

Science Challenge



Cars on a Ramp



When you are playing with a toy car you need to push it to make it go, but what happens when you put it on a ramp or a slope?

Make a ramp using a piece of card, wood or a hard backed book. Roll a toy car or a ball down the ramp and watch what happens.

Talk about what will happen if you make the slope steeper, flatter, longer or shorter.

How could you measure this?



Try rolling different items down the slope. What goes quickest or furthest? Do any items get stuck or slide instead of rolling?

Technology Challenge



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Raw Potato

Is it possible to stab a potato with a drinking straw? Find out with this fun experiment that shows how air pressure can be used in surprising ways.

What you'll need:

- Stiff plastic drinking straws
- A raw potato

Instructions:

1. Hold a plastic drinking straw by its sides (without covering the hole at the top) and try quickly stabbing the potato, what happens? Try different lengths- does that make a difference?
2. Repeat the experiment with a new straw but this time place your thumb over the top, covering the hole.

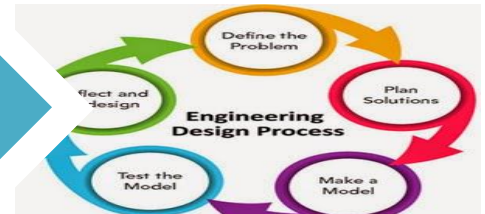


What's happening?

Placing your thumb over the hole at the top of the straw improves your ability to pierce the potato skin and push the straw deep into the potato. The first time you tried the experiment you may have only pierced the potato a small amount, so why are you more successful on the second attempt?

Covering the top of the straw with your thumb traps the air inside, forcing it to compress as you stab the straw through the potato skin. This makes the straw strong enough to pierce the potato, unlike the first attempt where the air is pushed out of the straw.

Engineering Challenge



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Super Spiderwebs

Have you ever looked closely at a spider web before? What did you see? A spider web is a sticky net that spiders make from silk to trap their prey. When insects fly or crawl into the web, they get stuck and the spider eats them. Most spider webs are very thin but are also very strong.

Go on a spider web hunt in your garden or local park. How many spider webs can you find? Where were they built?

Create your own spider web

You will need: straws, scissors and play-dough
([recipe via this link](#))

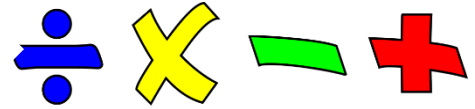


1. Snip the straws at different lengths (this is good for practicing scissor control!)
2. Make a blob of playdough for the centre of the web. Then stick straws into it. Add small blobs of playdough to the ends of these straws and join them together.
3. Keep looking at examples of spider webs to talk about what they are made of, the shapes they have in them and use these to help you create your web!

Super stretcher: You might want to make a playdough spider to sit in the centre of your web! Image from [RainyDayMum's blog post](#).



Maths & Numeracy Challenge



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Shapes with Sticks

Making shapes with sticks is a fantastic hands-on way for children to explore the properties of shapes. Children can apply their knowledge of shapes by creating them, and then exploring their properties by experimenting with their creations. All you need for this is lots of sticks!!

Once you have collected your sticks of all different sizes, use them to create shapes with 2 dimensions such as squares, triangles, rectangles or circles.



- What shapes can you make with the sticks?
- How do you know it is a triangle/square/rectangle, etc.?
- What happens if you move around and look at it from here? Is it still a triangle/square, etc.? Why?
- How many points are there? How many sides?
- Can you make any pictures with the shapes?
- What happens if you move the side of the stick over? Is it still a triangle, etc.?
- Can you fit inside your shape? Is it possible for more than 1 person fit inside? Can you fit more or fewer people into the shape if you change it?

Your final challenge is to make a picture on the ground using your 2-dimensional shapes. You might want to make a house, a car, an animal or something more adventurous.

Literacy Challenge



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Poems and Rhymes

This Poem is from The Poetry Society. It is called **Missing: Daisy** and is written by James Carter. You will need a grown up to read it to you.

Missing: DAISY

Anyone seen my DRAGON?
Scary, Scaly
Tall 'n Taily
Daisy the Dreadful Dragon.

She's got bad breath.
A temper true.
Eats old ladies. (Children too.)

She breathes out fire.
She puffs out smoke.
She'll singe your hair. She'll make
you choke.

Anyone seen my DRAGON?
Scary, Scaly
Tall 'n Taily
Daisy the Dreadful Dragon

She soars about.
She seeks out food.
Makes loud noises. (Mainly rude.)

Yes, she's grumpy.
Yes, she's smelly.
Big Butt always blocks the telly.

Anyone seen my DRAGON?
Scary, Scaly
Tall 'n Taily
Daisy the Dreadful Dragon

And she's beastly.
And a pest.
But I love her. (She's the best.)

Please send Daisy
Back to me.
Treat her well. Or you'll be tea

Anyone seen my dragon

Firstly, listen to someone reading it to you. Did you hear the bit that is repeated; Anyone seen my DRAGON? Scary, Scaly, Tall 'n Taily, Daisy the Dreadful Dragon. Try to say this bit along with your adult when you hear it.

Next, listen for the words that rhyme, that means they have endings that sound the same, such as scaly and taily; true and too. Try to join in with the rhyming words.

You could make a wanted poster for Daisy. Warning people to be nice or they may get eaten by the Dreadful Dragon!



Health & Wellbeing Challenge

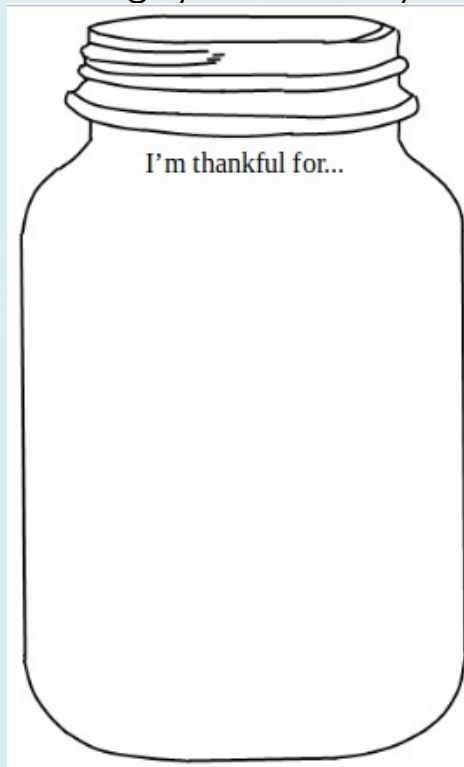
Being thankful

Practising being thankful has been shown to increase optimism, happiness and well-being. Focusing on things we are thankful for in our lives, no matter how big or small they are, can help us have a positive mind-set.

Watch this read-along of ['An awesome book of thanks'](#) by Dallas Clayton.

What are you thankful for?

Draw the outline of a balloon or jar. Inside it, draw pictures of people, things or events you are thankful for. You could even cut and stick pictures from magazines or photos to create a beautiful thankful collage. Decorate it with bright colours and arty bits and bobs like ribbon and sequins. Display your picture on the wall or fridge – somewhere you will see it everyday – to help remind you of all the wonderful things you have in your life!



Expressive Arts Challenge



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Pop Art



Pop Art uses very bright colours and bold pictures.

Make your own Pop Art

Choose some household items to draw around such as a mug, pair of scissors (closed), pencil.

Colour them in bold solid colours and then outline them with a thick black pen.

Cut them out and arrange them overlapping on a piece of background paper.

You might like to try out different background colours or patterns when you colour in.

You could try making a Pop Art name label using the technique in this short video clip. In this project you surround your name (or a word) with bright and bold patterns and shapes. [Pop Art Example](#)