

# Science Challenge



## Brilliant Bodies

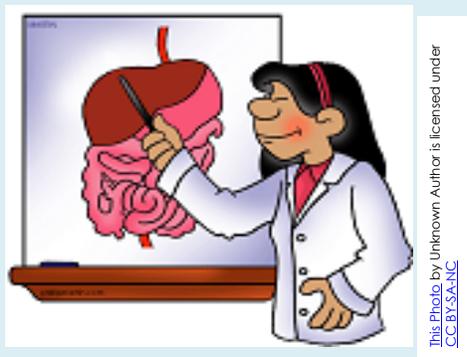
This week we are going to find out more about how our amazing and brilliant bodies work. We can learn about all kinds of body systems including our respiratory system or circulatory system. This page gives you access to a whole selection of clips and activities about the human body.

<https://www.bbc.co.uk/bitesize/topics/zfg8mp3>

Think about what your body needs to stay healthy. Can you think of a few small things you could do to help your body stay healthy? Maybe you could- take a bit more exercise, drink more water, eat more fruit and vegetables.....You could use your ideas to make a poster or leaflet to remind you and your family of what you are going to try to do.

One of the body systems we can learn more about is the digestive system. This is concerned with how our body uses the food we give it to give us energy and nutrients. This episode of Let's Go Live will help you to understand the digestive system and give you some ideas for activities to try for yourself.

<https://www.youtube.com/watch?v=ks70wt5G5M8>



# Technology Challenge



This Photo by Unknown Author is licensed under [CC BY](#)

## Flooding

### Setting the scene

Climate change is causing extreme variations in weather with some places around the world facing drought and fires, as we saw in Australia, or heavy storms and rain causing floods and landslides. Monsoons are creating massive problems for farmers in Bangladesh with flooding now affecting over one million people every year. Due to climate change the rainy season has become longer. It can last up to six months every year. Many families who used to grow crops to feed their families and sell at market are no longer able to do so.

In Gaibandha district, the monsoon season is becoming longer and more intense. This has led to many large rivers bursting their banks causing flooding and erosion of the land around. Farmers and their families often have to move when their homes and land get washed away. The soil left behind is very sandy and poor quality. This makes it almost impossible for farmers to grow enough crops to feed their family and to make extra income at market.

### The Challenge

To design and build a model structure that will enable farmers to grow crops even in an area that may become flooded.

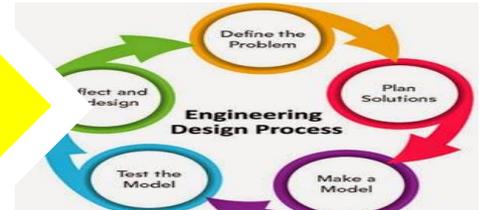
### What will we need?

For the model: Modeling equipment e.g. plastic bottles, lolly sticks, string, bubble wrap, food trays, cling film, sellotape, foil, straws and twigs.

For testing: Test in a sink, the bath or even a paddling pool! Put tins on top to see how much weight they can hold.



# Engineering Challenge



This Photo by Unknown Author is licensed under [CC BY-NC-ND](https://creativecommons.org/licenses/by-nc-nd/4.0/)

## Wind Power

We use **electricity** for lots of different things in our day-to-day lives. **Electricity can be generated in different ways for example through wind, water and solar power or by burning fossil fuels.** Watch this [short clip on BBC Bitesize](#) and complete the quick activity after it.

Watch this [video of the story 'The boy who harnessed the wind.'](#) It is a true story about a 14 year old boy called William Kamkwamba. William grew up in a small village in Malawi that was devastated by famine and drought. Forced to leave school he used donated books in the village library to teach himself how to build a windmill and create electricity. The first electricity ever seen in his village! He didn't speak English and he had to use a translation dictionary the whole time he was reading. **If you could meet William, what would you ask him?**



**Challenge: Can you construct a wind turbine which can lift a cup off the ground when powered by a hair dryer?**

**Suggested materials:** paper cup, string, straws, paperclips, card, paper, kitchen roll tubes, cellotape or masking tape.

**Things to think about** when planning and creating your design;

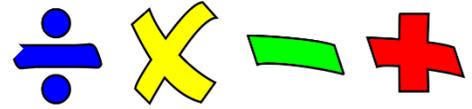
- how you will attach the turbine so that it spins** when the hairdryer is on?
- what **size / shape** should you make your blades?
- what would be the **best material** to make the blades? - how thick should they be?
- how many blades** should your design have?

[This website](#) has a detailed breakdown of setting up and carrying out the challenge as well as photos of different wind turbine designs which might inspire you!

If your family has **Netflix**, they have turned William's story into a film: **'The boy who harnessed the wind'**. You might like to watch this inspiring true story together.



# Maths & Numeracy Challenge



This Photo by Unknown Author is licensed under [CC BY-SA](#)

## Likelihood Landing

It is good to develop your understanding of chance and uncertainty – how likely or unlikely something will happen.

There are lots of words we can use, on a scale to describe the likelihood of something happening –

- Impossible
- Unlikely
- Even Chance
- Likely
- Certain

When you roll one 6-sided di –

- It is impossible to roll a 7
- There is an even chance that it will even or odd
- There is an even chance that it will be greater than 3 or equal to or less than 3
- It is certain that the number will be between 1-6

What statements can you write for when you roll two 6-sided dice?  
Or three? Or four?

An online dice roller can be found here, if you don't have access to any at home:

<https://www.random.org/dice/>

Once you have written some statements make sure you roll the di/dice and check out the probability of rolling these amounts to match the statements!



Some fun (and slightly silly) Likelihood games can be found here –

- **The Sludger** - <http://www.scootle.edu.au/ec/viewing/L115/index.html#>
- **Vile Vending Machine Game** - <http://www.scootle.edu.au/ec/viewing/L118/index.html#>

# Literacy Challenge



This Photo by Unknown Author is licensed under [CC BY-SA-NC](https://creativecommons.org/licenses/by-sa/4.0/)

## Giving Clear Instructions

This funny clip of a family making a sandwich shows us that we do not always give clear instructions-

<https://www.youtube.com/watch?v=FN2RM-CHkuI>



**How would you write instructions for this so that there was no confusion?  
Have a go!**

Try this for some other activities such as washing hands or brushing teeth. It is very important to think about the order you give the instructions. Ask a family member to carefully follow your instructions.

### Give instructions for drawing a picture.

Sit across from someone with a barrier between you such as a big book blocking their view.

Take turns to draw a simple picture and give instructions for the other person to copy. Concentrate on giving very clear instructions.

When you have finished compare the pictures-

Are they the same?

What instructions were hardest to follow?

Did you give enough detail?

If you have Lego bricks or something similar you could try this again but building a model instead.



# Social Studies Challenge



This Photo by Unknown Author is licensed under [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/)

## Night at the museum!

A museum is “a building in which objects of historical, scientific, artistic, or cultural interest are stored and exhibited.”

(<https://www.lexico.com/en/definition/museum>)

Can you create a museum exhibit or artefact for a period in history that interests you and that you have some knowledge on?

For example, you could make a Viking shield or axe, you may want to make a model of a World War 2 Anderson Shelter or you may decide to make your museum exhibit by creating an Egyptian mummy or pyramid.



It is important for visitors to the museum to be able to find out information about the exhibits they see.

Once you've created your exhibit, can you produce some information to go along with it so that others can find out about your interesting model from history?

# Expressive Arts Challenge



This Photo by Unknown Author is licensed under [CC BY-NC-ND](https://creativecommons.org/licenses/by-nc-nd/4.0/)

## Abstract Art

Sometimes it is good to doodle – just to be creative and free. With this activity you will get to doodle and be creative with pattern.

Patterns in art appear around the world in many art forms from many different cultures. Pattern is a visual element; even the most simple pattern can be eye-catching and compelling because of the colours and the variation of simple and complex patterns.

There are four ways to make patterns in abstract art:

- in ROWS (Example1)
- in "concentric rows", or rings (Example2)
- in a free-flowing way
- in a blocky style (Example3)

Can you create your own Abstract Art?

Here are some ideas:

Information of Pattern Art - <https://www.art-is-fun.com/patterns-in-art>

A how to video on how to make an Art pattern - <https://www.art-is-fun.com/how-to-make-a-pattern>

