# SCIENCE FUN AT HOME

Have some fun at home with these science activities from **Science Sparks** and the **Primary Science Teaching Trust**

**BEFORE YOU START!** Please read through this with an adult:

- Make sure you have read the 'IMPORTANT NOTICE' on the back of this page.
- If you have a space outside that you can use safely, then you can do the 'Try this outdoors' activity outside. Don't worry if not as you could still do it indoors.
- Talk to your adult about sharing the science you have done and if they want to share on social media, please tag **@ScienceSparks** and **@pstt_whyhow** and use **#ScienceFromHome**

## MUSICAL SCIENCE

### 1 TRY THIS INDOORS ... MAKE A DRUM

Place your small items - buttons, dried beans or rice work well - into the empty tin can so it's about half full. Take the balloon and cut off the end where you would tie the knot and stretch the rest of the balloon over the top of the tin can. Try shaking the can and tapping the balloon top, listening to the sounds the can makes. Try changing the items you put in the can, or changing how much you put into the can. You could try making more than one drum with different things in each.

### You will need

- Empty tin can
- Small items: rice, buttons, beans
- Balloon
- Wooden and metal spoons
- String or wool
- Natural and/or human made items



### WHAT DO YOU NOTICE?
### Things to talk about ...

Can you tell what is inside the can by the noise it makes? Is the sound different if you tap the balloon to when you shake the tin? What happens if you stretch the balloon more tightly over the tin? What does it sound like if you tap the side of the tin can with a wooden or metal spoon?

## 2 TRY THIS OUTDOORS .... MAKE A WIND CHIME

Collect natural items from outside, maybe while you are on a walk. Pine cones, leaves and sticks all work well. Tie them to a large stick using string or wool so they all hang at similar heights. Now make one with man made items such as keys, beads or small bells. Hang the wind chimes in the garden and listen to the noise.

### WHAT DO YOU NOTICE? Things to talk about ...

What different sounds do you hear from your wind chimes? Which chimes make the loudest or quietest sounds? Which chimes sound high pitched and which sound low pitched?

The wind chimes in this picture are made from sticks of bamboo.
For inspiration about making wind chimes from all sorts of different things, click here



## 3 WHAT IS THE SCIENCE?

We hear sounds when an object vibrates (moves back and forth quickly, a bit like shaking). The vibrations of the object make the air around it vibrate too. When the vibrations reach our ears they shake tiny hairs which are connected to nerves inside our ears. The nerves send a message to our brains telling them that there is a noise. An object vibrates when it is hit or made to move, e.g. when the wind blows on a wind chime, the hanging objects move and bump into each other which makes them vibrate. The type of sound an object makes when it vibrates depends on the material it is made from. Metals are hard and vibrate well and usually make a ringing noise. Fabrics are soft so they don't vibrate very well and don't make any noise.

## 4 MORE ACTIVITIES YOU COULD TRY

MAKE A STRAW FLUTE - https://www.science-sparks.com/how-to-make-a-straw-flute/

MAKE A STRING PHONE - https://wowscience.co.uk/resource/the-science-of-the-string-phone/

FIND OUT HOW TO 'SEE' SOUND - https: https://www.science-sparks.com/how-can-you-see-sound/

Join in with THE GREAT SCIENCE SHARE - register for this year's event and take a look at these question maker tools to SHARE YOUR SCIENTIFIC QUESTIONS!

**IMPORTANT NOTICE**: Science Sparks and The Primary Science Teaching Trust are not liable for the actions or activity of any person who uses the information in this resource or in any of the suggested further resources. Science Sparks and The Primary Science Teaching Trust assume no liability with regard to injuries or damage to property that may occur as a result of using the information and carrying out the practical activities contained in this resource or in any of the suggested further resources.

These activities are designed to be carried out by children working with a parent, guardian or other appropriate adult. The adult involved is fully responsible for ensuring that the activities are carried out safely.