

Science Home Learning

Summer 2 – Week 3 (wb 15th June 2020)

As part of our new project on *Water*, we would like you to learn about water power.

We have split the ideas into five different sessions, but this is only a guide. Please feel free to adjust the sessions so that they fit into your household timetable.

We would love to see what you have been up to, so if you are able to take a photo or upload it to Google Classrooms, that would be great!

SESSION 1

How do we make electricity?

Please watch this video (10mins.) to find out all about it:

<https://www.bbc.co.uk/teach/class-clips-video/primary-science-how-is-electricity-made/zfhfgwx>

SESSION 2

In the last session, we watched a video all about electricity and how it is made. Did you know that you can make electricity using water power?

[We have been learning about this for our English Fact Files this week]

Here is an experiment that you may like to try in the next session. Please watch the video to decide how you will go about conducting this experiment:

https://www.teachengineering.org/activities/view/cub_envron_lesson09_activity3

[The video is short – 1min36 – so you may have to watch it a few times, or press the pause button on your second watch, to ensure you know how the experiment works.]

Anything that causes a turbine to spin, can make electricity. This is why water is ideal as it doesn't run out.

SESSION 3 & 4

First, **Prediction** (guessing what you think will happen):

Try to write a sentence about what you think will happen when you pour water onto your water wheel. How much weight do you think it will be able to turn and lift?

Experiment time! 😊

MAKE A WATER WHEEL

What you will need:

a plastic bottle
some clingfilm
duct tape
some card
wool or string
sharp scissors
a wooden dowel
some weights (anything – bluetac, playdough, soggy bread, piece of apple – anything!)
an adult to supervise (and help with cutting)

Instructions:

- 1) As in the video, decide what shape and size your card needs to be and wrap each piece in clingfilm.
- 2) Mark the bottle with lines for slits for the cards and then **carefully** cut the slits out using sharp scissors (you may wish to get an **adult** to do this part as plastic can be very sharp).
- 3) Insert the cards into the slits and fold over slightly to keep in place.
- 4) Make a small hole in the base of your bottle and insert the dowel through this hole and out through the top of the bottle.
- 5) Tie a piece of wool or string around the top of the bottle and make a loop at the other end (so that you can attach some weight – your weight could be anything: a blob of bluetac or playdough, a piece of bread, anything!)
- 6) Holding your water wheel horizontally, pour some water on top.

Observation (what you can see):

What happened during your experiment? What did you see? Record your findings.

SESSION 5

In this session, you will look back at your experiment. What did you predict? Was your prediction correct?

Write up your **conclusion** (what you found out):

Did you make the water wheel correctly? Did it work? Would you change anything if you did the experiment again? Did you use enough water (or the same amount of water) with each weight?

Draw a picture of your experiment and what you have learnt.