***Some One minute science experiments to bring the magic to your classroom.***

1) Super Goo - gases, liquids, solids. This experiment is made with corn flour and water is added to it. It is then mixed together.

In the bowl it acts as a liquid, but when pressure of any form is exerted upon it, it then acts as a solid. As soon as the pressure is released it acts as a liquid again.

Great for young children in a tray and them using it to write their names in-helps concentration and they learn to do patterns quickly!

2) Eggs and salt and water (Density)

Free eggs in pure water-sink

Eggs in saltwater floats

Solution - suspended in the middle

Good book - ‘What they don’t tell you about science’-by Bob Fowke

3) Spinning Eggs - (Momentum)

Two eggs - one cooked and one raw

What will happen when both are made to spin?

The raw egg will not spin as well as the cooked egg.

Why?

The cooked egg has a centre which it spins around. The raw egg inside has a moving yolk causing it to wobble.

4) Gravity-defying water

An empty glass and a handkerchief which is draped over the glass. Pour the water in through the handkerchief and pull it tight.

Turn the glass upside down. The water will stay in because of surface tension.

5)The swinging Pendulum – attach a metal object (i.e. bike spanner) to the ceiling with a piece of string running down the North South line of a compass and wait to see what happens. The pendulum will show the change in movement due to the earths moving.

6) The Sun shines through more of the earth’s atmosphere in the evening causing a red glow. This can be shown using a tank of water filled with a milk and water mixture. Shine the torch through the tank and watch from the other side to see the orange red hue that occurs.

7) The Volcano - a broken loaf of bread covered with coffee made into the form of a volcano. Push a small bottle in the middle of the loaf filled with bicarbonate of Soda and red food colouring. Pour vinegar onto the top of the bottle and watch as the volcano explodes!

8) Levitating Marble

You need a straw with a bend in and a marble. Blow the end of the straw and the marble at the other end will appear to suspend in the air.

9) Blowing the balloon up

A bottle with bicarbonate of Soda and vinegar and put a balloon on the top. The balloon will blow up.

10) A saucer with water in and a glass with a lighted match-put the glass over the saucer and when the match has gone out the water will be drawn in.

11) Getting a free toy out of a cereal packet.

You need a test tube full of salt (with a lid on) and a stone in it. Shake the tube and the stone comes to the top eventually!

12) Egg experiment. If you hold a raw egg on the top and the bottom and squeeze the egg can withstand the force. Due to its structure and why architects use arches in building of bridges for strength.

13) Music - three bottles with different amounts of water in them. If you hit them you will hear a different pitch.

14) Illusions - Put a black elephant on a board and stare at it for about 30 seconds and then stare at a white board. You will see the image appear.

Website - <http://faculty.washington.edu/chudler/chvision.html>

15) Jar of water filled to the brim. How many pennies will it take to make the water overflow? The surface tension of the water keeps the surface together so that it takes a long time before it overflows.

16) The boats in a tank.

Put a paper boat in a tank of water and pour some soap behind it. The boat will move forwards as the soap has broken the surface tension of the water. You can only do this once and then need a fresh bowl of water!

17) Potato fun.

Try to pierce a potato with a straw. You cannot but if you hold the straw by squeezing it and then try you will be able to.

18) Fill a glass of water and put a piece of card on top and turn it over. Ensure that you wait for a few minutes. The water will stay in the glass.

19) The moving circle of card with slits in and dots on. If you look at the mirror and spin the card the dots appear to move-taken from the science museum website.

20)An electromagnet.

Coil wire around a nail (copper effective|) and attach to a battery. It now acts as a magnet. To increase the strength, use more coils or more current.

21)2 sheets of paper A4 held close together and blown down between and the pieces of paper come together-same principle as lift on plane wings

22) Water in a bucket-swing it around and water stays in because of gravity

23) The amazing sticky paper plate

Fill a glass with water and put the plate over it and turn it upside down. The plate should stick to it-surface tension.

24) Glass of water - add food colouring and watch what happens (diffusion).

25) Density - an egg is denser than water. It is less dense than a salt solution.

26) Two balloons on strings - if they are rubbed on hair they will go apart. Both are negatively charged so repel each other.

27) Exploding balloons. If a match is lighted under a balloon what happens?

It bursts –if a match is lighted under a balloon with some water in what happens?

It takes a much longer time for the balloon to burst because the water absorbs the heat and therefore it takes longer to burst.

28) Two books with approx the same number of sheets of paper in them. Merge the pages as you would a pack of cards and see if you can pull them apart.

Why? The friction between two sheets of paper is not much but by multiplying this by many pages, it becomes insurmountable!!

29) Glass wine bottle filled to the top with water and a tiny square of paper which is just bigger than the top of the bottle. Turn the bottle over and see what happens.

30 LONG cocktail stick and piece of card (rectangular attached to top through point of stick). Spin in your hand and it will take off. Why does it fly? Uplift!

31) Bottle with a two pence coin on the top to produce a seal. Put the hot bottle into cold water and the coin should bounce on the top. Watch carefully and closely to see this!

32) Vinegar and salt in a Petri dish and hold a two pence piece in it which is dirty. When you take it out it is cleaner. Why? Copper Oxide is dissolved by the acid (vinegar)

33) The singing glass. Fill a wine glass with some water, dip your finger in and run around the edge of the rim - it will sing.

34) Fish on water and pour in some soap - the paper fish move because the surface tension of the water has been broken.

35) Escape from a mountain side - use a shoelace to cut through rope.

36) Using a prism and a torch. Shine the torch through the prism and a rainbow will appear.

37) Using Lemonade and raisins.

If you put a few raisins into the water watch as they go up and down!

Density!

38) Vibrations creating sound. Using a tuning fork. Bang it and put it in water or sugar and watch to see what happens.

39) Make a small tube with tissue paper and light the top with a match. Watch as it rises up.

40) Put a lighted candle in front of a milk bottle and blow and you should be able to blow the candle out without actually blowing on the candle itself.

41) The silver foil snake. Light a candle under a snake made out of paper or tin foil and see as it moves around because of the hot air rising.

42) Make your own Lava lamp. Using a bottle and oil and coloured water. The two mixtures will not mix. It gives the appearance of a lava lamp when turned upside down.

43) Using a sieve with a bottle of water. Turn the bottle over and hold the sieve next to it and the water will not all pass through!

44) Chromatography – using different black pens and filter paper-draw a mark on the paper and put the paper into the water – you will see the ink move up the paper and all the different colours come out!!

45) Light bends when it hits a substance!

Try this – put a piece of paper (white)

Under a glass with a coin on top of paper and under glass look down through top and see the coin. If you put a piece of paper on top look and see if you can see the coin. It appears to have disappeared.

46) Whizzy Straw - A straw with a bed at each end at 90°. Blow through and it should whiz around.

47) Bottle of water (plastic) filled to the top with a salad cream packet inside. Put the top in and then squeeze. It falls to bottom and then when you let go of the squeeze, it will rise up again!

48) Balloon magic - thread a rice crispy to a thread and stick so that it is hanging down. Rub your hair and then hold the balloon next to the rice crispy and the rice crispy should go towards it. Opposites attract!

49) The match box exp - hold a match box lengthways and drop it from about 4 inches and it will fall over. If you pull the inside of the match box about a bit it will not fall over when dropped.

50) Changing the colour of a flower - split the stem and put them in food colouring. After about half an hour you will see a difference in the colour of the flower.

51) Sound Vibrations - using Rice on a drum. Bang the drum and you will see the rice jumping about.

52) Bulb growing. Plant bulbs and see which way they grow (towards the light).

53) Bi manual actions-If you are right-handed move your right ankle in a circle clockwise whilst at the same time with you right hand try to draw a large figure of 8 in the air. If you are left-handed, then use your left hand.

54) Sound - Hit a metal coat hanger with a metal instrument. You cannot hear it very well but if you attach string to the metal coat hanger and put the string in you ears you will hear it much better. Sound travels better through solids and liquids than it does through air!

55) Walking through a post card - cut the post card in small strips without cutting the edges. Open it out and you can walk through it! Literally.

56) The amazing umbrella - Put a ticking clock into a metal bowl and stand above it with an open umbrella. You should be able to hear the clock ticking clearly (science: vibrations hitting umbrella and bouncing back)

57) Jumping Flames - Light a candle and then blow it out with a match ready to relight. Hold it near to the wick as soon as the candle has been blown out and the wick should relight!

58)The 5p and paper trick. Fold a piece of paper in half one way and in half the other way and cut a hole right in the centre the size of a five p piece.

Can you pass a two pence piece through it?

Pass it through and then fold the paper the other way in half and it will pass through.

59) You need a glass of water with a straw in it. Get another straw and blow through it at a ninety-degree angle. The water should come up and out the straw as a spray!

60) Turn out the lights so that your eyes become accustomed to the darkness-get someone to put the lights on again and look at a partner’s eyes to see what happens to the pupils. They should go smaller.

61) A plastic bottle three quarters full of vegetable oil. Pour water with food colouring into it. Get some Alka-Seltzer tablets and put them quickly into the bottle. PUT THE LID ON! And then shine a torch behind it in the dark - you have made a Lava lamp!

62) Put a coin in cold water and then put it on top of a glass bottle.

Put your hands around the bottle and as it warms up you will see the coin jump.

63) Get a bowl of water and put pepper on the top so that there is a layer of pepper.

Pour some washing up liquid in the middle and watch what happens to the pepper.

64) The potato balancing trick.

Can you balance a potato on your finger? No?

Try using plastic forks and then using metal forks-two the same in either side at an angle. The potato should balance.

65) Fizz pop rocket - Using a camera pod-put a vitamin c (large) tablet in and add tap water.

66) Get two plastic cups and put one in the other. Blow on the rim of the cup on the top. The cup should fly out.

67) Put a penny down on the counter and using a pipette see how many drops of water you can fit onto the penny. You should be able fit between 30 and 45.

68) Weetabix and magnet experiment. Crumble up a weetabix and hold a magnet over it and see what happens.

69) Cartesian Diver. Using a plastic bottle and a pen lid. Squeeze the bottle and the lid goes down as the water pressure changes. When it gets to the bottom if you release the pressure, it will rise again.

70) Penny in a blown-up balloon-shake the balloon and the penny will start to spiral around. When you stop shaking the balloon, the penny will continue to spin.

71) A plastic bag with water in with a seal. You can stick a pencil right through it.

72) Static electricity.

Give everyone a balloon to blow up and put their names on. Give them

a minute to generate static electricity from their clothes or hair and then place the balloons onto a wall. Have a competition to see who has the balloon with the most ‘STICK’

73) /www.echalk.co.uk/amusements/OpticalIllusions/illusions.htm

The pin wheel experiment. If you stare at the pin wheel for 30 seconds and then look at your hand something strange may happen.

74) Two bottles of water filled with the same amount. Have a race to see who can empty it the quickest.

If you make a spiral with the water in the bottle it will come out much quicker!

75) Put a candle on a pebble on a plate filled with about half centimeter of water. Light the candle and put a tall thin glass over the top so that the candle goes out. Wait to see what happens.

76) Get a flat plate and fill it with full fat milk. Drop some spots of coloured ink on top of the milk. Now add some drops of washing up liquid and watch what happens.

77) Get a cup and put a piece of card on top of it. Put a match box on top of the card and put a lime on top of the match box. Pull the card out and see which object falls into the cup.

78) Fill a glass of water up to the top and put an ice cube in it. Put some salt on top of the ice cube and then lay some string on top. Wait for a few minutes and then lift up the piece of string to see what happens.

79) Twist up some small pieces of tissue paper and then roll it so that it looks like a sleeping snake. Drop water on top and watch to see what happens.

80) Get a tray of water and put some matches in to float in water. Add some washing up liquid and watch what happens.

81) Make a hover craft- using a cd and a cotton reel and a balloon. Put the cotton reel in the cd and cover the top of the cotton reel with a balloon that has been blown up.

82) Using a jar with a metal lid make some dimples on the inside of the lid. Fill a jar with boiling water. Place the metal lid upside down and place ice cubes on the top.

Add a little water and salt to the ice cubes.

Place jar on top of lid.

Wait a few minutes and watch as drops of rain start to fall from the lid.

83) Put tomato sauce on a dirty coin and see what happens after 15 mins.

Useful websites:

[www.abc.net.au/science/surfingscientist/marble.htm](http://www.abc.net.au/science/surfingscientist/marble.htm)