

Science activities to complete at home

KS1

Plants and habitats:

- Go on a walk around your local area or a local wood and see if you can spot the different types of plants that we can see growing in Spring and Summer.

Leaf Spotter Sheet:

http://www.treetoolsforschools.org.uk/activities/pdfs/pdf_leaf_spotter_sheet.pdf

Spring Flower Spotter Sheet:

http://www.treetoolsforschools.org.uk/activities/pdfs/pdf_spring_flowers_spotter_sheet.pdf

Summer Wildlife Spotter Sheet:

http://www.treetoolsforschools.org.uk/activities/pdfs/pdf_summer_spotter_sheet.pdf

- When you go on a walk, collect a range of different plants and materials you find around a stick. When you get home, write about your journey through nature using your journey stick to help you remember your travels.

http://www.treetoolsforschools.org.uk/activities/pdfs/pdf_journey_stick.pdf

- Plant a seed and watch it grow (e.g. a sunflower). Once it has grown, do different tests to see how it is affected. Eg. Put your plant by a window – which direction does it bend in and why? Put your plant in a dark place – what begins to happen to it and why?

- Create a microhabitat for minibeasts by making a Minibeast palace:

http://www.treetoolsforschools.org.uk/activities/pdfs/pdf_minibeast_palace.pdf

Check on your palace after a week – has anyone moved in? You could also try attracting some butterflies to your garden by making a butterfly feeder:

http://www.treetoolsforschools.org.uk/activities/pdfs/pdf_butterfly_feeder.pdf

Seasons:

- Keep a weather diary.
http://www.treetoolsforschools.org.uk/activities/pdfs/pdf_weather_diary.pdf
- In the Spring and Summer we get warmer weather because the Sun is closer to the Earth. Sunshine increases the temperature. Using tin foil to reflect the sun, see if you can use sunlight to melt food in our current season. Use how much the sun has melted your food to decide which season we might be in. Instructions:



<https://www.stevespanglerscience.com/lab/experiments/solar-oven/>



Forces:

- Can you sink the boat? Tin foil normally floats but as we add more weight to it the downwards force becomes too much. Try different designs and see which works best. Instructions: <https://www.fizzicseducation.com.au/150-science-experiments/force-movement-experiments/sink-the-foil-boat/>

Animals including humans:

- Exercise is really important to keep our bodies healthy. In particular, exercise helps our heart to pump our blood. Feel the effects of exercise by measuring your/an adults pulse for one minute, doing some exercise and then measuring the pulse again. What happens?



KS2

Plants:

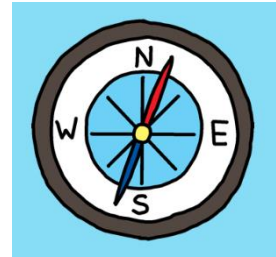
- Water is transported around plants to keep them healthy and give them the nutrients they need. In leaves, the veins transport the water. Watch this video and replicate it yourself to create leaf skeletons which show each individual vein! Video demonstration and instructions: <https://www.youtube.com/watch?v=yW-6H-aP5ys>

Forces:

- Friction is a force that happens when one surface/object meets another while moving. It opposes this and can slow objects down or stop them moving – this can be useful when designing tires on bikes and cars. Either: Test which shoes in your house create the most friction (are hardest to move) over carpet OR which surface in your house creates the most friction with a trainer. Enquiry page: <https://www.ogdentrust.com/resources/phizzi-enquiry-slippy-shoes>
- Go on a magnetic material hunt. Using a fridge magnet (if you have one available), go around your house, get up close to different objects and test if they are magnetic. If the fridge magnet sticks to something (or something sticks to your fridge magnet) it must be made of a magnetic material. How many items that are magnetic can you find on your magnetic material hunt at home?
- If you find some magnetic materials on your hunt, why not make a magnet maze game. Instructions: <https://www.science-sparks.com/mini-magnet-maze/> or <https://www.science-sparks.com/lego-magnet-maze/>

- Did you know that compasses work because of magnetism? Make your own compass using simple household materials to find true North in your home. Instructions:

<https://nationalmaglab.org/education/magnet-academy/try-at-home/make-a-compass>



- Air resistance (drag) is a force that acts against gravity – as an object is pulled downwards, the air resistance pushes it upwards. Air resistance is how parachutes work. Test falling paper with a small surface area (scrunched up into a ball) and a large surface area (left as a flat sheet) when dropped from the same height – what do you notice about how quickly they fall? Use what you learn to design a parachute with good air resistance. You could make your design out of anything and test it out your window (with adult supervision).

<https://www.youtube.com/watch?v=w4Jgh9V9gwE>

Sound:

- See the effects of sound waves traveling through the air in this simple investigation where sound waves actually make things move! Instructions and Video Demonstration:

<https://mocomi.com/can-sound-move-objects/>



Living things and their habitats:

- An underwater habitat is very important for underwater creatures – but what happens when we pollute our waters? Simulate water pollution by filling a bowl with water and then adding different polluting materials to it (string/thread, cling film, oil, cotton wool). Now run your hand through the water. What happens to your hand? Why might this be dangerous for creatures that live in underwater habitats like the ocean?

- Go on a walk around your local area or a local wood and see if you can spot the different types of animal habitats. Animal Home Spotter Sheet:

http://www.treetoolsforschools.org.uk/activities/pdfs/pdf_animal_homes_spotter_sheet.pdf

Animal Poo Spotter Sheet:

http://www.treetoolsforschools.org.uk/activities/pdfs/pdf_animal_poo_spotter_sheet.pdf

Can you spot any potential risks to that animal, eg. Urbanisation and Pollution? Draw a plan of how you could make your local environment better for the wildlife that lives there.

- Create a classification key for the wildlife in your local area – can your family use it to successfully identify different plants and animals?

Electricity:

- Explore static electricity by doing this simple experiment:

<https://www.stevespanglerscience.com/lab/experiments/static-flyer-flying-bag/>

