Wester Cleddens Science Grid

Mild

*****PLEASE NOTE, SOME OF THE ACTIVITIES BELOW REQUIRE ADULT SUPPORT AND SUPERVISION. *****

Message on a Banana

Do you think you can write a secret message on a banana with just a cocktail stick?

1.Use a cocktail stick to mark a pattern, draw a picture, or write a message on the banana skin. Press firmly enough to dent the skin, but not too hard to break through the skin.

2.Wait for your message, picture or pattern to appear.

SCN 0-07a

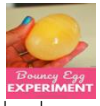
Bouncy Egg

SCN 0-07a

Do you think you can make a bouncy ball with an egg?

To make your own bouncy ball you will need the following items:

1. White Vinegar
2. Raw Egg
3. Bowl or Glass



If you would like to make a rainbow bouncy ball then add some food colouring to your vinegar.

https://www.youtube.com/watch?v=_vs5W8xvkx0

Re-growing a Carrot

SCN 0-03a

Place the top cut off end of a carrot in a shallow bowl of water. Change the water every three days. Keep in a sunny spot in your home.

https://www.youtube.com/watch?v=uoE7nhkYf4E

(You will not grow a whole carrot.)

Paper Towel Rainbow

SCN 0-07a

Show your support for the NHS by making this paper towel rainbow. Do you think the water can climb up the tissue?

What you need:

1. Water
2. Cups
3. Kitchen Roll
4. Food Colouring

https://www.youtube.com/watch?v=9EUfVlon6t8

Scared Pepper

SCN 0-07a

Do you think you can make some pepper run away just with your finger?

Why do you think this happened?

https://youtu.be/b-8-hCLqtKQ

Smelly Food

SCN 0-12b/1-12b

Can you identify a variety of different food just by smelling them? Choose 5 different items and then see if you can guess what they are by smelling them. Remember no peaking!

How many did you guess correctly?

My Heart

SCN 2-12a

Count how many beats your heart takes in 20 seconds and take a note. Now do 20 star jumps really quickly. Measure your heart beat again.

Is your heart beating faster or slower?

Why do you think this is?

Fireworks in a Glass

SCN 0-07a

Do you think its possible to make fireworks with just a glass, vegetable oil and food colouring?

What do you think is going to happen?

Why do you think the food colouring reacted like this?

https://www.youtube.com/watch?v=JgNOuNh0Okg

Re-growing a Spring Onion

SCN 0-03a

Do you think its possible to create an endless supply of spring onions from only one Spring Onion?

This is one of my favourite experiments because you get to eat the results.

https://www.youtube.com/watch?v=vrOJ9507JHg

Gummy Bear Experiment

SCN 0-05a / SCN 1-05a

Wouldn't it be great if you could make your gummy bears bigger? Well now you can.

Check your bear every couple of hours and take a note of whether it has gotten bigger or not.

https://www.youtube.com/watch?v=qRjS8xL_s65w

Coloured Celery

SCN 0-07a

Do you think its possible to change the colour of celery?

What do you think will happen if you place sticks of celery in glasses of water with food colouring?

https://www.youtube.com/watch?v=YovAfRptI9A

Bright as a new Penny

SCN 2-19a

Place a penny in a glass of fizzy juice, preferably Coke. Leave the penny over night.

What do you think will happen to the penny?

Does this put you off drinking fizzy juice?

What Lives on Us(Germs)

SCN 0-13a

Rub your hand on a piece of bread and place it in a bag. Now wash your hands. Take a second piece of bread and rub your hand on it before placing it in a bag. Place your bags on the windowsill.

What do you think will happen?

Do you understand the importance of washing your hands properly?

Grow a bean in a bag(germination)

SCN 0-01a/SCN 0-03a

Grow your own bean using only a wet paper towel, a plastic cup and a bean.

Take a note of what you see each day.

If you use a clear cup you will see the roots.

https://www.youtube.com/watch?v=U9SWwnWe0VQ

Floating Rice Bottle

SCN 0-07a

Do you think you could lift a bottle full of rice with just a skewer?

Discuss what you think will happen before you try the experiment. Where you correct?

https://www.youtube.com/watch?v=Puhvz4_Yj00

Wester Cleddens Science Grid

Medium

*****PLEASE NOTE, SOME OF THE ACTIVITIES BELOW REQUIRE ADULT SUPPORT AND SUPERVISION. *****

Forces and Motion

SCN 1-07a

A force is a push or a pull. Forces can make object move or stop, speed them up or slow them down. If you push a toy car it moves, if you push it harder it moves faster. Forces can also make objects change direction or shape.
You may wish to watch this video for more information:
https://www.bbc.co.uk/bitesize/topics/zn77hyc/articles/zptckqt
You may also choose to watch this for lots more examples of forces:
https://www.youtube.com/watch?v=EF02_3jiNkM

Create a Venn diagram that shows things you can push, things you can pull and things that you can push and pull. You can look for inspiration around your home and on your daily excursion.

Forces and Motion

SCN 1-07a

Using your knowledge of forces and motion can you create a new game that needs you to push or pull, using any toys or things from around the house. You could write out the rules and play it with the people or person in your home.
You could also think of exercises that require you to push or pull. Can you persuade the people or person you live with to join in and practice them with you?

Materials

SCN 1-15a

Here are some examples of materials and their properties:
Cotton wool - soft, fluffy, easy to pull apart, not magnetic
Steel - strong, heavy, cold, smooth, sinks, magnetic
Find items in your home and classify them using their properties. Label each group you have sorted with the properties they all have in common. You may choose to create a Venn diagram to sort them or use boxes to separate them. It's up to you!

Materials

SCN 1-15a

We will continue to explore materials and their properties through a scavenger hunt on your daily walk.
Can you find something – magnetic, strong, bendy, that floats (How will you test this?), transparent (see through), brittle (breaks easily, rough, stretchy, smooth, heavy.
You may wish to photograph the objects you find or you can discuss them and take the memories away with you.

What Lives on Us (Germs)

SCN 1-13a

Rub your hand on a piece of bread and place it in a bag. Now wash your hands. Take a second piece of bread and rub your hand on it before placing it in a bag. Place your bags on the windowsill.
What do you think will happen?
Do you understand the importance of washing your hands properly?

Friction SCN 1-04a

Choose a toy with wheels or a ball and create different surfaces for it to roll down. You could use one slope and change the surface to ensure it is the same height each time. You only want to introduce one variable i.e. surface friction. Remember to make a prediction about which surface will provide the least and the most amount of friction, just like a scientist. You can time your toy on each surface e.g. cloth, sandpaper, corrugated card, plastic, wet plastic, tissue, Sellotape, foam, a line of Lego or Duplo.
You may choose to watch these videos for more information on friction:
https://www.youtube.com/watch?v=C7NPD9W0kro
https://www.youtube.com/watch?v=D23SNc6IcRA

Floating Ping Pong Balls

SCN 1-07a

Can you make two ping pong balls float in the air with a hairdryer without them touching?
Write down or discuss your prediction with an adult.
Why do you think this happens?
No cheating but here's the answer.
https://www.youtube.com/watch?v=V2deFgyj3XQ

Only use cold air and an ADULT MUST be present.

Inertial Eggs – Momentum

SCN 1-07a

Materials – One hard boiled egg, one fresh egg and one parent.
1. Spin each egg, one hard boiled and one fresh, on a table.
2. Leave it to spin for a few seconds then momentarily stop it by placing your finger on top.
3. Release the egg and observe what happens next.
Why do you think this happened? Write your own explanation.
https://www.youtube.com/watch?v=Avj770CXIFF

Coloured Carnations

SCN 1-05a

Materials -White carnations, two colours of food dye, Plastic cups, Water and Scissors.
1. Use the scissors to cut the stem of the carnation in half lengthways. 2. Take two cups and fill them with water. Add a different coloured food dye to each cup. 3. Put the split stems of the carnation into the cups and leave overnight. 4. The next morning you should find that your flower has changed colour. 5. What do you notice about the petals?

Dancing Raisins

SCN 1-07a

Do you think you can make raisins dance up and down in a glass of fizzy juice? Predict what will happen or discuss with an adult.
1. Pour the can of soda into the tall glass. 2. Notice the bubbles coming up from the bottom of the glass. The bubbles are carbon dioxide gas released from the liquid. 3. Drop a few raisins into the glass. Watch the raisins for a few seconds. Describe what is happening to the raisins.
https://www.youtube.com/watch?v=mEQCvj977_A

Water, Ice and Water (Resources – Ice, 3 cups, lamp)

SCN 0-05a / SCN 1-05a

1. In cup 1 place an ice cube on its own.
2. In cup 2 place an ice cube underneath a thin layer of crushed ice.
3. In cup 3 put in an ice cube and place it safely under a warm lamp.
4. Leave them for ten minutes.
5. Draw a picture or write down what you think the ice will look like after ten minutes. Will it melt? Will it stay the same?
6. What happened in each cup? Discuss why you think this happened and then read the information below.

Make your own Invisible Ink

SCN 2-19a

You need a piece of paper, a cotton swab, a heat source (a lamp), and milk or lemon.
Dab a cotton swab into lemon juice or milk and write your message on a piece of paper.
Allow your message to dry and then ask an adult to hold your picture close to a lamp. After a few minutes your message should appear.

Floating Paper Clips SCN 2-08b

Do you think its possible to make a paper clip float?
1. Fill the bowl with water. 2. Tear off some tissue paper (around 4in x 2in). 3. Gently place the tissue paper onto the surface of the water so that it floats. 4. Place the dry paper clip on top of the tissue. 5. Use the rubber end of the pencil to carefully poke until the tissue sinks and the paper clip is left floating.
Can you make anything else float? Record your findings.

Wester Cleddens Science Grid

Spicy

*****PLEASE NOTE, SOME OF THE ACTIVITIES BELOW REQUIRE ADULT SUPPORT AND SUPERVISION. *****

How have plants benefited society?

SCN 2-01a

Research how plants have benefited society, for example, in medicine, dyes, fuels, construction etc.
You may choose to create a PowerPoint, film yourself giving a presentation, create a poster or design a leaflet.
https://www.woodlandtrust.org.uk/blog/2018/04/why-plants-are-important/
https://www.factmonster.com/dk/encyclopedia/science/medicinal-plants
https://graniteseed.com/blog/how-do-plants-help-prevent-erosion/

What Lives on Us (Germs)

SCN 2-13a

Rub your hand on a piece of bread and place it in a bag. Now wash your hands. Take a second piece of bread and rub your hand on it before placing it in a bag. Place your bags on the windowsill.

What do you think will happen?
Make a diary of what you see each day. Why do you think this is happening?
Do you understand the importance of washing your hands properly?

Friction SCN 2-07a

This task has two parts:
1. Describe the different types of friction in your own words.
2. Find a way to demonstrate one type of friction. You could use videos, photographs, diagrams a poster or any way you feel suits your example best.
https://www.bbc.co.uk/bitesize/topics/zsxxsbk/articles/zxqrdxs
https://www.ducksters.com/science/friction.php
https://www.theschoolrun.com/homework-help/friction-and-resistance

Balloon Kebabs

SCN 2-08a

Materials – Balloons, vegetable oil, skewers and adult supervision.
Do you think its possible to push a wooden skewer through a balloon without bursting it?
Make a prediction as to whether or not you think this is possible. Have a couple of attempts and then watch this video.
https://www.youtube.com/watch?v=PNXbW22Iat8
Research why this happens.

Forces Hunt

SCN 2-07a/SCN 2-08a

Find an example of air, water and surface resistance.
Find an example of gravity and of magnetic force.
Find an example of a machine that uses levers or pulley systems to do its job.
Document them anyway you want or discuss them with an adult. You may wish to create examples rather than look for them.

Classification of Plants

SCN 2-01a

All plants can be sorted into two groups, flowering and non-flowering.
To find out about flowering and non-flowering plants watch the video using this link:
https://www.youtube.com/watch?v=nzD7sMIS9Pk
https://www.ducksters.com/science/biology/flowering_plants.php
create a poster with a description of what flowering and non-flowering plants are. On this poster sort flowers into the two groups.

Make your own Sundial

Materials - Stick, rocks or chalk, 1 cup of playdoh (optional), watch or clock.
Find a sunny spot in your garden. Put the stick in the ground or playdoh upright. Throughout the day, place a rock, or mark with chalk for each hour indicating where the shadow falls at that time. Depending on your time, you may have to place rocks over a couple of days before your sundial is complete.

SCN 1-06a

Classification of Animals

SCN 2-01a

You may have seen branched keys before in magazines or comics. Scientists use them to help classify and identify living things.
For information on what a branched key is please visit the links below:
https://www.bbc.co.uk/bitesize/topics/zxjj6sg/articles/z9cbcwx
https://www.youtube.com/watch?v=pvzoleWxsI0 – more in depth explanation with an example. Choose to focus on invertebrates or vertebrates and create your own branched key.

Expanding Gases SCN 2-08a

Materials – Two bowls, cold water and hot water, Plastic bottle and a balloon
Find out what happens when gases are heated up or cooled down.
Make a prediction as to what will happen.
1.Fill two bowls – one with cold water and one with hot water. Place the bottle into the cold water and attach a balloon to the neck of the bottle.
2.Place the bottle into the hot water.
Record what happens.

Non Newtonian Fluid (Lots of fun)

SCN 2-05a/SCN 2-15a

Matter is either a Solid, a Liquid or a Gas. Is it possible for matter to fit into more than one of these categories? Can an Item be both a solid and a liquid?

Try the following experiment and find out.

WARNING – THIS COULD GET MESSY!
https://www.youtube.com/watch?v=Fnd-2jetTIw

Tornado in a Bottle SCN 2-08b

Do you think its possible to make a tornado in empty drink bottles?
Materials – Two 1 or 2 litre bottles, washer, duct tape, large bowl, water and adult supervision.
You could record your findings by filming your experiments or writing down your findings.

https://www.youtube.com/watch?v=-ZirFmCi_dE
https://www.youtube.com/watch?v=mzw3DcDbllg

Awe and Wonder – Cornflower Slime

SCN 2-15a

Materials – Cornflower, food colouring, water, large bowl, aprons and a large area because its going to get messy!

https://www.youtube.com/watch?v=eRrREeXzNmw

Could you create your own step by step instr making slime?

Fun with Density

SCN 2-05a/SCN 2-16a

Density is how much mass is in volume. One way to illustrate density is to pour liquids (which have a different density) on top of each other. The liquids with the greater density sink to the bottom.
Pour the exact same amount of honey, golden syrup, washing up liquid, milk, water and vegetable oil(In that order)into a glass. Colour the water and milk for more fun. Record your findings.
https://www.youtube.com/watch?v=Z50jFiIigNQ

Make your own Lava Lamp

Materials - Water, Vegetable Oil, Plastic Bottle, Food Colouring, Effervescent Tablet.
SCN 2-05a/SCN 2-16a
Method

1. Fill the bottle or jar a quarter full with water.
2. Top up, almost to the top with the vegetable oil
3. They should separate into two layers, water at the bottom and oil sitting on top.
4. Add about 6-8 drops of food colouring once the oil and water separate.
5. The colour will mix with the water at the bottom.
6. Pop in half an effervescent tablets and watch the bubbles form. Add more effervescent tablets bit by bit to keep the bubbles rising and falling

https://www.youtube.com/watch?v=nGA787T94Io