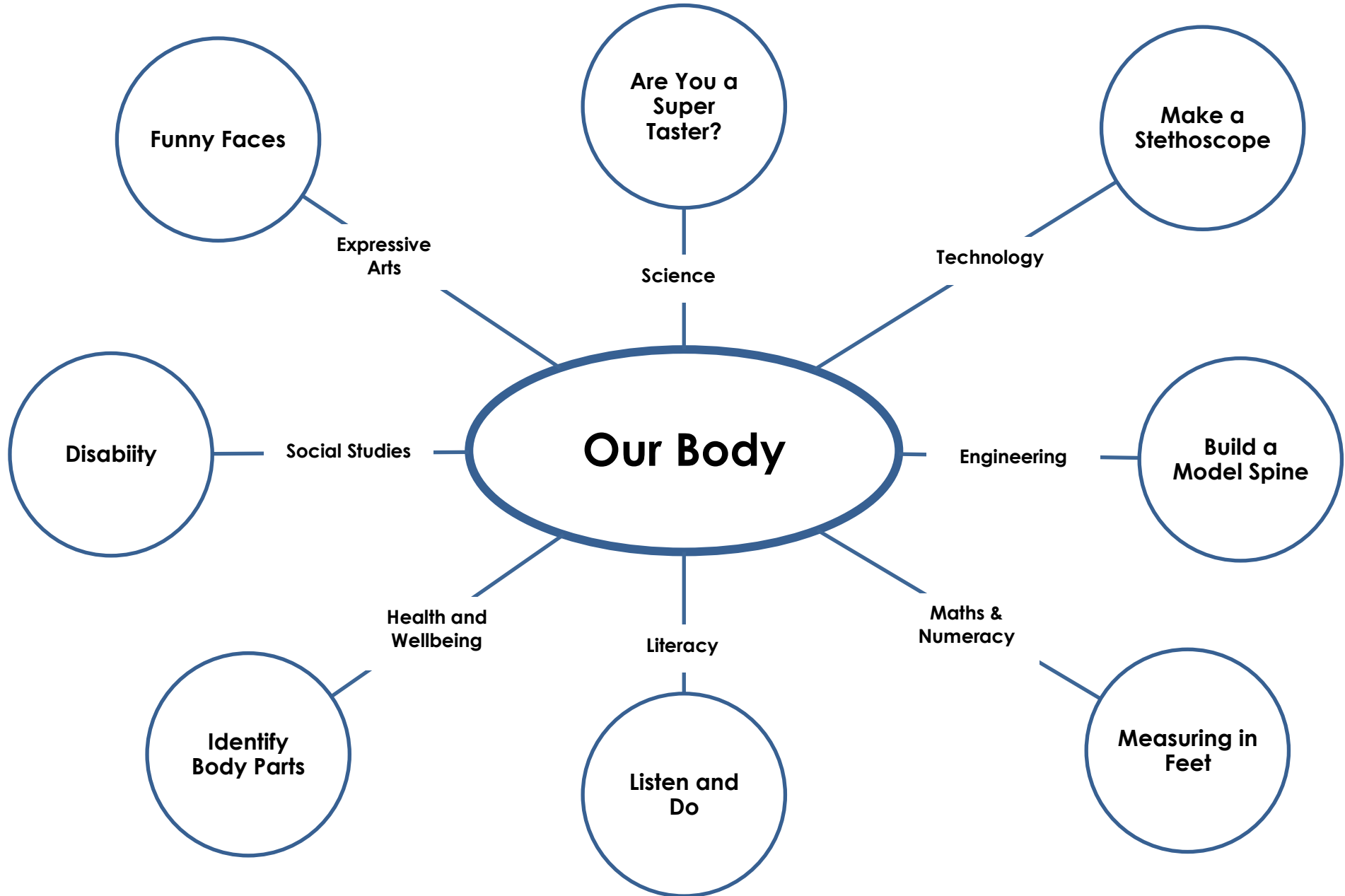


# Learning from Home



# Science Challenge



## Are You a Super Taster?

### Adult Support May Be Required

How many times have you heard 'No pudding until you eat all your vegetables?'

Sometimes you have to decide which is better, skipping your vegetables or getting pudding. Taste is an important sense, let's see how good yours is.

### You will need:

Dark food colouring, cotton ball, piece of white paper, hole punch, mirror

### Instructions:

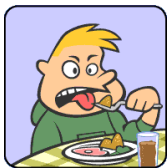
1. Use the hole punch to make a small hole in your piece of paper.
2. Dip the cotton wool ball into the food colouring.
3. Wipe the food colouring across the tip of your tongue.
4. Put the coloured part of your tongue through the hole in the paper.
5. Look in the mirror.
6. Count the round bumps on your tongue that appear in the paper hole.

### The Science:

If you have 25 or more round bumps on the tip of your tongue, you might be a super taster! If you have less than 25, you are likely to be an average taster.

*(Ask an adult to help you count them if you need to.)*

Being a super taster isn't necessarily a good thing! Some people have such sensitive taste buds that they find some nice tasting foods horrible because they can taste other things in them that average tasters can't. The taste buds are mostly found on or between bumps called papillae. Papillae cover the tongue surface, and you can see them with your naked eye.



Images from [www.clipart-library.com](http://www.clipart-library.com)

# Technology Challenge



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## Make a Stethoscope

### Adult Support Required

Stethoscopes are used to listen to a person's heart and breathing. We can make a very basic stethoscope easily using just a cardboard tube, tape and a funnel.



### You will need:

Kitchen roll tube, thick tape (duct tape), small funnel, a partner (adult at home or brother or sister), recording chart like the one below, pencil, timer

### Instructions:

1. Test out your cardboard tube – place it on the middle of your partner's chest. (Remember to ask permission first!) Can you hear their heart beating?
2. Tape the funnel into one end of the kitchen roll. Listen to your partner's chest again, does it sound any clearer?
3. **Make a prediction** - what do you think would happen to their heart rate if they did some exercises? Tell your partner your prediction.
4. \*Ask your partner to run on the spot for 2 minutes, if they can. Count the number of heartbeats **before and after** the exercise.
5. Now swap over and ask your partner to listen to and count your heart beats before and after exercise.



	Heart Beats (Rate) <b>Before</b> Exercise	Heart Beats (Rate) <b>After</b> Exercise
Me		
Partner		

\*Try counting the number of heart beats before and after some exercise. Record this data on the chart. What happened to the heart rate? Was your prediction correct?

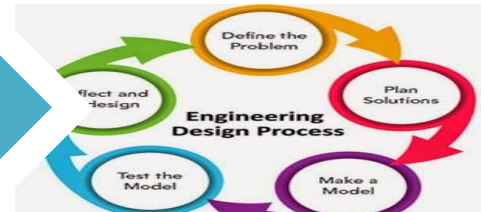
### The Science:

Stethoscopes used by doctors have a chest piece, rubber tubes and earpieces. The chest piece consists of a round diaphragm (tight flat surface) and bell (not one that rings!) which amplify (make it louder) the sound of the heart beating so the doctor can hear it.

Your heart pumps blood all around your body supplying it with oxygen. When you exercise, your need for oxygen increases (goes up) so your heart rate speeds up sending more blood (and oxygen) around your body.

Activity and photo from: [www.science-sparks.com/](http://www.science-sparks.com/)  
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# Engineering Challenge



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## Build a Model Spine

### Adult Support and Supervision required

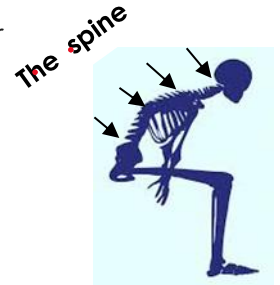
Humans are **vertebrates** - that means we have a **backbone**, otherwise known as a **spine**. The spine provides support to our body and allows us to stand upright. In this activity you're going to be building a model spine.

**Your Task:** Design and build a structure that resembles a human spine. The structure should not be rigid but have moveable parts.

**You will need:** Empty cardboard egg carton (s), pipe cleaners, foam sheets (or construction paper), scissors, other materials you wish to use

**Build it:** (Safety note: **ask an adult to help with the cutting out**)

1. Cut the top off an empty cardboard egg carton and discard it.
2. Cut the individual egg cups apart.
3. Carefully poke a hole in one side of each egg cup, then poke a hole in the opposite side.
4. Take your foam sheet and cut it into 12 circles, each approximately the same diameter (width across) as the egg cups.
5. Poke or cut a small hole in the centre of each foam circle.
6. Take your pipe cleaner and thread an egg cup onto it. Then add a foam circle. Then another egg cup etc. Continue the pattern.
7. When your pipe cleaner runs out, twist another one to the end to make the spine as long as you like.
8. Once your spine is the length you want, gently bend over the ends of the pipe cleaners at each end to hold everything in place. You made a model spine!



**Test it:** Can you bend your spine model? Do all the pieces move together when you bend or twist it?

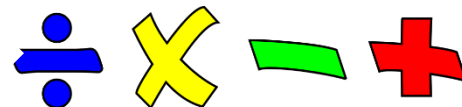
**Reflect:** Now look at pictures of a spine and think about what makes it so effective at providing support and supporting movement. (**Use books and /or the internet – ask an adult for help**)

**Improve it:** Use information from your reflection to make any changes to the structure.

The spine is part of our skeleton. To find out more click here: <https://www.youtube.com/watch?v=vt7QwUeRF0I>

Activity and photo from <https://team-cartwright.com/> Clipart from [www.clipart-library.com](http://www.clipart-library.com)

# Maths & Numeracy Challenge



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## Measuring in Feet

### Adult Support Required

Do you know how many feet tall you are (using your own feet)?

Today you will be investigating this question by drawing around your own feet, cutting them out and then working out how many of your own feet tall you are.

### You Will Need:

Paper  
Scissors  
Pens  
A partner



Take care  
using scissors!

### Method:

1. Stand on the paper and draw around your feet. (You will need several)
2. Carefully cut out the foot shapes. (Ask an adult for help if you need to)
3. Lie down and ask your partner to see how many of your own feet tall you are.
4. Swap over and now your partner cuts out their foot shape and you measure them with it.

**Note:** Don't leave any gaps when measuring, make sure you count each foot which should be just touching the last one.

Can you make a table like the one below to show the results?

	How many Feet Tall
You	
Your Partner	



**Extension:** Can you measure other things using your feet? How long is your sofa, your bedroom, your garden? Try to estimate (have a good guess) how long each object will be before you measure it. Were you correct or close?

Activity idea from: [www.science-sparks.com/](https://www.science-sparks.com/)

# Literacy Challenge



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## Listen and Do

**You will need a partner, a pencil and coloured pens/pencils for this activity.**

Cut the page in half, vertically. (Down the way) You keep the part with the body picture on it and your partner should take the other part with the instructions on.

Your partner will read you out some instructions involving writing and drawing on the body picture. You must listen very carefully and carry out the instructions.

When you have finished, share your picture with your partner and look at the instructions together – did you follow them correctly? Were you a good listener?

**Read these instructions out clearly to your partner. You can repeat each one once only and only if they ask.**

### Instructions:

1. Write your name on the back of your paper.
2. Draw on a pair of green eyes.
3. Give the person a pair of shorts.
4. Draw a cat or dog on the ground next to the person. If it's a cat, colour it black. If it's a dog colour it yellow.
5. Think of a name for your person and write it next to their head on the right-hand side.
6. Draw a pair of red glasses.
7. Draw a cardigan with 5 buttons onto your person.
8. If your person is a girl, give them red hair. If it is a boy give them brown hair.
9. Think of a hobby for your person and write it down on the paper sideways.
10. Fold your paper in half and give it to me.

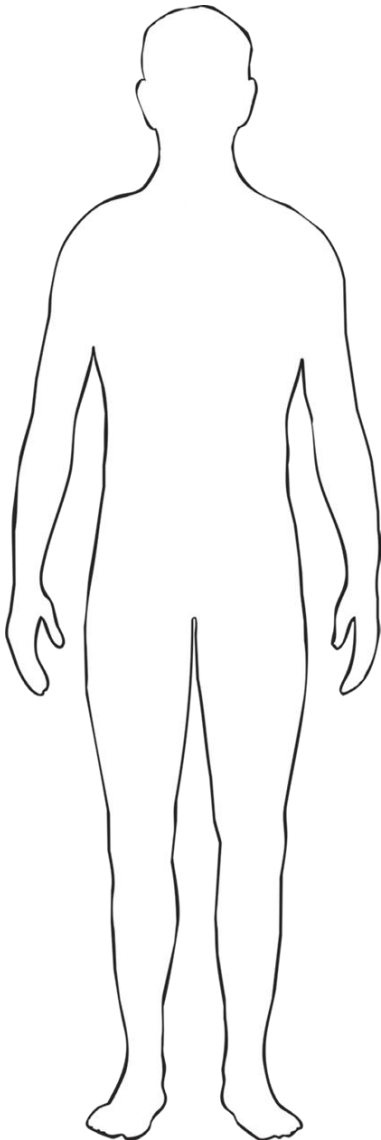


Image from [www.clipart-library.com](https://www.clipart-library.com)



# Health & Wellbeing Challenge

## Identify Body Parts

This is a picture of Ashley.

1. Label Ashley's main body parts using words from the word bank below.
2. Ask an adult, or brother or sister, to play 'Simon says' and / or 'I spy' with you – using the body parts you have just labelled.

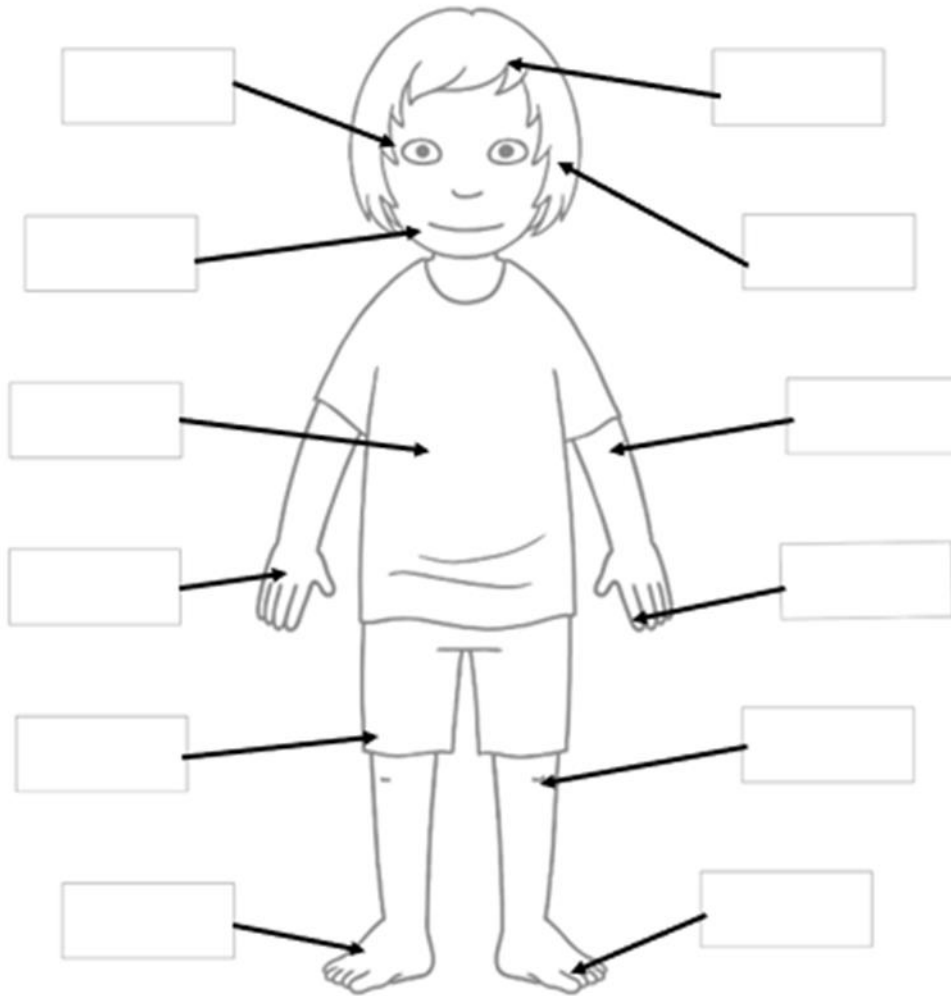


Image from Twinkl

leg	foot	head	finger	arm	toe
knee	eye	ear	stomach	hand	mouth

3. Talk to an adult about the names of any other body parts you might know. Try to add them to the picture above. Can you think of a reason why it is important for us to know the proper names for our body parts?

# Social Studies Challenge



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## Disability

### Adult Support Required

#### What Is a Disability?

A person with a disability may be limited in terms of their movement, senses or activities. There are many different types of disabilities.



Sometimes disabilities are hidden. This means that you might not be able to tell that somebody has a disability just by looking at them. Can you think of a disability that might be hidden? People with disabilities may or may not look different, act differently or just might not be able to do things as well or as quickly. However, they are still people, just like us.

**Try these activities with a partner. Can you guess what each disability might be?**

**Task 1:** Try doing these activities using only one hand. **1.** Tie your shoes, **2.** Eat your lunch, **3.** Open a jar that has a screw-on lid, **4.** Play cards, **5.** Draw or paint a picture, **6.** Go to the bathroom.

**Talk to an adult** about the difficulties you had doing these things. Imagine if you couldn't use either hand? Try to imagine what difficulties there might be if you were in a wheelchair **AND** you couldn't use your hands?

**Task 2:** Take turns to wear a blindfold (or keep eyes tightly closed). Give instructions to your partner to guide them across a room without them bumping into anything. Place an object somewhere in the room and give them directions to follow to find it.

**Task 3:** Each of you write down a short sentence or list -don't let each other see! Now take turns to read out your sentence or list (moving your mouth and lips but not making any sound) while your partner tries to lipread.

#### Task 4:

Look at these words. You must read the COLOUR the word is written in, not the word itself. Your brain will want to read the actual word. Even when you can do it correctly, you have to read much slower than you would usually.

**YELLOW BLUE ORANGE**

**BLACK RED GREEN**

**PURPLE YELLOW RED**

**ORANGE GREEN BLACK**

**BLUE RED PURPLE**

**GREEN BLUE ORANGE**



Activities and images from <https://adayinourshoes.com/>



# Expressive Arts Challenge



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## Funny Faces

### Adult Supervision Required

Today's challenge is to make a funny face collage using photographs, pictures from magazines, newspapers and catalogues, wool and any other bits and bobs you might have at home.

This is a fun activity, and you can be as creative as you like.

Note: Be careful when using scissors and **ask permission** before cutting up any pictures or photographs.



Activity and images from <https://picklebums.com/>