long way since Alexander Graham Bell was awarded the first electric telephone patent by the United States Patent and Trademark Office back in 1876. Today's cell phones are a marvel of modern technology, featuring not only the ability to make phone calls but to also surf the web, play music, view documents and much more.

Egg Drop Project

Can you protect a falling egg?

What you'll need:

- Eggs
- Paper towels

Build your egg protectors from resources such as:

- Plastic straws
- Popsicle sticks
- Tape
- Recycled paper
- Glue
- Plastic bags
- Boxes
- Used material
- Plastic containers

The aim:

- Your goal is simple, design and build a system that will protect an egg from a 1 metre (3.3 feet) drop. Eggs that smash or crack fail the test while eggs that survive without a scratch pass!

Getting started:

You need to create something that can absorb the energy the egg gathers as it accelerates towards the ground. A hard surface will crack the egg so you have to think carefully about how you can protect it. Something that will cushion the egg at the end of its fall is a good place to start, you want the egg to decelerate slowly so it doesn't crack or smash all over the ground. You'll need to run a few trials so have some eggs ready as guinea pigs, those that don't survive will at least be comforted knowing they were smashed for a good cause, and if not, you can at least have scrambled eggs for dinner right?

Grow Your Own Salt Crystals

What you'll need:

- A jar
- Water
- About half a cup of salt
- A spoon for stirring
- String
- Scissors
- 2 toothpicks

Instructions:

1. Fill the jar with water.
2. Add about half a cup of salt to the water.
3. Mix the solution together with a spoon.
4. Cut a piece of string with scissors and tie each end to a toothpick.
5. Place the string over the top of the jar so that the string dangles into the middle of the solution and the toothpicks hang over the edge.
6. Don’t forget to clean up when you’ve finished.

What next?

Leave the experiment and wait for salt crystals to form along the string. They are an excellent example of cubic crystals and you can do further research with them by examining them under a microscope.

When you look at various crystals under a microscope you can examine the differences between them: Are they perfectly formed? What shape are they? What colour? Can you see any microorganisms on the crystals?

Crystals can be found grouped together as lots of small crystals or as huge individual crystals. They vary in size from those at the microscopic level all they way up to crystals that are meters in length!

Try collecting a range of crystals for your project, label the different types and make a rock collection box to keep them in.

Make Your Own Robot!

Depending on the age and skill level of students you can try one of two different robot building projects.

Build a robot from household items

Let younger kids enjoy building a robot from everyday household items. It's lots of fun and is sure to keep their attention.

What you'll need:

- Useful materials include soft drink lids, old boxes, tin foil, ice cream containers, old clothing, various material, straws, paper and crayons.

General instructions:

- You'll need quite a lot of materials (depending on how many children will be taking part). A good idea is to start off with unused cardboard boxes and go from there. The children can glue or tape boxes together to form the general shape of a robot before attaching other items to complete the project. There is room for a wide variety of ideas on this project so if you have an idea that you think will work then give it a go!

Build a robot using electronics equipment or a robotics kit set

For older groups of children you can try a robot building project using real electronics equipment or a robotics kit set.

What you'll need:

- There are a number of great robotics kit sets out there as well as the always dependable Lego Mindstorms NXT which offers plenty of scope for robot building challenges.

General instructions:

- Rather than just letting them build any type of robot, give them a fun challenge which can serve as the inspiration behind the design of their robot as well as the focus of any program they make using a computer. This challenge could involve a race of some type, robots that use sensors to find something, a test of strength or building a robot that responds to some form of human input. As well as designing and building their robot, students will have to think about how they will program it as well.
- This project can be further developed into a great science fair project focusing on technology. You could research what kind of artificial intelligence your robot is capable of as well as any physical limitations it has that stop it from performing required tasks.

Make Your Own Fossil

What you'll need:

- Plasticine
- 2 paper cups
- An object that you would like to use as the fossilized impression
- Plaster of Paris
- Water

Instructions:

1. Flatten a ball of plasticine until it is about 2 cm thick while making sure the top is smooth.
2. Put the plasticine inside a paper cup with the smooth side facing up. Carefully press the object you want to fossilize into the plasticine until it is partially buried.
3. Carefully remove the object from the plasticine. An impression of the object should be left behind.
4. Pour half a cup of plaster of paris into the other paper cup. Add a quarter cup of water to the plaster and stir until the mixture is smooth. Leave it for around two minutes.
5. When the mixture has thickened pour it on top of the plasticine in the other cup. Leave the mixture until the plaster has dried.
6. When the plaster has fully dried, tear away the sides of the paper cup and take out the plasticine and plaster. Keep it in a warm dry place and enjoy your very own fossil.

What's happening?

Fossils are extremely useful records of the past. In your case you left behind an impression of an object you own but fossils found by scientists around the world can date back to the time of dinosaurs. These fossils allow palaeontologists (the name of scientists who study these types of fossils) to study what life might have been like millions of years ago. Fossils such as the one you made can leave delicate patterns and a surprising amount of detail.

Make Stalactites and Stalagmites

What you'll need:

- Two glass jars
- A saucer
- Woollen thread
- Either baking soda, washing soda or Epsom salts

Instructions:

1. Fill both jars with hot water. Dissolve as much soda as you can into each one.
2. Place the two jars in a warm place and put the saucer between them.
3. Twist several strands of woollen thread together before dipping the ends into the jars and letting the middle of the thread hang down above the saucer. The ends can be weighed down with various small, heavy objects to keep them in the jars.
4. The two solutions should creep along the thread until they reach the middle and then drip down onto the saucer.
5. Watch what happens to the experiment over the next few days.
6. Don’t forget to wash your hands when you’ve finished.

What's happening?

Over a few days the dripping water will leave behind the baking soda, forming a tiny stalactite (which forms from the roof) and stalagmite (which forms from the ground). With enough time these may eventually join to create a single column. Stalactites and stalagmites are columns of stone which form in underground caves. They are made from minerals dissolved in rainwater that slowly drips from the roofs and walls of caves.

Make Your Own Kaleidoscope

What you'll need:

- 3 pieces of mirrored perspex
- A roll of duct tape or masking tape
- Overhead transparency paper
- Coloured see-through plastic
- A pencil

Instructions:

1. Take 3 pieces of mirrored perspex and tape them together to form a triangle shape. Make sure it is solid and the tape is on the outside of the triangle.
2. Trace around the small triangle at the end of the kaleidoscope onto the overhead transparency paper (add another 1cm all the way around the triangle to allow for folding).
3. Place the transparency paper onto the end of the kaleidoscope and cut slits at the corners so the edges can be folded down.
4. Tape the transparency paper into place.
5. Draw another triangle, making this 2cm bigger than the last.
6. Decide what kind of coloured see-through plastic you would like to put inside your kaleidoscope. Cut out small pieces that will sit on top of the transparency paper.
7. Put the coloured plastic over the end of the kaleidoscope that has the transparency paper, and on top of that add the other (slightly bigger) triangle transparency paper. Tape the second triangle down on top so that there is still just enough room for the plastic to move between the two transparencies.
8. When your kaleidoscope is finished feel free to design and decorate a cover using cardboard, felt pens, glitter, tubing or anything else you want to use.

What's happening?

The patterns inside your kaleidoscope are made by light bouncing between the mirrors on the inside. While you look through one end, light enters through the other and reflects off the mirrors. Varying colours and patterns are formed thanks to the symmetric pattern created by the well placed mirrors.

Make Your Own Microscope

What you'll need:

- A piece of fuse wire
- Some water
- Objects to look at (newspaper or a magazine with fine print works well

Instructions:

1. Make a loop at the end of the fuse wire about 2mm wide.
2. Dip it into some water to get a drop formed in the loop.
3. Hold it close to your eye and look closely at an object such as a magazine.
4. You may have to experiment to get the right distance but you should see a magnified image, especially if you have the drop as close to your eye as possible.

What's happening?

Pioneers of early microscopes originally used tiny glass globes filled with water to magnify objects, this is similar to what you are doing in this experiment. The water droplet forms the shape of a convex lens, which refracts the light and converges it at the point where you see the image clearly. It was later that the method of grinding glass to make lenses was perfected. Modern microscopes have many lenses in them and allow us to see extremely small objects.

Stethoscope Project (Check Your Heart Rate)

What you'll need:

- A balloon
- A piece of tubing
- 2 small funnels
- Scissors
- A timer
- Rubber band (optional)
- A calculator (optional)

Instructions:

1. Take the piece of tubing and fit a funnel to each end.
2. Stretch the balloon by blowing it up and then letting the air out.
3. Cut off the top third of the balloon with scissors.
4. Stretch the top third of the balloon tightly over the open end of one the funnels. If necessary, use a rubber band to hold it in place.
5. Stir the mixture again with your fork and look at the long strands of gunk that have formed.
6. As the mixture cools slowly add more water, small amounts at a time.

Making your stethoscope work:

1. Find your heart with your hand by feeling where it beats in your chest.
2. Sit down somewhere quiet and place the end of the funnel with the balloon over it against your chest, directly onto your skin, just to the left centre.
3. Hold the other funnel to your ear. You should hear a low beating sound.
4. Use the timer to count how many beats you hear in 20 seconds. Multiply this number by three (use a calculator if you're not confident) to find out how fast your heart beats in one minute.
5. Try doing some more tests such as running around for 5 minutes and then checking how fast your heart is beating. Compare your results to your brothers, sisters, parents and even pets heart rates, are there any differences?

What's happening?

Did you know that when a doctor listens to your heartbeat with a stethoscope, they are actually listening for two sounds? The first sound is a longer, lower pitched sound. The second is a shorter, higher pitched sound.

The lower pitched sound is made by the closing of two heart valves when blood is flowing out of the heart. The higher pitched sound is made by two other valves when blood is flowing into the heart. When a person exercises or participates in any kind of physical activity, the heart beats faster in order to pump more blood and oxygen to the muscles that are being used. The closing of the heart valves makes a sound which causes the stretched balloon to vibrate. The vibrating balloon makes the air in the tube vibrate and the tube then carries these sound vibrations to your ear.

Make a Model Hand

What you'll need:

- A piece of card the size of your hand
- A pen or pencil
- Scissors
- String

Instructions:

1. Take the piece of card and trace the outline of your hand with a pen or pencil.
2. Cut out the shape of your hand with scissors.
3. Cut the string into 5 pieces that are about the length of your hand.
4. Tie a piece of string to the tip of each finger and thumb and stretch it to the base of the palm. Staple the string to the card at the same points where you have joints in your fingers and thumb.
5. Try pulling the strings from the base of the palm, what happens?

What's happening?

The muscles in your body are there to shorten or contract, a simple but very important task. Every movement you make is driven by the muscular system, from a simple smile to lifting a heavy box.

The muscles inside your forearm have long tendons running through ligament fibers, known as the carpal tunnel, in the wrist. These muscles allow you to flex your fingers, bending the tips towards your palm, as your fingers do when giving the thumbs up. This is what happens when you pull on the strings of your model hand.

Keeping Drinks Hot and More

What you'll need:

- 4 cups that are exactly the same
- Hot water
- Cold water
- Cold milk
- A thermometer
- Spoons

Instructions:

1. Half fill each cup with hot water.
2. Check that all of the cups are at the same temperature. Leave the thermometer in one of the cups for now.
3. Add 1 spoon of milk to the first cup. Add 1 spoon of cold water to the second cup. Add 3 spoons of milk to the third cup. Don't add anything to the last cup.
4. Check the temperature of each cup every minute with the thermometer. Which cup of water stays hot for the longest.

What's happening?

This one's up to you, do you think you can you explain it?

Some other interesting questions related to this topic include:

What are some good ways of keeping drinks hot?
Have you heard of the word ‘insulation’?
What happens if you want to keep a drink cool rather than hot?
Which is more likely to keep a drink hot for longer: a tall thin cup or a wide shallow cup?
Do some liquids cool faster than others?
What type of cup is better for keeping drinks hot: paper, plastic, clay or glass?

Make a Rain Gauge

What you'll need:

- A plastic (soft drink) bottle
- Some stones or pebbles
- Tape
- Marker (felt pen)
- A ruler

Instructions:

1. Cut the top off the bottle.
2. Place some stones in the bottom of the bottle. Turn the top upside down and tape it to the bottle.
3. Use a ruler and marker pen to make a scale on the bottle.
4. Pour water into the bottle until it reaches the bottom strip on the scale. Congratulations, you have finished your rain gauge.
5. Put your rain gauge outside where it can collect water when it starts raining. After a rain shower has finished, check to see how far up the scale the water has risen.

What's happening?

Rain falls into the top of the gauge and collects at the bottom, where it can be easily measured. Try comparing the amount of rain to the length of time the shower lasted, was it a short and heavy rain shower or a long and light one?

If you want to get serious you can graph the rainfall over weeks or even months, this is especially interesting if the place you live experiences varying seasons where sometimes it is very dry and other times it is very wet.

Combine your results with wind speed, wind direction and air pressure for a full weather report.

Make Your Own Weather Vane

What you'll need:

- An ice-cream container lid (or an old food container lid)
- Scissors or a craft knife (be careful and use adult help when necessary)
- A marker (felt pen)
- A skewer
- A straw
- A pin

Instructions:

1. Trace a triangle onto the ice-cream container lid with the marker and cut it out. Repeat the process but this time trace and cut out a rectangle.
2. Cut a slit in both ends of the straw and slide the triangle in one end and the rectangle in the other end and glue into place.
3. Push a pin through the exact middle of the straw and then into the flat end of the skewer.
4. Place it outside where you can easily see it from the inside and you'll be able to tell which direction the wind is blowing without even having to go outside.

What's next?

Combine your wind direction results with wind speed, air pressure and rain fall for a full weather report.

Make Your Own Barometer

What you'll need:

- A balloon
- Scissors
- A jar
- A rubber band
- Tape
- A straw
- A piece of card
- A marker (felt pen)

Instructions:

1. Cut the top off the balloon (the part which you blow into).
2. Stretch the balloon over the top of the jar and hold it in place with a rubber band.
3. Place the straw across the top of the jar so that one third of the straw is hanging over the edge. Stick the straw to the balloon with tape.
4. Draw three lines on the piece of card that are about half a centimetre apart from each other. Label these lines as high, moderate and low.
5. Tape the card against the back of the jar so that the straw points to moderate.
6. Put your barometer on a flat surface somewhere inside.

What's happening?

When there is low air pressure the balloon should expand out and the straw will point down. This is because the air inside the balloon now has relatively more air pressure compared to the air outside, it pushes the balloon out as a result.

When there is high air pressure the air on the outside will push the balloon into the jar and the straw will point upwards. The air inside the balloon now has relatively less pressure, this pushes the balloon inwards as a result.

In general, high air pressure indicates fair weather while low air pressure indicates that bad weather is more likely. Although forecasting the weather isn't an exact science and can be very difficult at times, give it a go and see how accurate you are.

Combine your results with wind speed, wind direction and rain fall for a full weather report.

Take the Wind Speed Challenge

Anemometer

An anemometer will help show you how fast the wind is going by spinning cups around. The faster the wind is moving the faster the cups will spin.

What you'll need:

- Paper cups
- A skewer (or something similar to poke holes)
- Straws
- Scissors
- A marker (felt pen)
- Tape or glue

The Challenge:
Your challenge is to design something that can measure the wind speed. Create an anemometer that features free spinning cups that spin faster as the wind increases. The wind should blow into the cups pushing them away. The faster the wind the more force it has to push the cups and the faster they spin. You can measure the wind strength by comparing how many times the anemometer spins around every 10 seconds. Does it vary from place to place and day to day?

Wind Speed Box

Make a wind speed box to measure how fast the wind is blowing. Similar in use to the anemometer, your wind box will be able to measure the strength of the wind in different places.

What you'll need:

- An old shoe box
- A marker (felt pen)
- String
- Tape or glue
- A piece of card

The Challenge:
The challenge is to make a wind box that can compare different wind speeds. Marking a scale inside the box is a good place to start and you can use the piece of card as a guide, with it swinging further along the scale as the wind increases. The rest is up to you and your problem solving skills. A stronger wind has more force to push the piece of card along the scale, while it might struggle to move it at all on a very calm day.

What's next?

Combine your wind speed results with wind direction, air pressure and rain fall for a full weather report.

Science Project Ideas

Chemistry Science Project Ideas

- Do women's cosmetics contain potentially harmful chemicals?
- Why do some liquids mix with each other while others don't?
- How does the strength of tape decrease over time?
- Why do some fabrics shrink after being washed?
- Research the characteristics of different gases.
- What's the best way to remove a red wine stain from carpet?
- Test a range of household cleaners to see which works best.
- What are the most difficult stains to remove?
- Can you use forensic science to see if someone in your house has been reading your diary?
- What's the best way to remove bad odours from a room?
- Test the effects of different types of acids on various materials.
- What types of glue are the strongest?
- Make the tallest Mentos and Diet Coke eruption you can.
- How do glow sticks work?
- Study the effectiveness of sunscreen.
- How effective are vitamin supplements?
- What are some negative side effects of medicine?
- How do non-stick fry pan surfaces work?
- What kind of chemicals does chewing gum contain?
- Study the different types of chemicals used in shampoo and conditioner.
- How does hair dye work?
- Use litmus paper to test the pH level of various chemicals.
- What are the chemical differences the between permanent and non-permanent markers?
- Explore the chemistry of crystals.
- What substances release the most harmful chemicals when burnt?

Biology Science Project Ideas

- In what conditions does mould form quickest?
- Study the differences between bacteria and viruses.
- How is swine flu different to a regular flu?
- In terms of hygiene, what is the best surface to prepare food on?
- Discuss the ethics of cloning.
- How long should you use a kitchen sponge before replacing it with a new one?
- Use a microscope to study different substances in detail.
- How long can you keep certain foods in the fridge before they become unsafe to eat?
- Research your family tree.
- What are the differences between yeast, mold, mushrooms and fungi?
- What kind of microorganisms can you find in water from a river?
- How does pollination work?
- Extract and examine DNA from various fruit and vegetables.
- Study Darwin's theories of evolution.

- How might humans evolve in the future?
- What plays a bigger role in the person you become, your upbringing or your genes?
- How long does it take for various materials to decompose?
- Debate the positive and negative arguments for genetically engineered food.
- Study the effects of different fertilizers on plant growth.

Physics Science Project Ideas

- What effect do different materials have on air resistance?
- Does your microwave have any effects on objects that are near but not inside it?
- What types of materials keep liquids hot for the longest amount of time?
- How do different surfaces affect the level of friction?
- What materials absorb the most sound?
- Study the strength of surface tension among different liquids.
- What three dimensional shapes are the strongest?
- How does the weight of an object affect how far you can throw it?
- Test Newton's three laws of motion.
- What kind of materials work best as parachutes?
- Research how much pressure it takes to pop a balloon after different amounts of air have been blown into it.
- Does the surrounding temperature affect the speed at which a candle burns?
- What types of wood burn the fastest?
- Does tire pressure effect how far you can travel on a tank of gas?
- Is a car more fuel efficient when traveling with the windows up?
- What bridge designs can hold the heaviest loads?
- What colours absorb the most light?
- Test the strength of different fabrics.

Earth Science Project Ideas

- Why are only some types of packaging recyclable?
- What are the short and long term effects of forest fires?
- Research what your local area might look like in 50 years due to various human environmental factors.
- Study the Earth's magnetic field.
- What effect do fans have on the temperature in a room?
- Study erosion in your local area.
- Test if modern cars are really better for the environment than older ones.
- Is there a difference between the air you breathe indoors compared to the air you breathe outdoors?
- Study rock formations in your local area.
- What are some possible side effects of diverting a river?
- Other than jewellery, what are diamonds used for?
- Study the size and frequency of waves at a beach.
- Use Mohs hardness scale to test different rocks.

- Research what your country looked like a millions of years ago and how the movement of tectonic plates has affected this.
- Study the locations of volcanoes on Earth.
- What effects might prolonged global warming have on Earth?
- How does a tornado form?
- What parts of the world are most susceptible to hurricanes?

Electricity Science Project Ideas

- How fast does electricity move?
- Experiment with different electricity circuits.
- What has a bigger impact on the lifespan of a light bulb, the amount of times you turn it off and on or the length of time it is on?
- Do electrical devices drain power when plugged in but not switched on?
- Which brand of batteries last the longest?
- What materials conduct electricity better?
- How much electricity do televisions use when on standby?
- Generate electricity from an everyday activity.
- What are some of the important safety precautions when dealing with electricity?
- Test the feasibility of using fruits and vegetables as batteries.
- What are the most energy efficient heating methods?
- Compare various light bulbs for cost, energy consumption, heat output, brightness etc.
- Explain the difference between AC and DC currents.
- What materials produce the most static electricity?
- Build an electricity circuit that sets off an alarm if a diary is opened.
- What are the characteristics of a magnetic field?
- Make your own compass.
- What would happen if the Earth had no magnetic field?
- Build an electricity circuit with a working switch.

Water Science Project Ideas

- How does water travel through the root of a plant?
- Research how some animals can survive for long periods of time without water.
- Does boiling water remove all the contaminants?
- Invent your own way of filtering water.
- Test the pH levels of water from different sources (bottled, tap, river, rain etc).
- What are some good ways of removing oil from water?
- How many cups of water should the average human drink a day?
- Does ice melt at a rate proportional to its surface area?
- What would happen in your area of the world if the polar ice caps were to melt?
- Study the different forms of water drainage at sports fields.
- Can you keep cut flowers alive longer by putting them in something other than water?
- Which brand of paper towels absorbs more water?
- How much do humans sweat during physical activity?

- Study if there are better ways to put out fires than with water.
- Is bottled water really cleaner than tap water?
- How much water do you save on average by having a shower rather than a bath?
- What are some good ways of reducing the amount of water you use in your daily life?
- Study the future effects of water shortages around the world.
- How easily can moisture damage electronic equipment?
- Could life as we know it be supported on a planet with no water?
- What are monsoon seasons and why do they occur?
- Does swimming in a chlorine pool have any long term negative effects on your health?
- Why do some parts of the world experience regular droughts?

Animal Science Project Ideas

- What baits work best for catching fish?
- Research the social interaction between insects such as ants.
- What substances keep various insects away?
- Follow the life cycle of a frog.
- Study behavioural differences between different breeds of dogs.
- Do dogs have a preference when eating from different coloured bowls?
- Follow the sleep patterns of various animals.
- How closely is the weight of an animal related to how much food it eats?
- Are mosquitoes more attracted to certain types of people?
- Do dogs favour their left or right paws?
- How many different insect species can you find on your property?
- Research how animals that live in cold places survive.
- What led to the extinction of dinosaurs?
- Study the social and family lives of spiders.
- Do goldfish live longer in a tank or in the wild?
- Why do bright lights attract insects?
- How good is a cat's memory?
- Monitor the social interactions between groups of animals.
- Do dogs take on characteristics of their owners?
- What kind of thing can you teach animals?
- Do insect killers really kill the insects they say they do?
- Study the effects of second hand smoke on pets.
- What makes a spider web sticky?

Food & Cooking Science Project Ideas

- Do various food products really give the health benefits they say on the labels?
- Test what effects the way you cook meat has on its level of calories.
- What locations or conditions are best for keeping food fresh?
- Explore the different types of chemical reactions that occur while cooking.
- Make your own cheese, yoghurt or other dairy products.
- Why are some egg shells brown and some white?

- Research the science behind different types of diets.
- What fruits contain the most sugar?
- Does chemical spraying have an effect on the taste of food?
- Why do you sometimes get 'brain freeze' from cold foods and drinks?
- Are there any common cooking ingredients that are useful when cleaning?
- Does eating food make you sleepy?
- Why is too much candy bad for your health?
- Is coffee addictive?
- Why is it so important that we eat fruit and vegetables?
- Does food presentation affect its perceived taste?
- Are certain foods more beneficial when eaten for breakfast rather than dinner?
- Make your own healthy eating food pyramid.
- Why is an egg shell stronger at the ends than the sides?
- How does the way you cook a vegetable affect the nutrients you receive from eating it?
- Are organic foods really better for your health?

Plants Science Project Ideas

- How well do seeds grow under different environmental influences?
- Make a hydroponic garden.
- How long can different plants survive without sunlight and water?
- Why do certain plants only grow in certain places?
- What kind of soil requirements do plants need?
- Make your own compost.
- How do greenhouses help plants grow better?
- Study different types of mushrooms.
- Why do leaves change colour?
- Research different types of grass and what conditions they grow best in.
- Can a plant survive on orange juice rather than water?
- Investigate if the cross section of a carrot has any relationship to its age.
- Study some non chemical ways of keeping insects away from strawberries.
- How does the process of photosynthesis work?
- After being frozen, why does a banana go brown so quickly?
- Research the number of seeds in different types of apples.
- What happens when you overcrowd an area with too many plants?
- How fast do sunflowers grow?
- Does cutting down trees on a hill affect the chances of a landslide or slip?
- Study how does a venus fly trap works.
- Are cactus spikes poisonous?
- How well do plants grow under artificial light?

Sports Science Project Ideas

- What affect does string tension have on the accuracy and power of a tennis shot?
- Is there an optimal angle to throw a javelin?

- Research the physics behind throwing a baseball.
- What is the best way to kick a rugby ball if you want it to spiral perfectly? (Angle, force, point of impact etc).
- Is physical performance affected by temperature?
- Why are more people right handed than left handed?
- Research the science behind a boomerang.
- How do the gears of a bicycle work?
- What materials are the fastest to swim in?
- Determine what role the moisture level in a cricket pitch has on the bounce of the ball.
- What are the characteristics of different tennis surfaces?
- Do dimples on a golf ball make it fly further?
- How does a soccer player curve the ball?
- Study the physics of throwing a Frisbee.
- How well do cycle helmets protect your head in the event of an accident?
- Is it easier to hit home runs in an indoor baseball stadium than it is to hit them in an outdoor stadium?
- How much does wind affect the flight of a golf ball?
- Does the rotation of a basketball after a shot is taken affect the chances of it going through the hoop?
- What role does nutrition play in sport?
- How does a sailing boat use the wind to its advantage?
- What affect does playing sport at a high altitude have on the distance a ball will fly through the air?

Psychology Science Project Ideas

- Do colours have an effect on people's emotions?
- What kind of facial reactions do people make to different smells?
- How does a placebo effect work?
- What are some of the side effects of social networking on the Internet?
- How strongly do brand names effect the decisions of consumers?
- Study how our subconscious affects our behaviour.
- Can visualizing a positive outcome before an event or activity improve your results?
- Why do humans respond more favourably towards cute things?
- Do people respond differently to the same questions asked by people wearing different clothes?
- Does music have an effect on your level of happiness?
- What are some effective ways of getting children to eat vegetables?
- How do the potential for rewards determine how much effort humans put into various tasks?
- Is your physical appearance related to the subjects you take at school or your job?
- Are people with symmetrical faces really more attractive?
- In terms of psychology, in what ways are humans different to apes?
- Can watching facial expressions tell you if a person is lying or not?
- Make your own lie detector.

- Who are more superstitious, men or women?
- At what age do humans recognize themselves in a mirror?
- Discuss the idea of cheating as an evolutionary strategy.
- How strongly are a child's interests related to that of their parents?
- Why do humans procrastinate?
- Are there positive side effects of learning a musical instrument?

Space & Astronomy Science Project Ideas

- Follow the movement of stars in the night sky.
- Create a model mars rover that can handle rocky surfaces.
- Study the phases of the moon.
- Discuss the idea of life on another planet.
- What kind of affect does solar weather have on Earth?
- Study the Big Bang theory.
- Make your own constellations from stars in the night sky.
- Research the chances of Earth being hit by a large asteroid in the next 100 years.
- Study the lifespan of the sun relative to other stars.
- Research Halley's Comet.
- Make a sundial to help you tell the time.
- How does the temperature vary from the centre of the sun to the surface?
- Why do planets orbit the sun in an elliptical shape?
- Is it possible for two planets in our solar system to collide?
- How big does an object need to be for it to not totally disintegrate when travelling through Earth's atmosphere?
- Make an argument that black holes don't exist.
- Why is there a higher concentration of stars in some parts of the night sky relative to others?
- Study different types of stars including how they end their life cycles.
- How often is Earth hit by objects from space?

Human Body Science Project Ideas

- What effect does exercise have on your appetite?
- Does caffeine have an effect on your reaction time or other physical abilities?
- Can you tell the difference between various soft drinks without using your sense of smell?
- Does hair colour have an effect on the speed at which it grows?
- Is the speed at which your hair grows related to temperature?
- Does an increase in heart speed heighten your senses?
- Research family traits such as hair colour and height.
- Do wounds heal faster with or without band aids?
- What are some of the characteristics of human saliva?
- What effect does age have on various physical skills? (Sight, reaction time etc)
- What would be worse for your health, licking a toilet bowl or a coin?
- Does looking at a computer screen have an affect on your short term eye sight?
- How much heat does a human produce?

- Study different techniques for improving short term memory.
- If age affects memory, at what point does your memory start to get worse?
- Why do we use toothpaste when we brush our teeth?
- What kinds of television shows affect your heart rate the greatest?
- Is there a relationship between your fitness level and the chances of catching a cold?
- Are you more likely to get sick if you are stressed?
- Is there such thing as an optimal amount of sleep?
- Does taking a nap during the afternoon improve your concentration during the evening?
- Do hot drinks make your digestive system work better?
- Why do humans cry?
- Is one of your eyes stronger than the other?
- Research if there are any relationships between gender and various types of allergies.
- What seasons are the most common for catching a cold or flu?
- Are tanning beds dangerous for your health?
- Do you breathe in chalk particles while wiping a blackboard?

Technology Science Project Ideas

- Can you make a robot with some form of artificial intelligence?
- Make a machine or device to help you with your daily chores.
- Research how building and construction methods have changed over the years.
- How are modern buildings designed to withstand large earthquakes?
- Do video games have any positive side effects?
- Make your own camera.
- How accurate are different types of clocks?
- In what places can you not get cell phone reception?
- Make a homemade television aerial.
- Study how a ball point pen works.
- How do gears in a car work?
- Research potential fuels that could be used in future vehicles.
- How much heat do cell phones produce?
- Make a solar powered vehicle.
- Research how modern digital cameras work.
- How does the search engine Google calculate its search results?
- What advantages do different image formats have over each other?
- Make your own counting machine (calculator).
- How do rewritable CD's and DVD's work?
- What is Moore's law and how accurate has it been?
- Test different building designs for earthquake stability.
- How reliable are fire alarms?
- Are wireless signals more reliable in higher temperatures?

Inventors & Inventions

- **The Earliest Inventions**
- **Archimedes (287 B.C. - 212 B.C.)**
- **Hero of Alexandria (1st Century A.D.)**
- **Medieval Inventions**
- **Johann Gutenberg (c.1397 - 1468)**
- **Leonardo da Vinci (1452 - 1519)**
- **Gerardus Mercator (1512 - 1594)**
- **Christiaan Huygens (1629 - 1695)**
- **Galileo Galilei (1564 - 1642)**
- **Blaise Pascal (1623 - 1662)**
- **Isaac Newton (1642 - 1727)**
- **Antoine van Leeuwenhoek (1632 - 1723)**
- **Thomas Newcomen (1663 - 1729)**
- **Benjamin Franklin (1706 - 1790)**
- **Richard Arkwright (1732 - 1792)**
- **James Watt (1736 - 1819)**
- **The Montgolfier Brothers (Joseph: 1740 - 1810) (Jacques: 1745 - 1799)**
- **Antoine Lavoisier (1743 - 1794)**
- **Edward Jenner (1749 - 1823)**
- **Alessandro Volta (1745 - 1827)**
- **Baron von Drais von Sauerbronn (1785 - 1851)**
- **Charles Babbage (1792 - 1871)**
- **Charles Macintosh (1766 - 1843)**
- **Joseph Nicéphore Niepce (1765 - 1833)**
- **George Stephenson (1781 - 1848) & Robert Stephenson (1803 - 1859)**
- **Samuel Morse (1791 - 1872)**
- **Samuel Colt (1814 - 1862)**
- **Michael Faraday (1791 - 1867)**
- **Etienne Lenoir (1822 - 1900)**
- **I.K. Brunel (1806 - 1859)**
- **Elisha Otis (1811 - 1861)**
- **Edwin Drake (1819 - 1899)**
- **Alfred Nobel (1833 - 1896)**
- **Joseph Lister (1827 - 1912)**
- **Thomas Edison (1847 - 1931)**
- **Alexander Graham Bell (1847 - 1922)**
- **Karl Benz (1844 - 1929) & Gottlied Daimler (1834 - 1900)**
- **The Lumiére Brothers (Auguste: 1862 - 1954) (Louis: 1864 - 1948)**
- **The Wright Brothers (Wilbur: 1867 - 1912) (Orville: 1871 - 1948)**

- **Guglielmo Marconi (1874 - 1937)**
- **Konstantin Tsiolkovsky (1857 - 1935)**
- **Albert Einstein (1879 - 1955)**
- **John Logie Baird (1888 - 1946)**
- **Lasslo Biro (1900 - 1985)**
- **Frank Whittle (1907 - 1996)**
- **John William Mauchly (1907 - 1980) & John Presper Eckert (1919 - 1995)**
- **Enrico Fermi (1901 - 1954)**
- **Christopher Cockerell (1910 - 1999)**
- **Theodore Maiman (1927 - 2007)**
- **The Seventies**
- **The Eighties**
- **The Nineties**
- **The 2000's**

A

- **Bruno Abakanowicz, (1852–1900)** Poland/Lithuania/Russia/France – Integraph, spirograph
- **Vitaly Abalakov, (1906–1986)** Russia – camming devices, Abalakov thread (or V-thread) gearless ice climbing anchor
- **Hovannes Adamian, (1879–1932)** Armenia/Russia – tricolour principle of the colour television
- **Robert Adler, (1913–2007)** Austria/United States – wireless remote control
- **Anatoly Alexandrov, (1903–1994)** Russia – anti-mine demagnetising of ships, naval nuclear reactors (including one for the first nuclear icebreaker)
- **Alexandre Alexeieff, (1901–1982)** Russia/France – pinscreen animation (with his wife Claire Parker)
- **Rostislav Alexeyev, (1916–1980)** Russia – ekranoplan
- **Zhores Alferov, (1930)** Russia – heterotransistor, continuous-wave-operating diode laser (together with Dmitri Garbuzov)
- **Genrich Altshuller, (1926–1998)** Russia – TRIZ ("The Theory of Solving Inventor's Problems")
- **Hermann Anschütz-Kaempfe, (1872–1931)** Germany – Gyrocompass
- **Mary Anderson, (1866–1953)** United States – windshield wiper blade
- **Vasily Andreyev, (1861–1918)** Russia – standard balalaika
- **Oleg Antonov, (1906–1984)** Russia – An-series aircraft, including A-40 winged tank and An-124 (the largest serial cargo, later modified to world's largest fixed-wing aircraft An-225)
- **Nicolas Appert, (1749–1841)** France – canning (airtight food preservation)
- **Archimedes, (c. 287–212 BC**) Greece – Archimedes' screw
- **Ami Argand, (1750–1803)** France – Argand lamp
- **Edwin Howard Armstrong, (1890–1954)** U.S. – FM radio
- **William George Armstrong, (1810–1900)** UK – hydraulic crane
- **Neil Arnott, (1788–1874)** UK – waterbed
- **Lev Artsimovich, (1909–1973)** Russia – tokamak
- **Joseph Aspdin, (1788–1855)** England – Portland cement
- **John Vincent Atanasoff, (1903–1995)** Bulgaria/U.S. – modern digital computer

B

- **Charles Babbage, (1791–1871)** UK – analytical engine (semi-automatic)
- **Roger Bacon, (1214–1292)** England – magnifying glass
- **Leo Baekeland, (1863–1944)** Belgian–American – Velox photographic paper and Bakelite
- **Ralph H. Baer, (1922–)** German born American – video game console
- **Abd al-Latif al-Baghdadi, (1162–1231)** Iraq/Egypt – ventilator
- **John Logie Baird, (1888–1946)** Scotland – an electromechanical television, electronic colour television

- **Abi Bakr of Isfahan, (c. 1235)** Persia/Iran – mechanical geared astrolabe with lunisolar calendar analog computer
- **Donat Banki, (1859–1922)** Hungary – inventor of the carburetor
- **Vladimir Baranov-Rossine, (1888–1944)** Ukraine/Russia/France – Optophonic Piano, pointillist or dynamic military camouflage
- **John Barber, (1734–1801)** England – gas turbine
- **John Bardeen, (1908–1991)** U.S. – co-inventor of the transistor
- **Vladimir Barmin, (1909–1993)** Russia – first rocket launch complex (spaceport)
- **Anthony R. Barringer** Canada/U.S. – INPUT (Induced Pulse Transient) airborne electromagnetic system
- **Earl W. Bascom, (1906–1995)** Canada/U.S. – side-delivery rodeo chute, hornless rodeo saddle, rodeo bareback rigging, rodeo chaps
- **Nikolay Basov, (1922–2001)** Russia – co-inventor of laser and maser
- **Muhammad ibn Jābir al-Harrānī al-Battānī (Albatenius), (853-929)** Syria/Turkey – observation tube
- **Eugen Baumann, (1846–1896)** Germany – PVC
- **Trevor Baylis, (1937–)** UK – a wind-up radio
- **Francis Beaufort, (1774–1857)** France – Beaufort scale
- **Ernest Beaux, (1881–1961)** Russia/France – Chanel No. 5
- **Arnold O. Beckman, (1900–2004)** U.S. – pH meter
- **Ulugh Beg, (1394–1449)** Persia/Iran – Fakhri sextant, mural sextant
- **Vladimir Bekhterev, (1857–1927)** Russia – Bekhterev's Mixture
- **Alexander Graham Bell, (1847–1922)** Canada, Scotland, and U.S. – telephone
- **Karl Benz, (1844–1929)** Germany – the petrol-powered automobile
- **Alexander Bereznyak, (1912–1974)** Russia – first rocket-powered fighter aircraft, BI-1 (together with Isaev)
- **Georgy Beriev, (1903–1979)** Georgia/Russia – Be-series amphibious aircraft
- **Emile Berliner, (1851–1929)** Germany and U.S. – the disc record gramophone
- **Nikolay Benardos, (1842–1905)** Russia – arc welding (specifically carbon arc welding, the first arc welding method)
- **Tim Berners-Lee, (1955–)** UK – with Robert Cailliau, the World Wide Web
- **Bi Sheng, (ca. 990–1051)** China – clay movable type printing
- **Gerd Binnig, (1947–)** Germany – with Heinrich Rohrer, scanning tunneling microscope
- **Laszlo Biro, (1899–1985)** Hungary – modern ballpoint pen
- **Clarence Birdseye, (1886–1956)** U.S. – frozen food process
- **Abū Rayhān al-Bīrūnī, (973–1048)** Persia/Iran – mechanical geared lunisolar calendar, laboratory and surveying equiptment.
- **J. Stuart Blackton, (1875–1941)** U.S. – stop-motion film
- **Otto Blathy (1860–1939)** Hungary – co-inventor of the transformer, wattmeter, alternating current (AC) and turbogenerator
- **Fyodor Blinov, (1827–1902)** Russia – first tracked vehicle, steam-powered continuous track tractor

- **Katharine B. Blodgett, (1898–1979)** UK – nonreflective glass
- **Alan Blumlein, (1903–1942)** England – stereo
- **Nils Bohlin, (1920–2002)** Sweden – the three-point seat belt
- **Joseph-Armand Bombardier, (1907–1964)** Canada – snowmobile
- **Sam Born** Russia/U.S. – lollipop-making machine
- **Satyendra Nath Bose, (1894–1974)** India – work on gas-like properties of electromagnetic radiation, Boson and providing foundation for Bose-Einstein statistics and Bose-Einstein Condensate
- **Jagdish Chandra Bose, (1858–1937)** India – Crescograph
- **George de Bothezat, (1882–1940)** Russia/U.S. – quadrotor helicopter (The Flying Octopus)
- **Robert W. Bower, (1936–)** U.S. – self-aligned–gate MOSFET
- **Seth Boyden, (1788–1870)** U.S. – nail-making machine
- **Walter Houser Brattain, (1902–1987)** U.S. – co-inventor of the transistor
- **Louis Braille, (1809–1852)** France – the Braille writing system
- **Jacques E. Brandenberger, (1872–1954)** Switzerland – Cellophane
- **Édouard Branly, (1844–1940)** France – the coherer, the first widely used detector for radio communication.
- **Karl Ferdinand Braun, (1850–1918)** Germany – cathode-ray tube oscilloscope
- **Harry Brearley, (1871–1948)** UK – stainless steel
- **Sergey Brin, (1973–)** Russia/U.S. – with Larry Page invented Google web search engine
- **Mikhail Britnev, (1822–1889)** Russia – first metal-hull icebreaker (Pilot)
- **Rachel Fuller Brown, (1898–1980)** U.S. – Nystatin, the world's first antifungal antibiotic
- **John Moses Browning, (1855–1926)** U.S. – automatic handgun[disambiguation needed]
- **Maria Christina Bruhn, (1732–1802)** Sweden
- **Nikolay Brusentsov, (born 1925)** Russia – ternary computer (Setun)
- **Edwin Beard Budding, (1795–1846)** UK – lawnmower
- **Gersh Budker, (1918–1977)** Russia – electron cooling, co-inventor of collider
- **Corliss Orville Burandt** U.S. – Variable valve timing
- **Henry Burden,(1791–1871)** Scotland and U.S. – Horseshoe machine (made 60 horse shoes in a minute), first usable Iron Railed road spike, and builder of the most powerful waterwheel in history "Niagara of Water-Wheels"
- **Richard James Burgess** U.K. – Simmons (electronic drum company), co-inventor of SDS5 drum synthesizer
- **Aleksandr Butlerov, (1828–1886)** Russia – hexamine, formaldehyde

C

- **Robert Cailliau, (1947–)** Belgium – with Tim Berners-Lee, the World Wide Web
- **C`ai Lun, (50–121 AD)** China – paper
- **Marvin Camras, (1916–1995)** U.S. – magnetic recording
- **Chester Carlson, (1906–1968)** U.S. – Xerography

- **Wallace Carothers, (1896–1937)** U.S. – Nylon
- **George Washington Carver, (1864–1943)** U.S. - Peanut Butter
- **Hezarfen Ahmet Celebi, (fl.1630–1632)** Turkey – artificial wings
- **Joseph Constantine Carpue, (1764–1846)** France – rhinoplastic surgery
- **George Cayley, (1773–1857)** UK – glider, tension-spoke wheels, Caterpillar track
- **Roxey Ann Caplin, (1793–1888)** UK – Corsets
- **Dennis Charter, (1952–)** Australia – secure electronic payment system for internet PaySafe
- **Vladimir Chelomey, (1914–1984)** Russia – first space station (Salyut), Proton rocket (the most used heavy lift launch system)
- **Pavel Cherenkov, (1904–1990)** Russia – Cherenkov detector
- **Adrian Chernoff, (1971–)** U.S. – GM Autonomy, GM Hy-wire, Rubber Bandits
- **Evgeniy Chertovsky, (1902–)** Russia – pressure suit
- **Alexander Chizhevsky, (1897–1964)** Russia – air ionizer
- **Andrey Chokhov, (c. 1545–1629)** Russia – Tsar Cannon
- **Niels Christensen (1865–1952)** U.S. – O-ring
- **Samuel Hunter Christie, (1784–1865)** UK – Wheatstone bridge
- **Juan de la Cierva, (1895–1936)** Spain – the autogyro
- **Alexandru Ciurcu, (1854–1922)** Romania – Reaction engine
- **Georges Claude, (1870–1960)** France – neon lamp
- **Henri Coandă, (1886–1972)** Romania – Jet engine
- **Josephine Cochrane, (1839–1913)** U.S. – dishwasher
- **Christopher Cockerell, (1910–1999)** UK – Hovercraft
- **Aeneas Coffey, (1780–1852)** Ireland – heat exchanger, Coffey still
- **Sir Henry Cole, (1808–1882)** England – Christmas card
- **Samuel Colt, (1814–1862)** U.S. – Revolver
- **George Constantinescu, (1881–1965)** Romania – Interrupter gear
- **Lloyd Groff Copeman, (1865–1956)** U.S. – Electric stove
- **Cornelis Corneliszoon, (1550–1607)** The Netherlands – sawmill
- **Jacques Cousteau, (1910–1997)** France – co-inventor of the aqualung and the Nikonos underwater camera
- **Thomas Crapper, (1836–1910)** England – ballcock (toilet valve)
- **Bartolomeo Cristofori, (1655–1731)** Italy – piano
- **János Csonka, (1852–1939)** Hungary – co-inventor of carburetor
- **Nicolas-Joseph Cugnot, (1725–1804)** France – first steam-powered road vehicle
- **William Cumberland Cruikshank, (1745–1800)** UK – chlorinated water
- **William Cullen, (1710–1790)** UK – first artificial refrigerator
- **Glenn Curtiss, (1878–1930)** U.S. – ailerons

D

- **Gustaf Dalén, (1869–1937)** Sweden – AGA cooker; Dalén light; Agamassan
- **Salvino D'Armate, (1258–1312)** Italy – credited for inventing eyeglasses in 1284

- **Leonardo da Vinci, (1452–1519)** Italy – conceptualized a helicopter, a tank, concentrated solar power, the double hull. Relatively few of his designs were constructed during his lifetime. Some that were used are an automated bobbin winder and a machine for testing the tensile strength of wire
- **Corradino D'Ascanio, (1891–1981)** Italy – D'AT3 helicopter; Vespa scooter
- **Jacob Davis, (1868–1908)** U.S. – riveted jeans
- **Edmund Davy, (1785–1857)** Ireland – acetylene
- **Humphry Davy, (1778–1829)** UK – Davy miners lamp
- **Joseph Day, (1855–1946)** UK – the crankcase-compression two-stroke engine
- **Lee DeForest, (1873–1961)** U.S. – triode
- **Vasily Degtyaryov, (1880–1949)** Russia – first self-loading carbine, Degtyaryov-series firearms, co-developer of Fedorov Avtomat
- **Akinfiy Demidov, (1678–1745)** Russia – co-developer of rebar, cast iron dome, lightning rod (all found in the Leaning Tower of Nevyansk)
- **Yuri Nikolaevich Denisyuk, (1927–2006)** Russia – 3D holography
- **Miksa Deri (1854–1938)** Hungary – co-inventor of an improved closed-core transformer
- **James Dewar, (1842–1923)** UK – Thermos flask
- **Aleksandr Dianin, (1851–1918)** Russia – Bisphenol A, Dianin's compound
- **William Kennedy Laurie Dickson, (1860–1935)** UK – motion picture camera
- **Philip Diehl, (1847–1913)** U.S. – Ceiling fan, electric sewing machine
- **Rudolf Diesel, (1858–1913)** Germany – Diesel engine
- **Al-Dinawari, (828-896)** Persia/Iran – more than a hundred plant drugs
- **William H. Dobelle, (1943–2004)** United States – first functioning artificial eye
- **Ray Dolby, (1933-)** U.S. – Dolby noise-reduction system
- **Mikhail Dolivo-Dobrovolsky, (1862–1919)** Poland/Russia – three-phase electric power (first 3-phase hydroelectric power plant, 3-phase electrical generator, 3-phase motor and 3-phase transformer)
- **Nikolay Dollezhal, (1899–2000)**Russia – AM-1 reactor for the 1st nuclear power plant, other RBMK reactors, VVER pressurized water reactors
- **Bryan Donkin, (1768–1855)** UK – print industry composition roller
- **Hub van Doorne, (1900–1979)** Netherlands, Variomatic continuously variable transmission
- **Anastase Dragomir, (1896–1966)** Romania – Ejection seat
- **Karl Drais, (1785–1851)** Germany – dandy horse (Draisine)
- **Cornelius Drebbel, (1572–1633)** The Netherlands – first navigable submarine
- **Richard Drew, (1899–1980)** U.S. – Masking tape
- **John Boyd Dunlop, (1840–1921)** UK – first practical pneumatic tyre
- **Cyril Duquet, (1841–1922)** Canada – Telephone handset
- **Alexey Dushkin, (1904–1977)** Russia – deep column station
- **James Dyson, (1947–)** UK – Dual Cyclone bagless vacuum cleaner, incorporating the principles of cyclonic separation.

E

- **George Eastman, (1854–1932)** U.S. – roll film
- **J. Presper Eckert, (1919–1995)** U.S. – ENIAC - the first general purpose programmable digital computer
- **Thomas Edison, (1847–1931)** U.S. – phonograph, commercially practical light bulb, stock ticker, ticker-tape machine etc.
- **Willem Einthoven, (1860–1927)** The Netherlands – the electrocardiogram
- **Ivan Elmanov** Russia – first monorail (horse-drawn)
- **Rune Elmqvist, (1906–1996)** Sweden – implantable pacemaker
- **John Haven Emerson, (1906–1997)** U.S. – iron lung
- **Douglas Engelbart, (1925–)** U.S. – the computer mouse
- **John Ericsson, (1803–1889)** Sweden – the two screw-propeller
- **Lars Magnus Ericsson, (1846–1926)** Sweden – the handheld micro telephone[citation needed]
- **Ole Evinrude, (1877–1934)** Norway – outboard motor

F

- **Peter Carl Fabergé, (1846–1920)** Russia – Fabergé Eggs
- **Samuel Face, (1923–2001)** U.S. – concrete flatness/levelness technology; Lightning Switch
- **Federico Faggin, (1941–)** Italy – microprocessor
- **Michael Faraday, (1791–1867)** England – electric transformer, electric motor
- **Johann Maria Farina, (1685–1766)** Germany; Eau de Cologne
- **Philo Farnsworth, (1906–1971)** U.S. – electronic television
- **Muhammad al-Fazari, (d. 796/806)** Persia/Iran/Iraq – brass astrolabe
- **James Fergason, (1934–)** U.S. – improved liquid crystal display
- **Enrico Fermi, (1901–1954)** Italy – nuclear reactor
- **Humberto Fernández Morán, (1924–1999)** Venezuela – Diamond scalpel, Ultra microtome
- **Reginald Fessenden, (1866–1932)** Canada – two-way radio
- **Adolf Gaston Eugen Fick, (1829–1901)** Germany – contact lens
- **Abbas Ibn Firnas (Armen Firman), (810-887)** Al-Andalus – artificial wings,, fused quartz and silica glass, metronome
- **Artur Fischer, (1919–)** Germany – fasteners including fischertechnik.
- **Gerhard Fischer** Germany/U.S. – hand-held metal detector
- **Nicolas Florine, (1891–1972)** Georgia/Russia/Belgium – first tandem rotor helicopter to fly freely
- **Robert Fulton, (1765–1815)** United States – first commercially successful steamboat, first practical submarine
- **Alexander Fleming, (1881–1955)** Scotland – penicillin
- **John Ambrose Fleming, (1848–1945)** England – vacuum diode
- **Sandford Fleming, (1827–1915)** Canada – Universal Standard Time

- **Tommy Flowers, (1905–1998)** England – Colossus an early electronic computer.
- **Jean Bernard Léon Foucault, (1819–1868)** France – Foucault pendulum, gyroscope, eddy current
- **Benoît Fourneyron, (1802–1867)** France – water turbine
- **John Fowler, (1826–1864),** England – steam-driven ploughing engine
- **Benjamin Franklin, (1706–1790)** U.S. – the pointed lightning rod conductor, bifocal glasses, the Franklin stove, the glass harmonica
- **Augustin-Jean Fresnel, (1788–1827)** France – Fresnel lens
- **William Friese-Greene, (1855–1921)** England – cinematography
- **Buckminster Fuller, (1895–1983)** U.S. – geodesic dome
- **Ivan Fyodorov, (c. 1510–1583**) Russia/Poland–Lithuania – invented multibarreled mortar, introduced printing in Russia
- **Svyatoslav Fyodorov, (1927–2000)** Russia – radial keratotomy
- **Vladimir Fyodorov, (1874–1966)** Russia – Fedorov Avtomat (first self-loading battle rifle, arguably the first assault rifle)

G

- **Dennis Gabor, (1900–1979)** UK – holography
- **Boris Borisovich Galitzine, (1862–1916)** Russia – electromagnetic seismograph
- **Dmitri Garbuzov, (1940–2006)** Russia/U.S. – continuous-wave-operating diode lasers (together with Zhores Alferov), high-power diode lasers
- **Elmer R. Gates, (1859–1923)** USA – foam fire extinguisher, electric loom mechanisms, magnetic & diamagnetic separators, educational toy ("box & blocks")
- **Richard J. Gatling, (1818–1903)** U.S. – wheat drill, first successful machine gun
- **Georgy Gause, (1910–1986)** Russia – gramicidin S, neomycin, lincomycin and other antibiotics
- **E. K. Gauzen** Russia – three bolt equipment (early diving costume)
- **Hans Wilhelm Geiger, (1882–1945)** Germany – Geiger counter
- **Andrey Geim, (born 1958)** Russia/United Kingdom – graphene
- **Nestor Genko, (1839–1904)** Russia – Genko's Forest Belt (the first large-scale windbreak system)
- **Henri Giffard, (1825–1882)** France – powered airship, injector
- **Valentyn Glushko, (1908–1989)** Russia – hypergolic propellant, electric propulsion, Soviet rocket engines (including world's most powerful liquid-fuel rocket engine RD-170)
- **Heinrich Göbel, (1818–1893)** Germany – incandescent lamp
- **Leonid Gobyato, (1875–1915)** Russia – first modern man-portable mortar
- **Robert Goddard, (1882–1945)** U.S. – liquid fuel rocket
- **Igor Gorynin, (1926)** Russia – weldable titanium alloys, high strength aluminium alloys, radiation-hardened steels
- **Peter Carl Goldmark, (1906–1977)** Hungary – vinyl record (LP), CBS colour television
- **Charles Goodyear, (1800–1860)** U.S. – vulcanization of rubber
- **Gordon Gould, (1920–2005)** U.S. – co-inventor of laser

- **Richard Hall Gower, (1768–1833)** England – ship's hull and rigging
- **Boris Grabovsky, (1901–1966)** Russia – cathode commutator, an early electronic TV pickup tube
- **Bette Nesmith Graham, (1924–1980)** U.S. – Liquid Paper
- **James Henry Greathead, (1844–1896)** South Africa – tunnel boring machine, tunnelling shield technique
- **Chester Greenwood, (1858–1937)** U.S. – thermal earmuffs
- **James Gregory, (1638–1675)** Scotland – Gregorian telescope
- **William Robert Grove, (1811–1896)** Wales – fuel cell
- **Otto von Guericke, (1602–1686)** Germany – vacuum pump, manometer, dasymeter
- **Joseph-Ignace Guillotin, (1738–1814)** France – Guillotine, a device for human decapitation
- **Mikhail Gurevich, (1893–1976)** Russia – MiG-series fighter aircraft, including world's most produced jet aircraft MiG-15 and most produced supersonic aircraft MiG-21 (together with Artem Mikoyan)
- **Hakan Gürsu, (c. 2007)** Turkey – Volitan
- **Johann Gutenberg, (c. 1390s–1468)** Germany – movable type printing press
- **Samuel Guthrie, (1782–1848)** U.S. – discovered chloroform

H

- **John Hadley, (1682–1744)** England – Octant
- **Waldemar Haffkine, (1860–1930)** Russia/Switzerland – first anti-cholera and anti-plague vaccines
- **Tracy Hall, (1919–2008)** U.S. – synthetic diamond
- **John Hays Hammond, Jr., (1888–1965)** U.S. - radio control
- **James Hargreaves, (1720–1778)** England – spinning jenny
- **John Harington, (1561–1612)** England – the flush toilet
- **John Harrison, (1693–1776)** England – marine chronometer
- **Victor Hasselblad, (1906–1978)** Sweden – invented the 6 x 6 cm single-lens reflex camera
- **Ibn al-Haytham (Alhazen), (965–1039)** Iraq – camera obscura, pinhole camera, magnifying glass
- **George H. Heilmeier, (1936–)** U.S. – liquid crystal display (LCD)
- **Robert A. Heinlein, (1907–1988)** U.S. – waterbed
- **Jozef Karol Hell, (1713–1789)** Slovakia – the water pillar
- **Rudolf Hell, (1901–2002)** Germany – the Hellschreiber
- **Joseph Henry, (1797–1878)** Scotland/U.S. – electromagnetic relay
- **Heron, (c. 10-70)** Roman Egypt – usually credited with invention of the aeolipile, although it may have been described a century earlier
- **John Herschel, (1792–1871)** England – photographic fixer (hypo), actinometer
- **William Herschel, (1738–1822)** England – infrared
- **Heinrich Hertz, (1857–1894)** Germany – radio telegraphy, electromagnetic radiation

- **George de Hevesy, (1885–1966)** Hungary – radioactive tracer
- **Rowland Hill, (1795–1879)** UK – postage stamp
- **Maurice Hilleman, (1919–2005)** – vaccines against childhood diseases
- **Ted Hoff, (1937–)** U.S. – microprocessor
- **Felix Hoffmann (Bayer), (1868–1949)** Germany – Aspirin
- **Herman Hollerith, (1860–1929)** U.S. – recording data on a machine readable medium, tabulator, punched cards
- **Nick Holonyak, (1928–)** U.S. – LED (Light Emitting Diode)
- **Robert Hooke, (1635–1703)** England – balance wheel, iris diaphragm
- **Erna Schneider Hoover, (1926–)** U.S. – computerized telephone switching system
- **Frank Hornby, (1863–1936)** England – invented Meccano
- **Coenraad Johannes van Houten, (1801–1887)** Netherlands – cocoa powder, cacao butter, chocolate milk
- **Elias Howe, (1819–1867)** U.S. – sewing machine
- **Muhammad Husayn, (fl.17th century)** Persia/Iran – cartographic Qibla indicator with sundial and compass
- **Christiaan Huygens, (1629–1695)** Netherlands – pendulum clock
- **John Wesley Hyatt, (1837–1920)** U.S. – celluloid manufacturing.

I

- **Sumio Iijima, (1939-)** Japan – Carbon nanotubes
- **Gavriil Ilizarov, (1921–1992)** Russia – Ilizarov apparatus, external fixation, distraction osteogenesis
- **Sergey Ilyushin, (1894–1977)** Russia – Il-series aircraft, including Ilyushin Il-2 bomber (the most produced military aircraft in history)
- **János Irinyi, (1817–1895)** Hungary – noiseless match
- **Aleksei Isaev, (1908–1971)** Russia – first rocket-powered fighter aircraft, BI-1 (together with Isaev)
- **Ub Iwerks, (1901–1971)** U. S. – Multiplane camera for animation

J

- **Jabir ibn Aflah (Geber), (c. 1100–1150)** Islamic Spain – portable celestial globe
- **Jābir ibn Hayyān (Geber), (c. 721-815)** Persia/Iran – pure distillation, liquefaction, purification, retort, mineral acids, nitric and sulfuric acids, hydrochloric acid, aqua regia, alum, alkali, borax, pure sal ammoniac, lead carbonatic, arsenic, antimony, bismuth, pure mercury and sulfur, plated mail
- **Moritz von Jacobi, (1801–1874)** Germany/Russia – electrotyping, electric boat
- **Karl Guthe Jansky, (1905–1950)** U.S. – radio telescope
- **Karl Jatho, (1873–1933)** Germany – aeroplane
- **Al-Jazari, (1136–1206)** Iraq – crank-driven and hydropowered saqiya chain pump, crank-driven screw and screwpump, elephant clock, weight-driven clock, weight-driven pump,

reciprocating piston suction pump, geared and hydropowered water supply system, programmable humanoid robots, robotics, hand washing automata, flush mechanism, lamination, static balancing, paper model, sand casting, molding sand, intermittency, linkage

- **Ibn Al-Jazzar (Algizar), (c. 898-980)** Tunisia – sexual dysfunction and erectile dysfunction treatment drugs
- **Steve Jobs, (1955–2011)** U.S. – Apple Macintosh computer, iPod, iPhone, iPad and countless other devices and software operating systems and applications
- **György Jendrassik, (1898–1954)** Hungary – turboprop
- **Charles Francis Jenkins, (1867–1934)** – television and movie projector (Phantoscope)
- **Carl Edvard Johansson, (1864–1943)** Sweden – Gauge blocks
- **Johan Petter Johansson, (1853–1943)** Sweden – the pipe wrench and the modern adjustable spanner
- **Nancy Johnson** U.S. – American version of the hand cranked ice cream machine in (1843)
- **Scott A. Jones, (1960–)** U.S. – created one of the most successful versions of voicemail as well as ChaCha Search, a human-assisted internet search engine.
- **Whitcomb Judson, (1836–1909)** U.S. – zipper

K

- **Mikhail Kalashnikov, (1919–)** Russia – AK-47 and AK-74 assault rifles (the most produced ever)[1]
- **Dean Kamen, (1951–)** U.S. – Invented the Segway HT scooter and the IBOT Mobility Device
- **Heike Kamerlingh Onnes, (1853–1926)** Netherlands – liquid helium
- **Nikolay Kamov, (1902–1973)** Russia – armored battle autogyro, Ka-series coaxial rotor helicopters
- **Pyotr Kapitsa, (1894–1984)** Russia – first ultrastrong magnetic field creating techniques, basic low-temperature physics inventions
- **Georgii Karpechenko, (1899–1941)** Russia – rabbage (the first ever non-sterile hybrid obtained through the crossbreeding)
- **Jamshīd al-Kāshī, (c. 1380–1429)** Persia/Iran – plate of conjunctions, analog planetary computer
- **Yevgeny Kaspersky, (1965–)** Russia – Kaspersky Anti-Virus, Kaspersky Internet Security, Kaspersky Mobile Security anti-virus products
- **Adolphe Kégresse, (1879–1943)** France/Russia – Kégresse track (first half-track and first off-road vehicle with continuous track), dual clutch transmission
- **Mstislav Keldysh, (1911–1978)** Latvia/Russia – co-developer of Sputnik 1 (the first artificial satellite) together with Korolyov and Tikhonravov
- **John Harvey Kellogg, (1852–1943)** cornflake breakfasts
- **John George Kemeny, (1926–1992)** Hungary – co-inventor of BASIC
- **Alexander Kemurdzhian, (1921–2003)** Russia – first space exploration rover (Lunokhod)
- **Kerim Kerimov, (1917–2003)** Azerbaijan and Russia – co-developer of human spaceflight, space dock, space station

- **Charles F. Kettering, (1876–1958)** U.S. – invented automobile self-starter ignition, Freon ethyl gasoline and more
- **Kaldi, (fl.9th century)** Ethiopia – coffee
- **Fazlur Khan, (1929–1982)** Bangladesh – structural systems for high-rise skyscrapers
- **Yulii Khariton, (1904–1996)** Russia – chief designer of the Soviet atomic bomb, co-developer of the Tsar Bomb
- **Anatoly Kharlampiev, (1906–1979)** Russia – Sambo (martial art)
- **Al-Khazini, (fl.1115–1130)** Persia/Iran – hydrostatic balance
- **Konstantin Khrenov, (1894–1984)** Russia – underwater welding
- **Abu-Mahmud al-Khujandi, (c. 940–1000)** Persia/Iran – astronomical sextant
- **Muhammad ibn Mūsā al-Khwārizmī (Algoritmi), (c. 780-850)** Persia/Iran – modern algebra, mural instrument, horary quadrant, Sine quadrant, shadow square
- **Erhard Kietz, (1909–1982)** Germany & U.S.A. – signal improvements for video transmissions Erhard Kietz Patents
- **Jack Kilby, (1923–2005)** U.S. – patented the first integrated circuit
- **Al-Kindi (Alkindus), (801–873)** Iraq/Yemen – ethanol, pure distilled alcohol, cryptanalysis, frequency analysis
- **Fritz Klatte, (1880–1934)** Germany – vinyl chloride, forerunner to polyvinyl chloride
- **Margaret E. Knight, (1838–1914)** U.S. – machine that completely constructs box-bottom brown paper bags
- **Ivan Knunyants, (1906–1990)** Armenia/Russia – capron, Nylon 6, polyamide-6
- **Robert Koch, (1843–1910)** Germany – method for culturing bacteria on solid media
- **Willem Johan Kolff, (1911–2009)** Netherlands – artificial kidney hemodialysis machine
- **Rudolf Kompfner, (1909–1977)** U.S. – Traveling-wave tube
- **Konstantin Konstantinov, (1817 or 1819–1871)** Russia – device for measuring flight speed of projectiles, ballistic rocket pendulum, launch pad, rocket-making machine
- **Sergey Korolyov, (1907–1966)** Ukraine/Russia – first successful intercontinental ballistic missile (R-7 Semyorka), R-7 rocket family, Sputniks (including the first Earth-orbiting artificial satellite), Vostok program (including the first human spaceflight)
- **Nikolai Korotkov, (1874–1920)** Russia – auscultatory technique for blood pressure measurement
- **Semen Korsakov, (1787–1853)** Russia – punched card for information storage
- **Mikhail Koshkin, (1898–1940)** Russia – T-34 medium tank, the best and most produced tank of World War II[2]
- **Ognjeslav Kostović, (1851–1916**) Serbia/Russia – arborite (high-strength plywood, an early plastic)
- **Gleb Kotelnikov, (1872–1944)** Russia – knapsack parachute, drogue parachute
- **Alexei Krylov, (1863–1945)** Russia – gyroscopic damping of ships
- **Ivan Kulibin, (1735–1818)** Russia – egg-shaped clock, candle searchlight, elevator using screw mechanisms, a self-rolling carriage featuring a flywheel, brake, gear box, and bearing, an early optical telegraph
- **Igor Kurchatov, (1903–1960)** Russia – first nuclear power plant, first nuclear reactors for submarines and surface ships

- **Raymond Kurzweil, (1948–)** Optical character recognition; flatbed scanner
- **Stephanie Kwolek, (1923–)** U.S. – Kevlar
- **John Howard Kyan (1774–1850)** Ireland – The process of Kyanization used for wood preservation

L

- **Dmitry Lachinov, (1842–1902)** Russia – mercury pump, economizer for electricity consumption, electrical insulation tester, optical dynamometer, photometer, elecrolyser
- **René Laënnec, (1781–1826)** France – stethoscope
- **Lala Balhumal Lahuri, (c. 1842)** Mughal India – seamless globe and celestial globe
- **Georges Lakhovsky, (1869–1942)** Russia/U.S. – Multiple Wave Oscillator
- **Hedy Lamarr, (1913–2000)** Austria and U.S. – Spread spectrum radio
- **Edwin H. Land, (1909–1991)** U.S. – Polaroid polarizing filters and the Land Camera
- **Samuel P. Langley, (1834–1906)** U.S. – bolometer
- **Irving Langmuir, (1851–1957)** U.S. – gas filled incandescent light bulb, hydrogen welding
- **Lewis Latimer, (1848–1928)** – Invented the modern day light bulb
- **Gustav de Laval, (1845–1913)** Sweden – invented the milk separator and the milking machine
- **Semyon Lavochkin, (1900–1960)** Russia – La-series aircraft, first operational surface-to-air missile S-25 Berkut
- **John Bennet Lawes, (1814–1900)** England – superphosphate or chemical fertilizer
- **Nikolai Lebedenko** Russia – Tsar Tank, the largest armored vehicle in history
- **Sergei Lebedev, (1874–1934)** Russia – commercially viable synthetic rubber
- **Antoni van Leeuwenhoek, (1632–1723)** Netherlands – development of the microscope
- **Jean-Joseph Etienne Lenoir, (1822–1900)** Belgium – internal combustion engine, motorboat
- **R. G. LeTourneau, (1888–1969)** U.S.- electric wheel, motor scraper, mobile oil drilling platform, bulldozer, cable control unit for scrapers
- **Willard Frank Libby, (1908–1980)** U.S. – radiocarbon dating
- **Justus von Liebig, (1803–1873)** Germany – nitrogen-based fertilizer
- **Otto Lilienthal, (1848–1896)** Germany – hang glider
- **Frans Wilhelm Lindqvist, (1862–1931)** Sweden – Kerosene stove operated by compressed air
- **Hans Lippershey, (1570–1619)** Netherlands – telescope
- **Lisitsyn brothers, Ivan Fyodorovich and Nazar Fyodorovich** Russia – samovar (the first documented makers)
- **William Howard Livens, (1889–1964)** England – chemical warfare – Livens Projector.
- **Alexander Lodygin, (1847–1923)** Russia – electrical filament, incandescent light bulb with tungsten filament
- **Mikhail Lomonosov, (1711–1765)** Russia – night vision telescope, off-axis reflecting telescope, coaxial rotor, re-invented smalt

- **Yury Lomonosov, (1876–1952)** Russia/United Kingdom – first successful mainline diesel locomotive
- **Aleksandr Loran, (1849 – after 1911)** Russia – fire fighting foam, foam extinguisher
- **Oleg Losev, (1903–1942)** Russia – light-emitting diode, crystadine
- **Archibald Low, (1882–1956)** Britain – Pioneer of radio guidance systems
- **Auguste and Louis Lumière** France – Cinématographe
- **Gleb Lozino-Lozinskiy, (1909–2001)** Russia – Buran (spacecraft), Spiral project
- **Ignacy Łukasiewicz, (1822–1882)** Poland – modern kerosene lamp
- **Giovanni Luppis, (1813–1875)** Austrian Empire (ethnical Italian) – self-propelled torpedo
- **Ali Kashmiri ibn Luqman, (fl.1589–1590)** Mughal India – seamless globe and celestial globe
- **Arkhip Lyulka, (1908–1984)** Russia – first double jet turbofan engine, other Soviet aircraft engines

M

- **Ma Jun, (c. 200–265)** China – South Pointing Chariot (see differential gear), mechanical puppet theater, chain pumps, improved silk looms
- **Aleksandr Makarov** Russia/Germany – Orbitrap mass spectrometer
- **Stepan Makarov, (1849–1904)** Russia – Icebreaker Yermak, the first true icebreaker able to ride over and crush pack ice
- **Nestor Makhno, (1888–1934)** Ukraine/Russia – tachanka
- **Charles Macintosh, (1766–1843)** Scotland – waterproof raincoat, life vest
- **Victor Makeev, (1924–1985)** Russia – first submarine-launched ballistic missile
- **Dmitri Dmitrievich Maksutov, (1896–1964)** Russia – Maksutov telescope
- **Sergey Malyutin, (1859–1937)** Russia – designed the first matryoshka doll (together with Vasily Zvyozdochkin)
- **Al-Ma'mun, (786-833)** Iraq – singing bird automata, terrestrial globe
- **Boris Mamyrin, (1919–2007)** Russia – reflectron (ion mirror)
- **George William Manby, (1765–1854)** England – Fire extinguisher
- **Guglielmo Marconi, (1874–1937)** Italy – radio telegraphy
- **John Landis Mason, (1826–1902)** U.S. – Mason jars
- **John W. Mauchly, (1907–1980)** U.S. – ENIAC - the first general purpose programmable digital computer
- **Henry Maudslay, (1771–1831)** England – screw-cutting lathe, bench micrometer
- **Hiram Maxim, (1840–1916)** USA born, England – First self-powered machine gun
- **James Clerk Maxwell (1831–1879)** and Thomas Sutton, Scotland – colour photography
- **Stanley Mazor, (1941-)** U.S. – microprocessor
- **John McAdam, (1756–1836)** Scotland – improved "macadam" road surface
- **Elijah McCoy, (1843–1929)** Canada – Displacement lubricator
- **Ilya Ilyich Mechnikov, (1845–1916)** Russia – probiotics
- **Hippolyte Mège-Mouriés, (1817–1880)** France – margarine

- **Dmitri Mendeleev, (1834–1907)** Russia – Periodic table, pycnometer, pyrocollodion, also credited with determining the ideal vodka proof as 38% (later rounded to 40%)
- **Antonio Meucci, (1808–1889)** Italy – telephone (prototype)
- **Édouard Michelin, (1859–1940)** France – pneumatic tire
- **Anthony Michell, (1870–1959)** Australia – tilting pad thrust bearing, crankless engine
- **Artem Mikoyan, (1905—1970)** Armenia/Russia – MiG-series fighter aircraft, including world's most produced jet aircraft MiG-15 and most produced supersonic aircraft MiG-21 (together with Mikhail Gurevich)
- **Alexander Mikulin, (1895–1985)** Russia – Mikulin AM-34 and other Soviet aircraft engines, co-developer of the Tsar Tank
- **Mikhail Mil, (1909—1970)** Russia – Mi-series helicopter aircraft, including Mil Mi-8 (the world's most-produced helicopter) and Mil Mi-12 (the world's largest helicopter)
- **Pavel Molchanov, (1893–1941)** Russia – radiosonde
- **Jules Montenier, (c. 1910)** U.S. – modern anti-perspirant deodorant
- **Montgolfier brothers, (1740–1810) and (1745–1799)** France – hot-air balloon
- **John J. Montgomery, (1858–1911)** U.S. – heavier-than-air gliders
- **Narcis Monturiol i Estarriol, (1819–1885)** Spain – steam powered submarine
- **Robert Moog, (1934–2005)** U.S. – the Moog synthesizer
- **Samuel Morey, (1762–1843)** U.S. – internal combustion engine
- **Garrett A. Morgan, (1877–1963)** U.S. – inventor of the gas mask, and traffic signal.
- **Samuel Morse, (1791–1872)** U.S. – telegraph
- **Alexander Morozov, (1904–1979)** Russia – T-54/55 (the most produced tank in history), co-developer of T-34
- **Sergei Ivanovich Mosin, (1849–1902)** Russia – Mosin–Nagant rifle
- **Motorins, Ivan Feodorovich (1660s – 1735) and his son Mikhail Ivanovich (?–1750)** Russia – Tsar Bell
- **Vera Mukhina, (1889–1953)** Russia – welded sculpture
- **Al-Muqaddasi, (c. 946–1000)** Palestine – restaurant
- **Ibn Khalaf al-Muradi, (fl.11th century)** Islamic Spain – geared mechanical clock, segmental gear, epicyclic gearing
- **William Murdoch, (1754–1839)** Scotland – Gas lighting
- **Jozef Murgas, (1864–1929)** Slovakia – inventor of the wireless telegraph (forerunner of the radio)
- **Evgeny Murzin, (1914–1970)** Russia – ANS synthesizer
- **Banū Mūsā brothers, Muhammad (c. 800-873), Ahmad (803-873), Al-Hasan (810-873)** Iraq – mechanical trick devices, hurricane lamp, self-trimming and self-feeding lamp, gas mask, clamshell grab, fail-safe system, mechanical musical instrument, automatic flute player, programmable machine
- **Pieter van Musschenbroek, (1692–1761)** Netherlands – Leyden jar, pyrometer
- **Eadweard Muybridge, (1830–1904)** England – motion picture
- **Fe del Mundo,(1941)** The Philippines - medical incubator made out of bamboo for use in rural communities without electrical power

N

- **Alexander Nadiradze, (1914–1987)** Georgia/Russia – first mobile ICBM (RT-21 Temp 2S), first reliable mobile ICBM (RT-2PM Topol)
- **John Napier, (1550–1617)** Scotland – logarithms
- **James Naismith, (1861–1939)** Canadian born, USA – invented basketball and American football helmet
- **Yoshiro Nakamatsu, (b. 1928)** Japan – floppy disk, "PyonPyon" spring shoes, digital watch, CinemaScope, armchair "Cerebrex", sauce pump, taxicab meter
- **Andrey Nartov, (1683–1756)** Russia – first lathe with a mechanic cutting tool-supporting carriage and a set of gears, fast-fire battery on a rotating disc, screw mechanism for changing the artillery fire angle, gauge-boring lathe for cannon-making, early telescopic sight
- **James Nasmyth, (1808–1890)** Scotland – steam hammer
- **Nebuchadrezzar II, (c. 630–562 BC)** Iraq (Mesopotamia) – screw, screwpump
- **Ted Nelson, (1937–)** USA – Hypertext, Hypermedia
- **Sergey Nepobedimiy, (1921–)** Russia – first supersonic anti-tank guided missile Sturm, other Soviet rocket weaponry
- **John von Neumann, (1903–1957)** Hungary – Von Neumann computer architecture
- **Isaac Newton,(1642–1727)** England – reflecting telescope (which reduces chromatic aberration)
- **Joseph Nicephore Niépce, (1765–1833)** France – photography
- **Nikolai Nikitin, (1907–1973)** Russia – prestressed concrete with wire ropes structure (Ostankino Tower), Nikitin-Travush 4000 project (precursor to X-Seed 4000)
- **Paul Gottlieb Nipkow, (1860–1940)** Germany – Nipkow disk
- **Jun-Ichi Nishizawa, (1926–)** Japan – Optical communication system, SIT/SITh (Static Induction Transistor/Thyristor), Laser diode, PIN diode
- **Alfred Nobel, (1833–1896)** Sweden – dynamite
- **Ludvig Nobel, (1831–1888)** Sweden/Russia – first successful oil tanker
- **Jean-Antoine Nollet, (1700–1770)** France – Electroscope
- **Carl Rickard Nyberg, (1858–1939)** Sweden – the blowtorch

O

- **Theophil Wilgodt Odhner, (1845–1903)** Sweden/Russia – the Odhner Arithmometer, a mechanical calculator
- **Ransom Eli Olds, (1864–1950)** United States – Assembly line
- **Lucien Olivier, (1838–1883)** Belgium or France / Russia – Russian salad (Olivier salad)
- **J. Robert Oppenheimer, (1904–1967)** United States – Atomic bomb
- **Edward Otho Cresap Ord, II, (1858–1923)** American – weapon sights & mining
- **Hans Christian Ørsted, (1777–1851)** Denmark – electromagnetism, aluminium
- **Elisha Otis, (1811–1861)** U.S. – passenger elevator with safety device
- **William Oughtred, (1575–1660)** England – slide rule

P

- **Larry Page, (1973–)** U.S. – with Sergey Brin invented Google web search engine
- **Alexey Pajitnov, (born 1956)** Russia/U.S. – Tetris
- **Helge Palmcrantz, (1842–1880)** Sweden – the multi-barrel, lever-actuated, machine gun
- **Daniel David Palmer, (1845–1913)** Canada – chiropractic
- **Luigi Palmieri, (1807–1896)** Italy – seismometer
- **Alexander Parkes, (1831–1890)** England – celluloid
- **Charles Algernon Parsons, (1854–1931)** British – steam turbine
- **Spede Pasanen, (1930–2001)** Finland – ski jumping sling
- **Blaise Pascal, (1623–1662)** France – Pascal's calculator
- **Gustaf Erik Pasch, (1788–1862)** Sweden – safety match
- **Les Paul, (1915–2009)** U.S. – multitrack recording
- **Nicolae Paulescu, (1869–1931)** Romania – insulin
- **Ivan Pavlov, (1849–1936)** Russia, – classical conditioning
- **John Pemberton, (1831–1888)** U.S. – Coca-Cola
- **Slavoljub Eduard Penkala, (1871–1922)** Croatia – mechanical pencil
- **Henry Perky, (1843–1906)** U.S. – shredded wheat
- **Stephen Perry** England – rubber band
- **Vladimir Petlyakov, (1891–1942)** Russia – heavy bomber
- **Peter Petroff, (1919–2004)** Bulgaria – digital wrist watch, heart monitor, weather instruments
- **Fritz Pfleumer, (1881–1945)** Germany – magnetic tape
- **Nikolay Ivanovich Pirogov, (1810–1881)** Russia – early use of ether as anaesthetic, first anaesthesia in a field operation, various kinds of surgical operations
- **Fyodor Pirotsky, (1845–1898)** Russia – electric tram
- **Arthur Pitney, (1871–1933)** United States – postage meter
- **Joseph Plateau, (1801–1883)** Belgium – phenakistiscope (stroboscope)
- **Baltzar von Platen, (1898–1984)** Sweden – gas absorption refrigerator
- **James Leonard Plimpton** U.S. – roller skates
- **Ivan Plotnikov, (1902–1995)** Russia – kirza leather
- **Petrache Poenaru, (1799–1875)** Romania – fountain pen
- **Christopher Polhem, (1661–1751)** Sweden – the modern padlock
- **Nikolai Polikarpov, (1892–1944)** Russia – Po-series aircraft, including Polikarpov Po-2 Kukuruznik[disambiguation needed] (world's most produced biplane)
- **Ivan Polzunov, (1728–1766)** Russia – first two-cylinder steam engine
- **Mikhail Pomortsev, (1851–1916)** Russia – nephoscope
- **Olivia Poole, (1889–1975)** U.S., – the Jolly Jumper baby harness
- **Alexander Popov, (1859–1906)** Russia – lightning detector (the first lightning prediction system and radio receiver), co-inventor of radio
- **Nikolay Popov, (1931–2008)** Russia – first fully gas turbine main battle tank (T-80)
- **Aleksandr Porokhovschikov, (1892–1941)** Russia – Vezdekhod (the first prototype tank, or tankette, and the first caterpillar amphibious ATV)

- **Valdemar Poulsen, (1869–1942)** Denmark – magnetic wire recorder, arc converter
- **Joseph Priestley, (1733–1804)** England – soda water
- **Alexander Procofieff de Seversky, (1894–1974)** Russia/United States of America – first gyroscopically stabilized bombsight, ionocraft, also developed air-to-air refueling
- **Alexander Prokhorov, (1916–2002)** Russia – co-inventor of laser and maser
- **Petro Prokopovych, (1775–1850)** Ukraine/Russia – early beehive frame, queen excluder and other beekeeping novelties
- **Sergey Prokudin-Gorsky, (1863–1944)** Russia/France – early colour photography method based on three colour channels, also colour film slides and colour motion pictures
- **George Pullman, (1831–1897)** U.S. – Pullman sleep wagon
- **Michael I. Pupin, (1858–1935)** Serbia – pupinization (loading coils), tunable oscillator
- **Tivadar Puskas, (1844–1893)** Hungary – telephone exchange

R

- **Mario Rabinowitz, (1936–)** U.S. – solar concentrator with tracking micromirrors
- **Hasan al-Rammah, (fl.1270s)** Syria – purified potassium nitrate, explosive gunpowder, torpedo
- **Harun al-Rashid, (763-809)** Persia/Iran – public hospital, medical school
- **Muhammad ibn Zakarīya Rāzi (Rhazes), (865–965)** Persia/Iran – distillation and extraction methods, sulfuric acid and hydrochloric acid, soap kerosene, kerosene lamp, chemotherapy, sodium hydroxide
- **Alec Reeves, (1902–1971)** UK -- Pulse-code modulation
- **Karl von Reichenbach, (1788–1869)** paraffin, creosote oil, phenol
- **Ira Remsen, (1846–1927)** U.S. – saccharin
- **Ralf Reski, (* 1958)** Germany – Moss bioreactor 1998
- **Josef Ressel, (1793–1857)** Czechoslovakia – ship propeller
- **Charles Francis Richter, (1900–1985)** U.S. – Richter magnitude scale
- **Adolph Rickenbacker, (1886–1976)** Switzerland – Electric guitar
- **Hyman George Rickover, (1900–1986)** U.S. – Nuclear submarine
- **John Roebuck, (1718–1794)** England – lead chamber process for sulfuric acid synthesis
- **Heinrich Rohrer, (1933–)** Switzerland – with Gerd Binnig, scanning tunneling microscope
- **Peter I the Great (Pyotr Alexeyevich Romanov), Tsar and Emperor of Russia, (1672–1725)** Russia – decimal currency, yacht club, sounding line with separating plummet (sounding weight probe)
- **Wilhelm Conrad Röntgen, (1845–1923)** Germany – the X-ray machine
- **Ida Rosenthal, (1886–1973)** Belarus/Russia/United States – modern brassiere (Maidenform), the standard of cup sizes, nursing bra, full-figured bra, the first seamed uplift bra (all with her husband William)
- **Boris Rosing, (1869–1933)** Russia – CRT television (first TV system using CRT on the receiving side)
- **Eugene Roshal, (born 1972)** Russia – FAR file manager, RAR file format, WinRAR file archiver

- **Ernő Rubik, (1944–)** Hungary – Rubik's cube, Rubik's Magic and Rubik's Clock
- **Ernst Ruska, (1906–1988)** Germany – electron microscope

S

- **Alexander Sablukov, (1783–1857)** Russia – centrifugal fan
- **Şerafeddin Sabuncuoğlu, (1385–1468)** Turkey – illustrated surgical atlas
- **Andrei Sakharov, (1921–1989)** Russia – invented explosively pumped flux compression generator, co-developed the Tsar Bomb and tokamak
- **Ibn Samh, (c. 1020)** Middle East – mechanical geared astrolabe
- **Franz San Galli, (1824–1908)** Poland/Russia (Italian and German descent) – radiator, modern central heating
- **Alberto Santos-Dumont, (1873–1932)** Brazil – non-rigid airship and airplane
- **Arthur William Savage, (1857–1938)** radial tires, gun magazines, Savage Model 99 lever action rifle
- **Thomas Savery, (1650–1715)** England – steam engine
- **Adolphe Sax, (1814–1894)** Belgium – saxophone
- **Bela Schick, (1877–1967)** Hungary – diphtheria test
- **Pavel Schilling, (1780–1836)** Estonia/Russia – first electromagnetic telegraph, mine with an electric use
- **Masatoshi Shima, (1943–)** Japan – microprocessor
- **Christian Schnabel (1878–1936)** German – simplistic food cutleries
- **Kees A. Schouhamer Immink (1946-)** Netherlands – Major contributor to development of Compact Disc
- **August Schrader** U.S. – Schrader valve for Pneumatic tire
- **David Schwarz, (1852–1897)** Croatia, – rigid ship, later called Zeppelin
- **Marc Seguin, (1786–1875)** France – wire-cable suspension bridge
- **Sennacherib, (705–681 BC)** Iraq (Mesopotamia) – screw pump
- **Iwan Serrurier, (active 1920s)** Netherlands/U.S. – inventor of the Moviola for film editing
- **Mark Serrurier, (190?–1988)** U.S. – Serrurier truss for Optical telescopes
- **Gerhard Sessler, (1931–)** Germany – foil electret microphone, silicon microphone
- **Guy Severin, (1926–2008)** Russia – extra-vehicular activity supporting system
- **Leonty Shamshurenkov, (1687–1758)** Russia – first self-propelling carriage (a precursor to both bicycle and automobile), projects of an original odometer and self-propelling sledge
- **Ibn al-Shatir, (1304–1375)** Syria – "jewel box" device which combined a compass with a universal sundial
- **Shen Kuo, (1031–1095)** China – improved gnomon, armillary sphere, clepsydra[disambiguation needed], and sighting tube
- **Murasaki Shikibu, (c. 973–1025)** Japan – novel, psychological novel
- **Pyotr Shilovsky, (1871 – after 1924)** Russia/United Kingdom – gyrocar
- **Fathullah Shirazi, (c. 1582**) Mughal India – early volley gun
- **William Bradford Shockley, (1910–1989)** U.S. – co-inventor of transistor

- **Henry Shrapnel, (1761–1842)** England – Shrapnel shell ammunition
- **Vladimir Shukhov, (1853–1939)** Russia – thermal cracking (Shukhov cracking process), thin-shell structure, tensile structure, hyperboloid structure, gridshell, modern oil pipeline, cylindric oil depot
- **Sheikh Muszaphar Shukor, (b. 1972)** Malaysia – cell growth in outer space, crystallization of proteins and microbes in space
- **Augustus Siebe, (1788–1872)** Germany/England – Inventor of the standard diving dress
- **Sir William Siemens, (1823–1883)** Germany – regenerative furnace
- **Werner von Siemens, (1816–1892)** Germany – an electromechanical "dynamic"
- **Al-Sijzi, (c. 945–1020)** Persia/Iran – heliocentric astrolabe
- **Igor Sikorsky, (1889–1972)** Russia/U.S. – first four-engine fixed-wing aircraft (Russky Vityaz), first airliner and purpose-designed bomber (Ilya Muromets), modern helicopter, Sikorsky-series helicopters
- **Kia Silverbrook, (1958-)** Australia – Memjet printer, world's most prolific inventor
- **Vladimir Simonov, (born 1935)** Russia – APS Underwater Assault Rifle, SPP-1 underwater pistol
- **Charles Simonyi, (1948–)** Hungary – Hungarian notation
- **Ibn Sina (Avicenna), (973–1037)** Persia/Iran – steam distillation, essential oil, pharmacopoeia, clinical pharmacology, clinical trial, randomized controlled trial, quarantine, cancer surgery, cancer therapy, pharmacotherapy, phytotherapy, Hindiba, Taxus baccata L, calcium channel blocker
- **Isaac Singer, (1811–1875)** U.S. – sewing machine
- **B. F. Skinner, (1904–1990)** U.S. -- Operant conditioning chamber
- **Nikolay Slavyanov, (1854–1897)** Russia – shielded metal arc welding
- **Alexander Smakula, (1900–1983)** Ukraine/Russia/U.S. – anti-reflective coating
- **Yefim Smolin** Russia – table-glass (stakan granyonyi)
- **Igor Spassky, (1926–)** Russia – Sea Launch platform
- **Percy Spencer, (1894–1970)** U.S. – microwave oven
- **Elmer Ambrose Sperry, (1860–1930)** U.S. – gyroscope-guided automatic pilot
- **Ladislas Starevich, (1882–1965)** Russia/France – puppet animation, live-action/animated film
- **Gary Starkweather, (1938–)** U.S. – laser printer, colour management
- **Boris Stechkin, (1891–1969)** Russia – co-developer of Sikorsky Ilya Muromets and Tsar Tank, developer of Soviet heat and aircraft engines
- **George Stephenson, (1781–1848)** England – steam railway
- **Simon Stevin, (1548–1620)** Netherlands – land yacht
- **Andreas Stihl (1896–1973)** Switzerland/Germany – Electric chain saw
- **Reverend Dr Robert Stirling (1790–1878)** Scotland – Stirling engine
- **Aurel Stodola, (1859–1942)** Slovakia – gas turbines
- **Aleksandr Stoletov, (1839–1896)** Russia – first solar cell based on the outer photoelectric effect
- **Levi Strauss, (1829–1902)** U.S. – blue jeans
- **John Stringfellow, (1799–1883)** England – airplane

- **Almon Strowger, (1839–1902)** U.S. – automatic telephone exchange
- **Su Song, (1020–1101)** China – first chain drive
- **Pavel Sukhoi, (1895–1975)** Russia – Su-series fighter aircraft
- **Simon Sunatori, (1959–)** Canada – inventor of MagneScribe and Magic Spicer
- **Sushruta, (600 BC)** Vedic India – inventor of Platic Surgery, Cataract Surgery, Rhinoplasty
- **Abd al-Rahman al-Sufi (Azophi), (903–986)** Persia/Iran – timekeeping astrolabe, navigational astrolabe, surveying astrolabe
- **Joseph Swan, (1828–1914)** England – Incandescent light bulb
- **Robert Swanson, (1905–1994)** Canada – Invented and developed the first multi-chime air horn for use with diesel locomotives
- **Andrei Sychra, (1773-76 – 1850)** Lithuania/Russia, Czech descent – Russian seven-string guitar
- **Vladimir Syromyatnikov, (1933–2006)** Russia – Androgynous Peripheral Attach System and other spacecraft docking mechanisms
- **Leó Szilárd, (1898–1964)** Hungary/U.S. – Co-developed the atomic bomb, patented the nuclear reactor, catalyst of the Manhattan Project

T

- **Salih Tahtawi, (fl.1659–1660)** Mughal India – seamless globe and celestial globe
- **Igor Tamm, (1895–1971)** Russia – co-developer of tokamak
- **Taqi al-Din, (1526–1585)** Syria/Egypt/Turkey – steam turbine, six-cylinder 'Monobloc' suction pump, framed sextant
- **Mardi bin Ali al-Tarsusi, (c. 1187)** Middle East – counterweight trebuchet, mangonel
- **Bernard Tellegen, (1900–1990)** Netherlands – pentode
- **Edward Teller, (1908–2003)** Hungary – hydrogen bomb
- **Nikola Tesla, (1856–1943)** Croatian Serb, citizenship:Austrian Empire (pre-1891), American (post-1891) – Tesla Coil, induction motor, wireless communication
- **Léon Theremin, (1896–1993)** Russia – theremin, interlace, burglar alarm, terpsitone, Rhythmicon (first drum machine), The Thing (listening device)
- **Charles Xavier Thomas de Colmar, (1785–1870)** France – Arithmometer
- **Elihu Thomson, (1853–1937)** England, USA – Prolific inventor, Arc lamp and many others
- **Eric Tigerstedt, (1887–1925)** Finland – triode vacuum tube
- **Kalman Tihanyi, (1897–1947)** Hungary – co-inventor of cathode ray tube and iconoscope
- **Mikhail Tikhonravov, (1900–1974)** Russia – co-developer of Sputnik 1 (the first artificial satellite) together with Korolyov and Keldysh, designer of further Sputniks
- **Gavriil Adrianovich Tikhov, (1875–1960)** Russia – feathering spectrograph
- **Benjamin Chew Tilghman, (1821–1897)** U.S. – sandblasting
- **Tipu Sultan, (1750–1799)** India – iron-cased rocket
- **Fedor Tokarev, (1871–1968)** Russia – TT-33 semiautomatic handgun and SVT-40 self-loading rifle
- **Evangelista Torricelli, (1608–1647)** Italy – barometer
- **Alfred Traeger, (1895–1980)** Australia – the pedal radio

- **Richard Trevithick, (1771–1833)** England – high-pressure steam engine, first full-scale steam locomotive
- **Franc Trkman, (1903–1978)** Slovenia – electrical switches, accessories for opening windows
- **Yuri Trutnev, (1927–)** Russia – co-developer of the Tsar Bomb
- **Konstantin Tsiolkovsky, (1857–1935)** Russia – spaceflight
- **Mikhail Tsvet, (1872–1919)** Russia – chromatography (specifically adsorption chromatography, the first chromatography method)
- **Ibn Tufail, (c. 1105–1185)** Islamic Spain – philosophical novel
- **Alexei Tupolev, (1925–2001)** Russia – the Tupolev Tu-144 (first supersonic passenger jet)
- **Andrei Tupolev, (1888–1972)** Russia – turboprop powered long-range airliner (Tupolev Tu-114), turboprop strategic bomber (Tupolev Tu-95)
- **Nasīr al-Dīn al-Tūsī, (1201–1274)** Persia/Iran – observatory, Tusi-couple
- **Sharaf al-Dīn al-Tūsī, (1135–1213)** Persia/Iran – linear astrolabe

U

- **Lewis Urry, (1927–2004)** Canada – long-lasting alkaline battery
- **Vladimir Utkin, (1923–2000)** Russia – railcar-launched ICBM (RT-23 Molodets)

V

- **Vladimir Sergeyevich Vakhmistrov, (1897–1972)** Russia – first bomber with a parasite aircraft (Zveno project)
- **Theophilus Van Kannel, (1841–1919)** United States – revolving door (1888)
- **Viktor Vasnetsov, (1848–1926)** Russia – budenovka military hat
- **Vladimir Veksler, (1907–1966)** Russia – synchrophasotron, co-inventor of synchrotron
- **John Venn, (1834–1923)** England – Venn diagram (1881)
- **Pierre Vernier, (1580–1637)** France – vernier scale (1631)
- **Dmitry Vinogradov, (c.1720/25 – 1758)** Russia – original Russian hard-paste porcelain (together with Mikhail Lomonosov)
- **Louis R. Vitullo, (1924?–2006)** United States – developed the first sexual assault evidence kit
- **Alessandro Volta, (1745–1827),** Italy – battery
- **Faust Vrančić, (1551–1617)** Croatia – parachute
- **Traian Vuia, (1872–1950)** Romania – designed, built, and tested one of the earlier aircraft in 1906. Vuia reportedly flew to a height of 1 Meter and was able to stay aloft for 20 Meters.
- **Ivan Vyrodkov, (? – 1563-64)** Russia – battery tower

W

- **Paul Walden, (1863–1957)** Latvia/Russia/Germany – Walden inversion, Ethylammonium nitrate (the first room temperature ionic liquid)

- **Barnes Wallis, (1887–1979)** England – bouncing bomb
- **Robert Watson-Watt, (1892–1973)** Scotland – microwave radar
- **James Watt, (1736–1819)** Scotland – improved Steam engine
- **Thomas Wedgwood, (1771–1805)** England – first (not permanent) photograph
- **Jonas Wenström, (1855–1893)** Sweden – three-phase electrical power
- **George Westinghouse, (1846–1914)** U.S. – Air brake (rail)
- **Charles Wheatstone, (1802–1875)** England – concertina, stereoscope, microphone, Playfair cipher
- **Eli Whitney, (1765–1825)** U.S. – the cotton gin
- **Frank Whittle, (1907–1996)** England – co-inventor of the jet engine
- **Otto Wichterle, (1913–1989)** Czechoslovakia – invented modern contact lenses
- **Paul Winchell, (1922–2005)** U.S. – the artificial heart
- **Baldwin Wood, (1879–1956)** U.S. – high volume pump
- **Granville Woods, (1856–1910)** U.S. – the Synchronous Multiplex Railway Telegraph
- **Wright brothers, Orville (1871–1948) and Wilbur (1867–1912)** – U.S. – powered airplane
- **Arthur Wynne, (1862–1945)** England – creator of crossword puzzle

Y

- **Pavel Yablochkov, (1847–1894)** Russia – Yablochkov candle (first commercially viable electric carbon arc lamp)
- **Hidetsugu Yagi, (1886–1976)** Japan – Yagi antenna
- **Alexander Yakovlev, (1906–1989)** Russia – Yak-series aircraft, including Yakovlev Yak-40 (the first regional jet)
- **Khalid ibn Yazid, (635-704)** Syria/Egypt – potassium nitrate
- **Yi Xing, (683-727)** China – astronomical clock
- **Gazi Yasargil, (1925-)** Turkey – Microneurosurgery
- **Arthur M. Young, (1905–1995)** U.S. – the Bell Helicopter
- **Vladimir Yourkevitch, (1885–1964)** Russia/France/U.S. – modern ship hull design
- **Sergei Yudin, (1891–1954)** Russia – cadaveric blood transfusion and other medical operations
- **Muhammad Yunus, (b. 1940),** Bangladesh – microcredit, microfinance
- **Abu Yaqub Yusuf, (c. 1274**), Morocco/Spain – siege cannon
- **Linus Yale, Jr., (1821–1868),** U.S. – cylinder lock
- **Linus Yale, Sr., (1797–1858),** U.S. – pin tumbler lock

Z

- **Abu al-Qasim al-Zahrawi (Abulcasis), (936–1013)** Islamic Spain – catgut surgical suture, various surgical instruments and dental devices
- **Alexander Zalmanov, (1875–1965)** Russia – turpentine bath
- **Ludwik Łazarz Zamenhof, (1859–1917)** Russia/Poland – Esperanto

- **Abū Ishāq Ibrāhīm al-Zarqālī (Arzachel), (1028–1087)** Islamic Spain – almanac, equatorium, universal astrolabe
- **Yevgeny Zavoisky, (1907–1976)** Russia – EPR spectroscopy, co-developer of NMR spectroscopy
- **Nikolay Zelinsky, (1861–1953)** Russia – the first effective filtering coal gas mask in the world
- **Zhang Heng, (78–139)** China – invented the first hydraulic-powered armillary sphere
- **Zheng He, (1371–1433)** China – treasure ship
- **Nikolai Zhukovsky, (1847–1921)** Russia – an early wind tunnel, co-developer of the Tsar Tank
- **Konrad Zuse, (22 June 1910–18 December 1995)** Germany – invented the first Computer (Z1, Z2, Z3, Z4)
- **Vasily Zvyozdochkin, (1876–1956)** Russia – matryoshka doll (together with Sergey Malyutin)
- **Vladimir Zworykin, (1889–1982)** Russia/U.S. – Iconoscope, kinescope.

Inventions

Adhesives/Glue
Adhesives/Tape
Aerosol Spray Cans
Air Bags
Air Balloons
Air Brakes
Air Conditioning
Air Ships
Aeroplane/Aviation
Alcoholic Beverages
Alternating Current
Alternative Energy Related
Altimeter
Aluminum Foil - Aluminum Manufacturing Process
Ambulance
Anemometer
Answering Machines
Antibody Labeling Agents - Antigen and Antibody
Antiseptics
Apple Computers
Aqualung
Arc Transmitter
Archimedes Screw
Armillary Sphere
Artificial Heart
Asphalt
Aspirin
Assembly Line
AstroTurf
Atari Computers
ATM - Automatic Teller Machines
Atomic Bomb
Atomic Clock
Audio Tape Recording
Auto-Tune
Automated Electrified Monorail Systems
Automatic Doors
Automobile
Baby Carriage
Bakelite

Ball Point Pens
Balloons/Blimps
Balloons (Toy)
Band-Aid
Bar Codes
Barbeque
Barbed Wire
Barbie Doll
Barometer
Bartholdi Fountain
Baseball/Baseball Equipment
BASIC
Basketball
Bathroom Related (The history of ancient and modern plumbing from around the world - baths, toilets, water closets and sewage systems.)
Battery
Beauty Related (The history of hair dryers, ironing curlers and other beauty appliances. The history of cosmetics and hair products.)
Beds
Beer
Bells
Beverage Related (The history of beverages and the equipment that make them.)
Blenders
Bic Pens
Bicycle
Bifocals
Bikini
Bingo
Biofilters/Biofiltration
Biometric Related
Blood Bank
Blue Jeans
Board Games
Body Armor & Bullet Proof Vests
Boilers
Boomerang
Bourdon Tube Pressure Gauge
Bra
Braces - Dental
Braille
Braingate
Brush - Hair

Bubble Gum
Bulldozer
Bunsen Burner
Butterick Dress Patterns
Cabbage Patch Kids
Calendars/Clocks
Calcium Carbide Process
Calculators
Camera
Can/Can Opener
Candy
Carborundum
Card Games
Cardiac Pacemaker
Carmex
Cars
Carousels
Cash Register
Cassette Tape
Cat Eyes
Catheter
Cathode Ray Tube
CAT-Scans
CCD
Cellular Phones/Cell Phones
Cellophane Film
Celsius Thermometer
Census
Chain Saw
Champagne
Chapstick
Cheese in a Can
Cheese Slicer
Cheesecake and Cream Cheese
Chewing Gum
Chia Pet
Chinese Related (Learn about ancient Chinese technology and the history of Chinese inventions. Find lesson plans for teachers. Learn about the kite, chopsticks, umbrellas, gunpowder, firecrackers, the steelyard, abacus, cloisonné, ceramics, papermaking and more.)
Chocolate
Christmas Related (The history of candy canes, Christmas lights and Christmas trees.)
Christmas Lights

Cigarettes/Cigarette Lighters
Clarinet
Clermont
Clocks
Cloning
Closed Captioning
Clothing Related (The history of our clothes - blue jeans, the bikini, the tuxedo, fabrics, fasteners etc.)
Coat Hangers
Coca-Cola
Cochlear Implants - Bionic Ear
Coffee
Cold Fusion Energy
Colour Television
Colt Revolver
Combustion Engine
Combustion Engine - Diesel
Comics
Compact Disk
Compass
Computers
Computer Chess
Computer Games
Computer Keyboard
Computer Peripherals
Computer Printers
Computerized Banking
Concrete
Construction Materials (The history of construction and building materials.)
Contact Lenses
Cookies (Chocolate Chip, Fig Newton)
Cordite
Corkscrews
Corn Flakes
Cortisone
Cosmetics
Cotton
Cotton Candy
Cotton Gin
Cotton Swabs/Q-tips
Crash Test Dummies
Crayons

Cray Supercomputer
Credit Cards
Cricket
Crinolines, Petticoats
Crossword Puzzles
Cruise Control
Cuisinart
Cyclotron
Daguerreotype (Louis Daguerre invented daguerreotype photography, the first modern method of photography.)
Dentistry Innovations (The history of false teeth, dentistry, the toothbrush, toothpaste, dental floss and more.)
Deodorants (The history of deodorants.)
Depth Charge (The depth charge or bomb is a weapon used by ships or aircraft to attack submerged submarines. The first depth charges were developed by the British in World War I for use against German submarines.)
Detergents (In the synthetic detergent industry is not easy to pinpoint exactly when the first synthetic detergents were invented.)
Dewar Flask (Sir James Dewar invented the Dewar flask, the first thermos.)
Diabetes Testing Kits (Helen Free received a patent for a home diabetes test. The history of insulin.)
Dialysis Machine (Willem Kolff invented the artificial kidney dialysis machine. The history of kidney innovations.)
Diapers (Disposable) The convenient disposable diaper was invented by New Yorker Marion Donovan in 1950.)
Diesel Engine (Rudolf Diesel was the inventor of the diesel-fuelled internal combustion engine.)
Digital Camera (The history of the digital camera.)
Dirigibles (The history of airships, balloons, blimps, dirigibles and zeppelins.)
Dishwasher (Josephine Cochran invented the dishwasher in 1886.)
Disposable Cell Phone (Randice-Lisa Altschul invented the world's first disposable cell phone.)
Diving Equipment (In the 16th century, barrels were used as primitive diving bells, and for the first time divers could travel underwater with more than one breath of air, but not much more than one.)
Domes Geodesic (The geodesic dome was invented in 1954 by Richard Buckminster Fuller.)
Donut/Doughnut (The history of the pastry with the hole in the middle.)
DRAM (Robert Dennard invented one-transistor Dynamic Random Access Memory or DRAM.)
Drinking Straws (In 1888, Marvin Stone patented the spiral winding process to manufacture the first paper drinking straws.)
Drive-In (Richard Hollingshead patented and opened the first drive-in theatre.)
Dr Pepper (In 1885, Charles Aderton invented the Dr Pepper soft drink. The history of soft drinks.)
Dry Ice (Dry ice was discovered not invented - the name was trademarked by the first company to sell dry ice.)
Duramold (Duramold is a process that involves laminating and moulding thin sheets of veneer together. Howard Hughes' airplane called the Spruce Goose was made of Duramold.)

DVD (Matshusita was the company mainly responsible for the development of DVD.)
Dynamite (Alfred Nobel invented dynamite.)
Earmuffs (Chester Greenwood, a grammar school dropout, invented earmuffs at the age of 15 and accumulated over 100 patents in his lifetime.)
Ear Plugs (The history of ear plugs.)
Easel (Painting with an easel was known to the ancient Egyptians.)
Easter Related (Inventions created for Easter occasions.)
Eating Utensils (The history of forks, spoons and knives.)
Eiffel Tower (Gustave Eiffel built the Eiffel Tower for the Paris World's Fair of 1889, which honoured the 100th anniversary of the French Revolution.)
Elastic (In 1820, Thomas Hancock patented elastic fastenings for gloves, suspenders, shoes and stockings.)
Electric Blanket (In 1936, the first automatic electric blanket was invented.)
Electric Chair (The history and of the electric chair.+
Electricity Related, Electronics
Several famous persons in the field of electricity and electrical theory are profiled.

The history of electricity and electronics.
Electric Motor
Michael Faraday's big breakthrough in electricity development was his invention of the

electric motor.
Electric Vehicles
An electric vehicle or EV by definition will use an electric motor for propulsion rather

than being powered by a gasoline-powered motor.
Electrochemical Paintbrush
Adam Cohen invented the "electrochemical paintbrush", nanotechnology used in etching

microchips.
Electrogasdynamics Systems
Meredith Gourdine invented electrogasdynamics systems.
Electromagnet
An electromagnet is a device in which magnetism is produced by an electric current.
Electromagnetism Related
Innovations related to magnetic fields. See Also - Timeline of Electromagnetism
Electron Tubes
The complex history behind the electron or vacuum tube.
Electron Microscope
If pushed to the limit, electron microscopes can make it possible to view objects as

small as the diameter of an atom.

Electronics Printed
Printed electronics is the term for a relatively new technology that defines the printing

of electronics on common media such as paper, plastic, and textile using standard

printing processes.
Electrophotography
The copy machine was invented by Chester Carlson.
Electroplating
Electroplating was invented in 1805 and paved the way for economical jewelry.
Electroscope
The electroscope - a device for detecting electric charge - was invented by Jean Nollet

in 1748.
Elevator
Elisha Elisha Graves Otis did not actually invent the first elevator - he invented the

brake used in modern elevators, and his brakes made skyscrapers a practical reality.
Email
Have you ever wondered what this @ in your email address is for?
ENIAC Computer
With twenty thousand vacuum tubes inside, the ENIAC computer was invented by John Mauchly

and John Presper.
Engines
Understanding how engines work and the history of engines.
Engraving
The history of engraving, a popular method of printing.
Erector Set
A.C. Gilbert invented the Erector Set, a child's building toy.
ERMA and MICR
The first bank industry computer - also MICR (magnetic ink character recognition) for

reading checks.
Escalator
In 1891, Jesse Reno created a new novelty ride at Coney Island that led to the invention

of the escalator.
Etch-A-Sketch
The Etch-A-Sketch was developed in the late 1950s by Arthur Granjean.
Ethernet

Robert Metcalfe and Xerox team invented network computing.
Exoskeleton
Exoskeletons for human performance augmentation is a new type of body army being

developed for soldiers that will significantly increase their capacity.
Explosives
The history of explosives.
Eyeglasses
The history of the oldest known glass lens to the first pair of spectacles invented by

Salvino D'Armate.
Fabrics
Denim, nylon, colored cotton, vinyl... the history behind these and other fabrics.
Facebook
Learn the facinating story of how facebook was invented.
Fahrenheit Thermometer & Scale
What can be considered the first modern thermometer, the mercury thermometer with a

standardized Fahrenheit scale, was invented by Daniel Gabriel Fahrenheit in 1714.
Farm Related
Innovations related to farms, agriculture, tractors, cotton gin, reapers, plows, plant

patents and more.
Fasteners
The history of clothing fasteners - buttons, lacing, zippers, snaps, velcro and more.
Fax/Fax Machine/Facsimile
The facsimile was invented in 1842 by Alexander Bain.
Ferris Wheel
The history of the ferris wheel.
Fiber Optics
Fiber optics and the use of light to communicate.
Fig Newton Cookies
The history behind this tasty cookie.
Film
The history of photographic film.
Fingerprinting
One of the first significant developments in forensic science was identification by

fingerprinting.
Fire Prevention Related
The history of many fire fighting innovations.
Firearms

The history of guns and firearms.
Fireplace (Rumford)
Count Rumford (aka Benjamin Thompson) invented the Rumford fireplace in 1796.
Fishing Related
The history of fishing, rods, reels, baits and more.
Flashlight
When the flashlight was invented the biblical quote of Let There Be Light was on the

cover of the 1899 Eveready catalog.
Flight
The history of flight and the invention of the airplane including inventors Orville and

Wilbur Wright.
Floppy Disk
Alan Shugart nicknamed the first disk - the "Floppy" for its flexibility.
Fluorescent Lamps
The history of fluorescent lights and mercury vapor arc lamps.
Fly Swatter
Who first used the term "fly swatter"?
Flying Machines
While air balloons allowed mankind to float inventors dreamed of making flying machines

that would allow mankind to have controlled flight.
Flying Saucers
Yes, there are patents issued for flying saucers.
Flying Shuttle
John Kay invented the flying shuttle, an improvement to looms that enabled weavers to

weave faster.
Foam Finger
The foam finger or foam hand is seen at many sporting events and political rallies.
Food Related
The history of food. The story behind soup, sandwiches, pizza, pasta and other foods.
Football
The invention of football, American style.
Footbag
Hacky Sack or Footbag is a modern American sport invented in 1972.
Forensic Science Related
The history of significant developments in forensic science.
Fortran
The first high level programming language called fortran was invented by John Backus and

IBM. See Also - Fortran GoTo
Fountain Pens
The history of fountain pens and other writing instruments.
Freezers
The history of this famous kitchen appliance.
French Fries
"Potatoes, fried in the French Manner," is how Thomas Jefferson described a dish he

brought over to the colonies in the late 1700s.
French Horns
The brass French horn was an invention based on early hunting horns.
Freon
In 1928, Thomas Midgley and Charles Kettering invented a "Miracle Compound" called Freon.

Freon is now infamous for greatly adding to the depletion of the earth's ozone shield.
Frisbee
How the empty pie plates of the Frisbie Baking Company became the early prototype for the

world's funniest sport.
Freeze Drying/Freeze Dried Foods
The basic process of freeze-drying foods were known to the Peruvian Incas of the Andes.

Freeze drying is the removal of water from food while the food is frozen.
Frozen Foods
Clarence Birdseye found a way to flash-freeze foods and deliver them to the public -

several decades of frozen history.
Fuel Cells
Fuel cells were invented in 1839 by Sir William Grove, and are now becoming the power

source for the 21st century. Also See - How fuel cells work, Fuel Cell Power Plants.
Full Spectrum Lighting
John Ott was the pioneer of full spectrum lighting.
Garbage Bag
Harry Wasylyk invented the green garbage bag.
Gas Mask
The history of gas masks. See Also - Garrett Morgan, Cluny MacPherson
Gatling Gun
In 1861, Doctor Richard Gatling patented the Gatling Gun
Gasoline

The history of automotive fuel.
Genetic Engineering Related
Herbert Boyer and Stanley Cohen invented a method of cloning genetically engineered

molecules in foreign cells.
Geobond ®
Patricia Billings invented a indestructible and fireproof building material.
Geodesic Domes
Geodesic domes were invented in 1954 by Richard Buckminster Fuller.
Gerber Variable Scale
Joseph Gerber invented the Gerber Variable Scale® and the GERBERcutter®.
Ghost Detectors
Who invented the ghost detector? the history of ghost detecting.
Glass - Glasses
Learn about glass throughout the ages from the bronze age to contemporary glass. Eye

glasses from the oldest known glass lens to the first pair of spectacles invented by

Salvino D'Armate and beyond.
Gliders
Samuel Langley created early air gliders equipped with internal combustion engines.
Glossary
A glossary is a list of word definitions restricted to a very specific subject.
Glow in the Dark Products
Phosphorus and its various compounds are phosphorescents, or materials that glow in the

dark - Before knowing what phosphorus was, its glowing properties have been reported in

ancient writings
Glue
Around 1750, the first glue patent was issued in Britain for a fish glue.
Golf Related
The game has advanced from one played with simple hand made clubs and leather balls

stuffed with feathers to the game we know today, based on clubs designed by computer

using advanced materials such as titanium and zirconia.
Google
Larry Page and Sergey Brin invented Google.
GPS/Global Positioning System
GPS or the Global Positioning System was invented by the U.S. Department of Defense
Graham Crackers

Sylvester Graham invented Graham Crackers in 1829.
Grain Elevator
In 1842, the first grain elevator was built in Buffalo, NY.
Gramophone
Emile Berliner invented the disk gramophone, the first record player to use disks. The

history of the gramophone. See Also - Photos of Gramophone, Sounds of a Gramophone
Grenade
The word "grenade" comes from the French word for pomegranate, early grenades looked like

pomegranates.
Grocery Bag
Margaret Knight was an employee in a paper bag factory when she invented a new machine

part to make square bottoms for paper bags.
Guitar
The history behind the universally popular string instrument played by plucking or

strumming.
Guillotine
The history of the guillotine, the last execution and more.
Gum
The invention and history of chewing gum and bubble gum, gum wrappers, tins and bubble

gum machines.
Gummi Candy
Hans Riegel invented gummi bears during the 1920s.
Guns
The history of guns and firearms.
Gyroscope
The history of gyroscopes.
Hacky Sack
Hacky Sack or Footbag is a modern American sport invented in 1972.
Hair Related
The history of hair styling products - learn who invented dyes blowers or the bobby pin.
Hallmark Cards
Joyce Hall was a youthful picture-postcard peddler who became the big name in greeting cards.
Halloween Related

See some amazing inventions patented in service of Halloween.

History of Halloween
Halloween Costumes
Halloween Masks
Halloween - Pumpkin Carving
Halloween Novelties
Halloween Tombstones

Halogen Lights
Also lightbulbs, lighting and other lamps.
Handbags
The earliest handbags that have been verified historically were small sacks carried by gentlemen containing pomanders (scented spices and oranges), flint and money.
Hangers
Today's wire coat hanger was inspired by a clothes hook patented in 1869, by O. A. North of New Britain, Connecticut.
Hardware Tools
The inventors behind several common household tools.
Harpsicord
The history behind musical instruments and their inventors.
Hats
The history of hats and wigs.
Hearing Related
The history of hearing aids and more.
Helicopter
The history of helicopters.
Highways
The history of roads and asphalt.
Hills Hoist
A rotary clothes line developed and marketed by Australian, Lance Hill in 1945.
HIV Protease Inhibitors
First invented between 1989 and 1994.
Hockey
The game we know today was first played in Montreal in 1875, according to rules devised by a McGill student.
Hole Punch
C. B. Brooks patented an early paper punch, also called a ticket punch. His had a built-in receptacle on one of the jars to collect the round pieces of waste paper and prevent littering.
Holography/Holograms

Holography is a photographic process, best known for the 3-dimensional images. Holograms are made using a laser and a light-sensitive material chemically similar to a photographic emulsion.

Home Related

The history of the common inventions you find inside your home.

Home Security Related

The first home security system was patented on December 2, 1969.

Horseshoe

The origin of iron horseshoes and horseshoe nails.

Hot Dogs

The history of hot dogs.

Hovercraft

The hovercraft was invented by Christopher Cockerell in 1956.

HTML

The history of hypertext markup language (HTML) is a strange and interesting tale.

Hula Hoop

The hula hoop was re-invented by Richard Knerr and Arthur "Spud" Melin.

Hydrofoil Boats

In 1908, Hydrofoil Boats were co-invented by Alexander Graham Bell & Casey Baldwin.

Hydrogen Fuel Cells

Invented in 1839 by Sir William Grove, hydrogen fuel cells have now becoming the power source for the 21st century. See Also - How hydrogen cells work

Hygrometer

A hygrometer is an instrument used to measure the moisture content or the humidity of air or any gas.

Hyperbaric Oxygen Chambers

The history of hyperbaric oxygen chambers.

Hypodermic Needle or Syringe

What's the history behind this medical device.

IBM PC

From an "Acorn" grows a personal computer revolution. The historical invention of the century.

Ice Cream

History of the world's best loved dessert - ice cream.

Ice Cube Trays

The first flexible stainless steel, all-metal ice tray was invented by Guy Tinkham in 1933.

Ice Hockey

The game of ice hockey we know today was first played in Montreal in 1875, according to rules invented by a McGill student.

Ice Skates

The oldest pair of ice skates known date back to about 3000 B.C.

Iconoscope

Vladimir Zworykin invented the iconoscope, an early television camera.

Idaho Potato

A plant patented by Luther Burbank.

Ignition System

Charles Kettering invented the first automobile electrical ignition system.

Induction Coil

William Stanley invented the induction coil.

Industrial Design Related

Groundbreaking contributions to architecture, furniture and industrial design.

Instant Mashed Potatoes

The history of instant mashed potatoes.

Instant Photography

Edwin Land invented the polaroid camera and instant photography.

Integrated Circuit

The integrated circuit was co-invented by Jack Kilby and Robert Noyce.

Intel

In 1968, Robert Noyce and Gordon Moore were two unhappy engineers working for the Fairchild Semiconductor Company who decided to quit and create their own company Intel.

Internal Combustion Engine

The history of the internal combustion engine.

Internet - ARPAnet

The first internet.

Internet - WWW

The contributions of Vinton Cerf, Bob Kahn, Tim Berners-Lee and Mark Andreesen to the World Wide Web's birth in 1991.

Intravenous Catheter Shield

Betty Rozier and Lisa Vallino co-invented the intravenous catheter shield.

iPhone

The iPhone by Apple was the first smart phone.

iPod

On October 23, 2001 Apple Computers publicly announced their portable music digital player the iPod.

Iron Lung

The first scientist to appreciate the mechanics of respiration was John Mayow.

Ironing Board

An improvement to the ironing board was patented by African American inventor, Sarah Boone.

Irons

Henry Seely invented the electric iron in 1882.

Jacuzzi

In 1968, Roy Jacuzzi invented and marketed the first self-contained, fully integrated whirlpool bath by incorporating jets into the sides of the tub. Jacuzzi® is the trademarked name for the invention.

Jacquard Loom

Weaved complex designs.

Janney Coupler

An improvement in railroad car couplers that became the standard for the railroad freightcar couplers used even today.

Java

Java is a programming language and environment written by Patrick Naughton, Mike Sheridan and James Gosling.

JavaScript

Created by Netscape programmer Brendan Eich.

Jet Ski

The jet ski was invented by Clayton Jacobsen II.

Jet Aircraft

Dr. Hans von Ohain and Sir Frank Whittle are recognized as the co-inventors of the jet engine. See Also - Different Types of Jet Engines

Jigsaw Puzzles

The history of jigsaw puzzles - John Spilsbury created the first jigsaw puzzle in 1767.

Jock Strap

In 1920, Joe Cartledge invented the first jock strap or athletic supporter.

Jukebox

The history of the jukebox.

Kaleidoscopes

The kaleidoscope was invented by Sir David Brewster and patented by him in 1817. See also - How to Make a Kaleidoscope

KaZaA

A second-generation peer-to-peer file-sharing service.

Kelvin Scale

Lord Kelvin invented the Kelvin Scale in 1848, the Kelvin Scale measures the ultimate extremes of hot and cold.

Kevlar

Stephanie Kwolek invented a material five times stronger than steel.

Keyboard

The invention of the modern computer keyboard began with the invention of the typewriter.

Kinescope

Vladimir Zworykin invented a type of cathode-ray tube called the kinescope in 1929, a tube needed for television transmission.

Kitchen Related

Who invented the refrigerator, dishwasher, microwave oven and other kitchen appliances?

Kitty Litter

Edward Lowe made the trademark name of Kitty Litter® part of the American vocabulary.

Kleenex Tissue

In 1924, the Kleenex brand of facial tissue was first introduced.

KOOL-AID

Edwin Perkins invented kool-aid in 1927.

Laptop Computer

The history of the laptop.

Laser

Gordon Gould received a patent for the laser - the history of lasers from 1917 to the present. See Also - How Lasers Work

Laser Disc

David Paul Gregg first envisioned the optical or laser disc in 1958 and patented it in 1969.

Laser Printers

The history of computer laser printers.

Lava Lamp

Post-war England was the perfect backdrop for Craven Walker to create this swinging 60's icon.

Lawn Mowers

The first patent for a "machine for mowing lawns" was granted to Edwin Beard Budding on August 31, 1830.

La-Z-Boy Recliner

Cousins Edward Knabusch and Edwin Shoemaker designed a wood slat outdoor folding chair from orange crates - the first La-Z-Boy recliner.

LCD - Liquid Crystal Display

James Fergason was the inventor of an improved liquid crystal display or LCD.

Letter Box

Philip Downing invented the letter drop letter box in 1891. The history of the mail.

Lie Detector

John Larson invented the polygraph or lie detector in 1921.

Life Savers Candy

The history of the candy called life savers.

Lightbulb & Lamp Related

Read about the history of lighting - including fluorescent lamps, halogen lights, lightbulbs, mercury vapor lighting and tungsten wire.

Lighthouses

Sailors in unfamiliar waters welcome the sight of lighthouses, buoys beacons and other navigational aids as guideposts to safe harbor.

Light Microscope

Read about the history of the microscope, from the earliest models to today's scanning electron microscope. See Also - Timeline

Linoleum

In 1860, Fredrick Walton invented linoleum the home floor covering.

Liposuction

Dr. Giorgio Fischer, a gynecologist from Rome, Italy, invented the liposuction procedure in 1974.

Lisa Computers

The first home computer with a GUI or graphical user interface was Apple's Lisa.

Liquid Paper

Bette Graham received a patent for "Liquid Paper".

Liquid Soap

The original liquid soap was introduced in 1980.

Locks

While the original inventor of the lock is lost in history, there are many inventors and patents still found on record.

Lollipops

Samuel Born was a Russian immigrant who invented a lollipop making machine.

Loudspeakers

The history of music speakers.

Lunchbox (Metal)

The first metal lunchbox produced was the Hopalong Cassidy created by the Aladdin company in 1950.

Machine Shop

By definition a machine shop is a workshop where metal is cut and shaped by machine tools.

Macintosh Computer

Learn the history behind the famous Apple home computer.

Mackintosh Raincoat

The mackintosh raincoat was named after Charles Macintosh.

Magic Lantern

The Magic Lantern was the forerunner of the modern slide projector.

Magnetic Core Memory

Kenneth Olsen invented "Magnetic Core Memory".

Magnetic Resonance Imaging

The history of magnetic resonance imaging (MRI) scanner, which has revolutionized the field of diagnostic medicine.

Magnet Related

These are natural stones and are not inventions. However, the machines that we make with magnets are inventions.

Mail Order Catalog

Aaron Montgomery Ward sent out his first mail order catalog in 1872.

Mail Related

Postmarking and canceling machines, letter boxes and Rowland postage stamps.

Marlex

Research chemists, Paul Hogan and Robert Bank invented Marlex a plastic.

Marshmallows

The history of marshmallows.

Maser Laser

Arthur Schawlow received a patent for the maser laser.

Matches

John Walker brought the power of Prometheus to our fingertips.

Mathematics Related

Learn about the history of math and the inventions associated with mathematics.

MDMA

MDMA or ecstasy began as a 1913 patent belonging to the Merck Chemical Company.

Measuring Tools

From Noah's ark to modern times, read about the history of measurement and measuring tools.

Mechanization (Postal)

The early Post Office Department relied entirely on antiquated mailhandling operations.

Medical Related

The history behind many key medical innovations.

Megaphones

Cecile B DeMille was the first director to use a megaphone on the movie set.

Menlo Park

Thomas Edison had his first laboratory in Menlo Park, New Jersey nicknamed the invention factory.

Mercury Thermometer

The mercury thermometer was invented by Daniel Gabriel Fahrenheit in 1714.

Mercury Vapor Lighting

Read about the history of mercury lighting.

Metal Detector

Alexander Graham Bell invented the first crude metal detector in 1881. The portable metal detector was invented by Gerhard Fischar in 1931.

MICR - Magnetic Ink Character Recognition

The first bank industry computer used MICR (magnetic ink character recognition) for reading checks.

Microbiology Related

Timeline and profiles on inventors related to microscopy, culture methods, germ theory of disease, defense or control of microbes and molecular methods.

Microchip, History of

The integrated circuit was co-invented by Jack Kilby and Robert Noyce. Also See - Microchip, Technology of

Microphones
The first microphone was a telephone transmitter invented by Emile Berliner for Alexander Graham Bell in 1876. After the invention of the radio, new broadcasting microphones were needed.
Microprocessor 4004
The Intel 4004 was a breakthru in microprocessors. Microprocessor Chip, Definition, History, How It Works
Microsoft Corporation
The history of the famous software company.
Microsoft Windows
Windows might have been released under the original name of Interface Manager if marketing whiz, Rowland Hanson had not convinced Microsoft's founder Bill Gates that Windows was the far better name.
Microscope
Read about the history of the microscope, from the earliest models to today's scanning electron microscope. Also See - Timeline of Microscopes
Microwave Oven
The microwave oven was invented by Percy Spencer.
Milk Related
Did you know that Marco Polo arrived in Mongolia in 1275 and made written records of how the Mongols used powdered milk.
Mills
Information on the history and workings of water mills, windmills, paper mills and other types of mills.
Miniature Golf
Garnet Carter was the first person to patent a game of miniature golf called "Tom Thumb Golf" in 1927.
Mirrors
Mirrors made by coating flat glass with silver or gold foil dates from Roman times.
Missile Systems
Missile systems are any of a variety of weapons systems that deliver explosive warheads to their targets by means of rocket propulsion.
Mobile/Cellular Phones
How the FCC slowed the progress of a mobile cellular phone system.
Mobile Homes
Mobile homes as we know them today began in 1926 with automobile-pulled trailers or "Trailer Coaches" designed as a home away from home during camping trips.
Modems
The history of modems along with some historical trivia about email.
Money
The past, present and future of money.
Monopoly

Charles Darrow became the first millionaire game designer, after he sold his Monopoly patent to Parker Brothers.

Moonpies

The history of moonpies, a tasty pastry.

Morse Code

Samuel Morse invented morse code, an electronic alphabet patented in 1840.

Motion Picture Related

Learn about the early history of the cinema, camera, projectors etc.

Motorcycles

The history of the first motorcycles, Gottlieb Daimler and the first practical motorcycle.

Mouse (for Computers)

Douglas Engelbart nicknamed his invention the mouse because the tail came out off the end.

Mousetraps

James Henry Atkinson was the British inventor who in 1897 invented the prototype mousetrap called the "Little Nipper". See Also - Mousetrap Gallery of Images

MP3

The German company Fraunhofer-Gesellshaft developed MP3 technology.

MRI Scanner

The history of magnetic resonance imaging (MRI) scanner, which has revolutionized the field of diagnostic medicine.

Musical Instruments

The history behind different musical instruments and the inventors.

My Little Pony

My Little Ponies® is the registered trademark belonging to Hasbro Industries for their very popular toy pony.

Nail Polish

The history of nail polish.

Nanotechnology

Nanotechnology is the science and engineering of the very small.

Native American Related

Native American inventions and achievements in science - native technology both ancient, modern and revived.

Nautical Related

The history of buoys and tenders, fog horns, fishing industry innovations, sailing ships and more.

Neckties

The history of neckties - the honor of father of modern necktie construction goes to the American tie manufacturer Jesse Langsdorf, who in 1920 patented the all-weather, wrinkle-free tie.

Neon

Los Vegas should build a shrine to these early inventors.

Neutronic Reactor

Enrico Fermi invented the neutronic reactor.

Nintendo

Interesting history even if you have never touched a joystick.

Nipkow Disk

In 1884, Paul Nipkow invented a rotating-disk technology to transmit pictures over wire called the Nipkow Disk. This was the very first electromechanical television scanning system. Nipkow's system was abandoned early in the history of the television for the electronic systems developed by later inventors.

Nuclear Fission & Fusion

There are two types of atomic explosions that can be facilitated by Uranium-235: fission and fusion. See Also - Timeline of Nuclear Power

Nylon/Neoprene Materials

A brilliant and tragic mind, Carothers was the brains behind Dupont and the birth of synthetic fibers.

Nylon Stockings

DuPont demonstrated nylon and nylon stockings to the American public at the 1939 New York World's Fair.

Nystatin

Rachel Brown and Elizabeth Hazen co-invented the world's first useful antifungal antibiotic called Nystatin.

Ocarina

Giuseppe Donati invented the modern 10-hole ocarina.

Oceanography Related

Although oceanography has been recognized as a formal scientific discipline for only 150 years, the quest for this understanding and its practical application to commerce and war - often unwitting - goes back much further.

Odometer

History of the odometer.

Office History

In the late 19th century, commercial offices for conducting business first appeared in the United States. See also - Office Machinary

Optical Analysis System

Ellen Ochoa invented the optical analysis system.

Optical Diagnostic Equipment

Tuan Vo-Dinh invented optical diagnostic equipment. Vo-Dinh's patents were for a badge worn on a worker's shirt that recorded exposure to toxic chemicals and for a optical scanner that would read that badge.

Optical Disc

David Paul Gregg first envisioned the optical or laser disc in 1958 and patented it in 1969.

Oral Contraceptives

The inventors behind the first oral contraceptives.

Orgone Accumulator

Dr Wilhelm Reich invented the orgone accumulator.

O-Ring

Today's dynamic o-ring was the result of experimental work done in the early 1930's by Mr. Niels Christensen.

Pacemaker

John Hopps invented the first cardiac pacemaker.

Package Saver

Have you ever wondered, "who invented the circular thing that keeps the pizza from hitting the inside of the box top?"

Pagers

A pager is a dedicated RF (radio frequency) device.

Paige Typesetter

A competitor to the linotype machine was the Mark Twain funded paige typesetter.

Paintball

The history and invention of Paintball.

Paint Roller

The paint roller was invented by Norman Breakey of Toronto in 1940.

Panty Hose

In 1959, Glen Raven Mills of North Carolina introduced pantyhose.

Paper Related

The history of paper, papermaking and paper sacks; the patents and persons behind the different processes.

Paperclip

A history of the paperclip.

Paper Punch

History of the paper punch.

Paper Towels

Who invented paper towels and other kitchen innovations.

Parachutes

Louis Sebastien Lenormand is credited with being the first person to demonstrate the principle of the parachute in 1783.

Parking Meter

Carl Magee invented the first parking meter in 1932.

Particle Accelerators

The history of particle accelerators.

Pascaline Calculator

French scientist and mathematician, Blaise Pascal invented the first digital calculator - the Pascaline.

Pasta

The history of pasta.

Pasteurization

Louis Pasteur invented pasteurization.

Patent Medicine

The first patent issued for a medicine was granted in 1796.

Paypal

Elon Musk invented Paypal a money transfer service.

PCR Amplifying Nucleic Acids

Kary Mullis received a patent for PCR, the process for amplifying nucleic acids.

PCS - Personal Communication Services

Learn about PCS technology (Personal Communication Services) or digital cellular phones.

Peanut Butter

The history of peanut butter.

Penicillin

The history of the drug penicillin and how it works. Penicillin was discovered by Alexander Fleming. Andrew Moyer patented the industrial production of penicillin. John Sheehan invented a synthesis of natural penicillin.

Pens/Pencils

The history of pens and other writing instruments (including pencil sharpeners and erasers).

Pentothal

Donalee Tabern and Ernest Volwiler co-invented the general anesthetic, Pentothal.

Pepsi-Cola

"Pepsi-Cola" was invented by Caleb Bradham in 1898.

Perfume

The history behind perfume.

Periodic Table

The history of the periodic table.

Periscope

The history of the periscope.

Perpetual Motion Machine

The USPTO will not patent a perpetual motion machine.

Petroleum Refining

Edith Flanigen received a patent for a petroleum refining method, and was one of the most inventive chemists of all time.

Pez Candy

Don't forget someone had to have invented the Pez dispenser - smile and enjoy.

Phillips Head Screw

The Phillips head screw was the brainchild of Henry Phillips. He invented the new screw to work better with power screwdrivers.

Phone-Card-Phone

Randice-Lisa Altschul invented the world's first disposable cell phone.

Phonograph

The word "phonograph" was Edison's tradename for his musical playback device, which played wax cylinders rather than flat disks.

Photocopier

The photocopier was invented by Chester Carlson.

Photography Still

Learn about the Camera Obscura, the history of photography, the significant processes, polaroid photography and the invention of photographic film. See Also - Photography Timeline

Photoluminescence Related

Photoluminescence spectroscopy is a contactless, nondestructive method of probing the electronic structure of materials.

Photophone

Alexander Graham Bell's photophone - ahead of its time.

Phototypesetting

Louis Moyroud and Rene Higonnet invented the first practical phototypesetting machine.

Photovoltics Related

Solar cells or PV cells rely on the photovoltaic effect to absorb the energy of the sun and cause current to flow between two oppositely charge layers. See Also - How a Photovoltic Cell Works, Making N and P Material for a Photovoltic Cell

Piano

The piano first known as the pianoforte was invented by Bartolomeo Cristofori.

Piggy Bank

The piggy bank's origin owes more to the history of language.

Pill

The patents and people behind the first oral contraceptives.

Pillsbury Doughboy

On October, 1965, Pillsbury debuted the loveable 14-ounce, 8 3/4-inch character in a Crescent Roll commercial.

Pinball

The history of pinball.

Pizza

The history of pizza.

Plastic

Learn about the history of plastic, the uses for and the making of plastic, plastic in the fifties and more.

Play-Doh

Noah McVicker and Joseph McVicker invented Play-Doh in 1956.

Pliers

Simple pliers are an ancient invention. Two sticks probably served as the first uncertain holders, but bronze bars may have replaced wooden tongs as early as 3000 BC.

Plow - Gemeral

The farmers of George Washington's day had no better tools than had the farmers of Julius Caesar's day - in fact - Roman ploughs were superior to those in general use in America eighteen centuries later.

Plow - John Deere

John Deere invented the self-polishing cast steel plow.

Plumbing Related

Learn about ancient and modern plumbing from around the world - bathes, toilets, water closets.

Pneumatic Related

A pneumatic device is any of various tools and instruments that generate and utilize compressed air.

Pogo Stick

Legend and history of the jumping toy.

Polaroid Photography

Polaroid photography was invented by Edwin Land.

Police Technology

The methods and techniques of, and the equipment available to, police agencies.

Polio Vaccine

History of the polio vaccine and biography of polio researcher Jonas Salk.

Polyester

Polyethylene terephthalate created synthetic fibers such as polyester dacron and terylene.

Polygraph

John Larson invented the polygraph or lie detector in 1921.

Polystyrene

Polystyrene is a strong plastic created from erethylene and benzine that can be injected, extruded or blow molded, making it a very useful and versatile manufacturing material.

Polyurethane

Polyurethane is an organic polymer that can be injected, extruded, or blow molded; making it a very useful and versatile manufacturing material.

Pom Poms

Pompoms and the history of cheerleading innovations.

Popsicle

The history of the popsicle.

Postal Related

William Barry invented the postmarking and canceling machine. William Purvis invented the hand stamp. Philip Downing invented the letter-drop letter box. Rowland Hill invented the postage stamp.

Post-It Notes

Arthur Fry invented Post-It Notes as a temporary bookmarker.

Potato Chips

Potato chips were invented in 1853.

Mr Potato Head

George Lerner of New York City invented and patented Mr. Potato Head in 1952.

Poulsen Arc Transmitter

The arc transmitter was invented by Valdemar Poulsen in 1902.

Power Loom

Edmund Cartwright was a cleric and the inventor of the power loom patented in 1785.

Press Release

A press release is a public statement made to the media.

Printed Electronics

Printed electronics is the term for a relatively new technology that defines the printing of electronics on common media such as paper, plastic, and textile using standard printing processes.

Printers (Computer)

The history of computer printers.

Printing

Learn about the history of printing and printer technology.

Prony Brake

Gaspard de Prony invented the Prony brake or dynamometer.

Prosthetics

The history of prosthetics and amputation surgery begins at the very dawning of human medical thought.

Prozac

Prozac® is the registered trademarked name for fluoxetine hydrochloride and the world's most widely prescribed antidepressant.

Pumpkin Carving Kits

The art and history of pumpkin carving. See Also - Pumpkin Carving II

Punch Cards

Herman Hollerith invented a punch-card tabulation machine system for statistical computation.

Push Pins

Edwin Moore invented the push-pin.

Puzzles

Learn the history behind the crossword and other brain-teasing puzzles.

PVDC

The origins of Saran Wrap® (PVDC) film and the history of the Dow Chemical Company.

PVC

Waldo Semon invented a way to make polyvinyl chloride or vinyl useful.

Q-tips

Q-Tips was not the original brand name for the new cotton swabs.

Quartz Watch

View an historical timeline on the invention of the quartz watch.

QWERTY

QWERTY is the name for the layout of typewriter keys.

RADAR/Doppler RADAR

The history of RADAR and Doppler RADAR.

Radio

The history of the radio.

Radiovision

Charles Jenkins invented a mechanical television system called radiovision and claimed to have transmitted the earliest moving silhouette images on June 14, 1923.

Railroad Related

The history of railroads and railroad related innovations. See - Also First Steam Powered Locomotives

Rain Gauge

King Munjong invented a rain gauge for measuring rainfall.

RAM, Computer memory

Intel's 1103 was the world's first available dynamic RAM chip.

Razors

The history of shaving time line - safety razors, mechanical razors, electric razors, razors for women and more.

Reaper - General History

Early American pioneers had only a sickle or a scythe with which to cut down and harvest their grain before reapers were invented.

Reaper - Cyrus McCormick

In 1831, Cyrus McCormick invented the first commercially successful reaper, a horse-drawn machine that harvested wheat.

Refrigerators

The history of this famous kitchen appliance.

Remote Controls

The first television remote control called "Lazy Bones" was invented in 1950 by Zenith.

Respirators

The first respirator was called the "iron lung". It was invented by Philip Drinker and Louis Agassiz Shaw in 1927.

Restaurants

The history of restaurants and famous restaurant chains.

Revolvers

The history of the revolver.

Road Related

The history of roads and asphalt and the invention of traffic management.

Robot History

Introduction to robotics and few famous first robots. See Also - Definition of a Robot, Timeline, Photo Gallery

Rockets (Missiles)

Any of a variety of weapons systems that deliver explosive warheads to their targets by means of rocket propulsion.

Rocket (Space Travel)

Robert Goddard invented liquid-fueled rockets and a control mechanism for rocket apparatus. See Also - Timeline, Rockets: Timeline II, Rockets: How They Work

Rodeo Related

Earl Bascom invented and manufactured the rodeo's first one-hand bareback rigging.

Rollerblades

Scott and Brennan Olsen invented rollerblades.

Rollercoasters

John Miller was the 'Thomas Edison" of rollercoasters.

Roller Skates

The history of roller skates began as a way to ice skate on land.

Rolodex

Alfred Neustadter invented the Rolodex.

Root Beer

Hires first sold commercial root beer to the public in 1876 at the Philadelphia Centennial Exhibition.

Rubber

The strange story of rubber - also the history of rubber stamps, rubber erasers, rubber balloons and more.

Rubik's Cube

There is only one correct answer and 43 quintillion wrong ones to the most populaRr puzzle in history.

Ruby Laser System

Theodore Harold Maiman received a patent for the Ruby Laser System.

Rumford Fireplace

Count Rumford (aka Benjamin Thompson) invented the Rumford fireplace in 1796.

Safety Pin

The safety pin was invented by Walter Hunt in 1849.

Sailboards

The very first sailboards (windsurfing) date back to the late 1950s.

Samhain Related

Objects invented for use on Samhain or Halloween.

Sandwich

The origins of the sandwich.

Saran Wrap

The origins of Saran Wrap film and the history of the Dow Chemical Company.

Satellites

History changed on October 4, 1957, when the former Soviet Union successfully launched Sputnik I. The world's first artificial satellite was about the size of a basketball, weighed

only 183 pounds, and took about 98 minutes to orbit the Earth on its elliptical path. Also See - Satellite Explorer 1

Saxophone

The history of the saxophone.

Scanning and Sorting Machine

Jacob Rabinow received a patent for a automated scanning and sorting machine.

Scanning Tunneling Microscope - STM

Gerd Karl Binnig and Heinrich Rohrer are the inventors of the STM, which provided the first images of individual atoms.

Scissors

There is history behind this cutting invention.

Scooters

The invention of scooters. Also See - Early Patent Drawings

Scotch Tape

Scotch Tape was patented by the banjo playing, 3M engineer, Richard Drew.

Scotchgard

Patsy Sherman received a patent for scotchgard fabric protector.

Screws and Screwdrivers

Early wooden screws - Archimedes Screw - Phillips Head Screw - Robertson Screw - Square Drive Screws - screwdrivers.

Scuba Diving Equipment

In the 16th century, barrels were used as primitive diving bells, and for the first time divers could travel underwater with more than one breath of air, but not much more than one.

Sea-cretion

Wolf Hilbertz patented sea-cretion, a construction material made from the electrolytic deposition of minerals from seawater.

Seat Belts

Never drive without first buckling up you seat belt. But which inventor brought us this safety invention?

Seaplane

The seaplane was invented by Glenn Curtiss.

See Also - Seaplane

On March 28, 1910, the first successful seaplane take-off from water at Martinque, France.

Seismograph

John Milne was the English seismologist and geologist who invented the first modern seismograph and promoted the building of seismological stations.

Self-Cleaning House

This amazing home was invented by Frances Gabe.

Segway Human Transporter

What was once a mysterious invention created by Dean Kamen that had everyone speculating as to what it was, was revealed and demonstrated as the now familiar Segway Human Transporter.

Seven-Up

Seven-Up is the bubbling lemon lime drink invented by Charles Grigg.

Sewing Machines

The history behind sewing machines. See Also - Brother Sewing Machines

Shrapnel

Shrapnel is a type of antipersonnel projectile named after the inventor, Henry Shrapnel.

Shoe Related

An interesting tale of the sole - "As late as 1850 most shoes were made on absolutely straight lasts, there being no difference between the right and the left shoe." Learn about the history of footwear and shoe making technology

Shoe Manufacturing Machine

Jan Matzeliger developed an automatic method for lasting shoes and made the mass production of affordable shoes possible.

Shopping Related

Who created the first shopping mall and other trivia.

Sierra Sam

The history of crash test dummies - the first crash test dummy was the Sierra Sam created in 1949."

Silly Putty

Silly Putty is a result of history, engineering, an accident and entrepreneurship.

Sign Language

The history of sign language.

Signaling System (Pyrotechnic)

Martha Coston invented a system of maritime signal flares.

Skyscrapers

The skyscraper like many other architectural forms, evolved over a long period of time.

Skateboard

A short history of the skateboard.

Skates (Ice)

The oldest pair of ice skates known, date back to 3000 B.C.

Skiing Related

There is a long history behind the sport of Skiing. The idea of skiing dates as far back as the stone-age period.

Sleeping Car (Pullman)

The Pullman sleeping car (train) was invented by George Pullman in 1857.

Sliced Bread

The history of sliced bread and the toaster, the best thing since sliced bread, but actually invented before sliced bread.

Slide Rule

Around 1622, the circular and rectangular slide rule was invented by Episcopalean minister William Oughtred.

Slinky

The slinky was invented by Richard and Betty James. Also See - Slinky in Motion

Slot Machines

The first mechanical slot machine was the Liberty Bell, invented in 1895 by Charles Fey

Smart Gels

Toyoichi Tanaka received a patent for Smart Gels, a synthetic (polyacrylamide) polymer gel with unusual properties.

Smart Pills

The name of smart pill now refers to any pill that can deliver or control its delivery of medicine without the patient having to take action beyond the initial swallow.

Smoke Detectors

The first battery operated home smoke detector was patented in 1969, Randolph Smith and Kenneth House.

Snack Related

Snack food history - pretzels, popcorn, ice cream, soft drinks, gum and more.

Sneakers

Modern athletic shoes were designed by Bill Bowerman and Phil Knight.

Snowblower

Canadian, Arthur Sicard invented the snowblower in 1925.

Snowmaking Machines

The history of snowmaking machines and facts about making snow.

Snowmobile

In 1922, Joseph-Armand Bombardier developed the type of sport machine that we know today as the snowmobile.

Soaps

Soap making was known as early as 2800 B.C. - in the synthetic detergent industry it is not as easy to pinpoint exactly when the first detergents were invented.

Soccer

Not much is known about the origin of soccer, however, football and ball kicking games were played by the ancient Greeks and Romans.

Socks

The first real knit socks were discovered in Egyptian graves in Antinoe.

Soda Fountain

In 1819, the "soda fountain" was patented by Samuel Fahnestock.

Softball Related

George Hancock invented softball.

Soft Drinks

An introduction to the history of soft drinks including Coca-Cola, Pepsi-Cola and the history behind other pop drinks. See Also - Timeline

Software

The history of different software programs.

Solar-Powered Cars

Solar-powered electric demonstration vehicles were first built by universities and manufacturers during the late eighties.

Solar Cell

A solar cell directly converts light energy into electrical energy.

Sonar

Experience the history of Sonar.

S.O.S Soap Pads

Ed Cox invented a pre-soaped pad with which to clean pots.

Sound Recording

The history of sound recording technology - from early recorded sounds and wax cylinders to the latest in broadcasting history.

Soup (Campbell's)

Where did soup come from.

Spacesuits

The history of spacesuits.

Spacewar

In 1962, Steve Russell invented SpaceWar, one of the first games intended for computer use.

Spark Plugs

The history of spark plugs.

Spectacles

The history of eyeglasses from the oldest known glass lens to the first pair of spectacles invented by Salvino D'Armate and beyond.

Spectrograph

George Carruthers received a patent for the far-ultraviolet camera and the spectrograph.

Spectrometer

The history of the spectrometer.

Spinning Jenny

Hargreaves patented the spinning jenny used for weaving yarn.

Spinning Mule

Samuel Crompton invented the spinning mule.

Spinning Wheel

The spinning wheel is an ancient machine that turned fibers into thread or yarn, which were then woven into cloth on a loom. The spinning wheel was probably invented in India, though its origins are obscure.

Spork

The spork is half spoon and half fork.

Sports Related

Yes, there are patents related to sports.

Sporting Goods

Learn who invented the skateboard, the frisbee, sneakers, the bicycle, the boomerang and other sporting goods.

Sprinkler Systems

The first fire sprinkler system was invented by American, Henry Parmalee in 1874.

Stamps

Rowland Hill invented the postage stamp in 1837, an act for which he was knighted.

Stapler

Brass paper fasteners were introduced in the mid-1860s, and by 1866 George W. McGill had developed a machine to insert these fasteners into papers. The first stapling machine with a magazine that held a supply of preformed wire staples that were fed automatically to the staple-driving mechanism was patented in 1878.

Statue of Liberty

Bartholdi was a French sculptor born in Alsace - He created many monumental sculptures - his most famous work was the Statue of Liberty.

Steamboats

Robert Fulton invented the first successful steamboat on August 7, 1807. Also See - Steamboats American

Steam Engines

Thomas Newcomen invented the atmospheric steam engine in 1712 - steam engine history and information on the men and women involved with steam engines.

Steel

Henry Bessemer invented the first process for mass-producing steel inexpensively.

Stem Cell Research

James Thomson was the first scientist to isolate and culture human embryonic stem cells.

Sterotyping

William Ged invented stereotyping in 1725. Sterotyping is a process in which a whole page of type is cast in a single mold so that a printing plate can be made from it.

Stoves

The history of stoves.

Straws

In 1888, Marvin Stone patented the spiral winding process to manufacture the first paper drinking straws.

Street Sweeper

C. B. Brooks invented an improved street sweeper truck and patented it on March 17, 1896.

Styrofoam

What we commonly call styrofoam, is actually the most recognizable form of foam polystyrene packaging.

Submarines

Study the evolution of submarine design, from the submarine's beginning as a compressed air or human-powered warship to today's nuclear-powered subs.

Sugar Processing Evaporator

The sugar processing evaporator was invented by Norbert Rillieux.

Sunglasses

Around the year 1752, James Ayscough introduced his spectacles with lenses made of tinted glass.

Sunscreen

The first commercial sunscreen was invented in 1936.

Supercomputer

Seymour Cray and the Cray Supercomputer.

Superconductors

In 1986, Alex Müller and Johannes Bednorz patented the first high-temperature superconductor.

Super Soaker

Lonnie Johnson invented the Super Soaker® a squirt gun. Johnson also patented thermodynamics systems.

Suspenders

The first patent ever issued for modern suspenders, the kind with the familiar metal clasp was patent by Roth.

Swimming Pools

The history of swimming pools - the first heated swimming pool was built by Gaius Maecenas of Rome.

Syringe

The history behind this medical device.

Tagamet

Graham Durant, John Emmett and Charon Ganellin co-invented Tagamet. Tagamet inhibits the production of stomach acid.

Tampons

The history of tampons.

Tape Recorders

In 1934/35, Begun built the world's first tape recorder used for broadcasting.

Tattoo Related

Samuel O'Reilly and the history of inventions related to tattoos.

Taxi

The name taxicab usually abbreviated to taxi came from the taximeter an old instrument which measured the distance travelled.

Tea Related

The history of tea, tea bags, tea drinking customs and more.

Teddy Bear

Theodore (Teddy) Roosevelt, the 26th president of the United States, is the person responsible for giving the teddy bear his name.

Teflon

Roy Plunkett invented tetrafluoroethylene polymers or Teflon.

Tekno Bubbles

Tekno Bubbles are a rave innovative variation on the old blowing bubbles, but these bubbles glow under black lights and can smell like raspberries.

Telegraph

Samuel Morse invented the telegraph. The general history of telegraphy. Optical Telegraph

Telemetry

Examples of telemetry are the tracking of the movements of wild animals that have been tagged with radio transmitters, or the transmitting of meteorological data from weather balloons to weather stations.

Telephone

The history of the the telephone and telephone related devices. Telephone - First Patent For

Telephone Switching System

Erna Hoover invented the computerized telephone switching system.

Telescope

A spectacle maker probably assembled the first telescope. Hans Lippershey of Holland is often credited with the invention of the telescope, but he almost certainly was not the first person to make one.

Television

The history of television - color television, satellite broadcasts, remote controls and other television related inventions. Also See - Television (Books On), Television Timeline

Tennis Related

In 1873, Walter Wingfield invented a game called Sphairistikè (Greek for "playing ball) which evolved into modern outdoor tennis.

Tesla Coil

Invented in 1891 by Nikola Tesla, the Tesla coil is still used in radio and television sets and other electronic equipment.

Tetracycline

Lloyd Conover invented the antibiotic tetracycline, which became the most prescribed broad spectrum antibiotic in the United States.

Theme Park Related

The history behind circus, theme park, and carnival inventions including roller coasters, carousels, ferris wheels, trampoline and more.

Thermometer

The first thermometers were called thermoscopes. In 1724, Gabriel Fahrenheit invented the first mercury thermometer, the modern thermometer.

Thermos

Sir James Dewar was the inventor of the Dewar flask, the first thermos.

Thong

Many fashion historians believe that the thong first appeared in the 1939 World's Fair.

Tidal Plants

The rise and fall of the sea level can power electric-generating equipment.

Timekeeping Related
The history of timekeeping innovations and time measurement.
Timken
Henry Timken received a patent for the Timken or tapered roller bearings.
Tinkertoy Construction Sets
Charles Pajeau invented tinkertoy construction sets, a toy construction set for children.
Tires
The history of tires.
Toaster
The best thing since sliced bread, but actually invented before sliced bread.
Tobacco Related
A history of the use of tobacco and the invention of tobacco related innovations.
Toilets, Toilet Paper
The history of toilets and plumbing.
Tombstone Related
Patents of tombstones
Tom Thumb Locomotive
The history of the inventor of the Tom Thumb locomotive and Jello.
Tools
The history behind several common household tools.
Toothpaste/Toothbrush/Toothpick
Who invented false teeth, dentistry, toothbrush, toothpaste, toothpicks and dental floss.
Totalizator Automatic
The automatic totalizator is a system that totals the investments on runners, horses, betting pools and pays out dividends; invented by Sir George Julius in 1913.
Touch Screen Technology
The touch screen is one of the easiest to use and most intuitive of all PC interfaces, making it the interface of choice for a wide variety of applications.
Toys
The history behind several toy inventions - including how some toys were invented, how others got their names and how famous toy companies began.
Tractors
A history of tractors, bulldozers, forklifts and related machinery. Also See - Famous Farm Tractors
Traffic Signals (General)
The world's first traffic lights were installed near London's House of Commons in 1868.
Traffic Signal (Morgan)
Garrett Morgan patented a hand-cranked traffic management device.
Trampoline
The prototype trampoline apparatus was built by George Nissen, an American circus acrobat and Olympic
Transistor

The transistor was an influential little invention that changed the course of history in a big way for computers and electronics. See Also - Definition

Transportation

The history and timeline of different transportation innovations - cars, bikes, planes, and more.

Trillian

The king of instant messengers.

Trivial Pursuit

Trivial Pursuit was invented by Canadians Chris Haney and Scott Abbott.

Trumpet

The trumpet has evolved more than any other instrument known to modern day society.

TTY, TDD or Tele-Typewriter

The history of TTY.

Tungsten Wire

The history of tungsten wire used in lightbulbs.

Tupperware

Tupperware was invented by Earl Tupper.

Tuxedo

The tuxedo was invented by Pierre Lorillard of New York City.

TV Dinners

Gerry Thomas is the man who invented both the product and the name of the Swanson TV Dinner

Typewriters

The first practical typewriter was invented by Christopher Latham Sholes. The history of the typewriter's keys (QWERTY), early typewriters and typing history.

Umbrella

The umbrella was invented over four thousand years ago there is evidence of umbrellas in the ancient art and artifacts of Egypt, Assyria, Greece, and China.

UNIVAC Computer

The UNIVAC computer was the first commercially available computer invented by John Presper Eckert and John Mauchly.

Vaccination Needle

Benjamin Rubin invented the "Pronged Vaccinating and Testing Needle."

Vacuum Cleaner

The history of the vacuum cleaner.

Vacuum Packed Canning

Amanda Jones re-invented American food production by inventing vacuum packed canning.

Vacuum Tubes

The complex history behind the electron or vacuum tube.

Velcro

Mother Nature could not have made it better herself.

Vending Machines
The first commercial coin-operated vending machine was introduced in London in the early 1880s; it dispensed post cards.
Venetian Blinds
The history behind venetian blinds.
Viagra
To the researchers of Viagra - life might seem cruel.
Video Related
The history of the first practical videotape recorder (VTR) - audio and video magnetic recording history - video cameras.
Video Games
The history of video games is interesting even if you have never touched a joystick.
VisiCalc
VisiCalc, the first computer spreadsheet program, was released to the public in 1979.
Vitamin Related
The history of vitamins - discovery or synthesized and production methods
Vinyl
Waldo Semon invented a way to make polyvinyl chloride (PVC) useful - the history of vinyl.
Volleyball
Volleyball was invented by William Morgan in 1895.
Voting Machines
The history of voting machines - paper ballots - mechanical lever machines - punch cards - optical scan - direct recording electronic.
Walkie Talkie
History and information on the walkie talkie radio.
Walkman
The history of the Sony Walkman.
Wallpaper
Wallpaper as a wall covering was first used by the working classes in Britain and in Europe as a substitute for costly materials.
Washing Machines
The earliest washing "machine" the scrub board was invented in 1797.
Watches
The invention of the quartz watch, mechanical clocks, timekeeping devices and time measurement.
Water Based Fuels
Rudolf Gunnerman invented water based fuels.
Water Fountain & Water Cooler
The modern drinking fountain was invented and then manufactured in the early 1900s.
Water Frames

It was the first powered textile machine and enabled the move away from small home manufacturing towards factory production.

Water Heaters

Edwin Ruud invented the automatic storage water heater in 1889.

Water Mills

The history and workings of water mills, windmills, paper mills and other types of mills.

Water Wheel

The water wheel is an ancient device that uses flowing or falling water to create power by means of a set of paddles mounted around a wheel.

Waterskiing Related

Waterskiing was invented in 1922 by Ralph Samuelson, an eighteen-year-old from Minnesota. Samuelson proposed the idea that if you could ski on snow, then you could ski on water.

WD-40

Norm Larsen invented WD-40 in 1953.

Weather Instruments

The history and patents behind different weather measuring instruments.

WebTV

The history of WebTV.

Welding Tools and Welding Related

In 1885, Nikolai Benardos and Stanislav Olszewski were granted a patent for an electric arc welder with a carbon electrode called the Electrogefest. Benardos and Olszewski are considered the fathers of welding apparatus.

Wheel

Everyone kept asking me who invented the wheel; here is the answer.

Wheelbarrow

Chuko Liang of China is considered to be the creator of the wheelbarrow.

Wheelchairs

The first dedicated wheelchair was made for Phillip II of Spain.

Wigs

The history of hats and wigs.

Windmills

Information on the history and workings of water mills, windmills, paper mills and other types of mills.

Windows

The history of Microsoft's graphical user interface for personal computers.

Windshield Wipers

Mary Anderson invented windshield wipers. The history of cars.

Windsurfing Related

Windsurfing or boardsailing is a sport that combines sailing and surfing and uses a one person craft called a sailboard.

White-out

Bette Nesmith Graham invented white-out.

Word Processing Related

The origins of word processing programs - from a rising WordStar.

Wrenches

Solymon Merrick patented the first wrench in 1835. Also See - Jack Johnson - Patent Drawings For A Wrench, Jack Johnson Biography

Wristies

KK Gregory is the ten-year-old inventor of Wristies.

Writing Instruments

The history of pens and other writing instruments.

Xerox/Xerography

The invention that no one wanted at first; yet it changed the world.

X-Rays

A history of X-Rays and the invention of x-ray machine.

Yellow Pages

In 1886, Reuben H. Donnelly produced the first Yellow Pages directory. The history of the telephone.

Yo-Yo

Even a small toy like the yoyo has an interesting history behind it. D F Duncan joined forces with newspaper tycoon William Randolph Hearst to create the US yoyo fad.

YouTube

YouTube was invented by Steve Chen, Chad Hurley and Jawed Karim.

Zamboni

The history of the Zamboni ®, the original ice cleaning machine invented by Frank Zamboni.

Zeppelins

The history and inventors behind all airships, balloons, blimps, dirigibles and zeppelins.

Zipcode

The history of the ZIP Code aka Zoning Improvement Plan.

Zipper

The history of the zipper - original patents and prototypes of the zipper.