

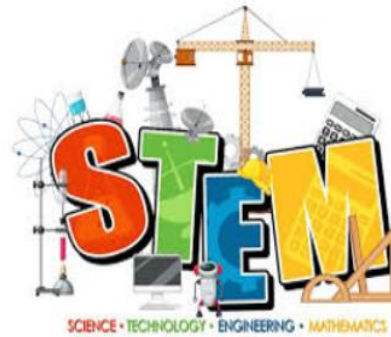
Science

In the story *Heavy Metal Badger*, Badger likes to make loud, rocking sounds but sometimes his music is too loud. Sound is a type of energy just like light and heat. Ask your grown up to help you find some household objects to make some loud sounds and then try to make the sound quieter or softer. Sound, is made by an object shaking, we call this vibrating. The bigger the vibration the louder the sound.

Investigate the different sounds you can make using an empty plastic bottle and some dry ingredients like pasta, rice, lentils. All you need to do is put a handful of pasta into your bottle, put the lid back on and give it a good shake. Empty the pasta and repeat with the lentils and the rice. Which ingredient made the loudest/softest sound? Why do you think that is?

Bring your shakers into class and explain your experiment to your teacher and your friends.

SCN 1-11a



Engineering

Badger likes trying out different types of music. You could build your own instruments to make a band for you and your friends. Work like an engineer to plan, create, test and improve designs of some homemade musical instruments. Have a look at some pictures of musical instruments like a guitar, drum, maraca and flute. Have a look for some household objects you have available and plan how you can use them to build your own instruments. Here are some ideas.

Guitar: Stretch rubber bands of different thicknesses over a tissue box opening. Pluck and compare sounds.

Drum: Stretch a balloon over a cup or tin can and tap it. Try tapping harder or softer.

Shaker: Fill a plastic bottle with rice or pasta and shake it.

Straw Flute: Cut straws at different lengths, tape them together, and blow to make notes.

Now test out your instruments. Do you need to make any improvements? Enjoy playing your music with your friends.

These STEM challenges are based around the facts in the book. Please enjoy trying all or some of them with your child. You can draw, write about or put pictures of your activities in your bag so your child can share these with their class.

Technology

A long time before the first "real" telephone was invented by Alexander Graham Bell in 1876, people were able to explore how sound travelled using "telephone cups". You can make your own Rock'n'Roll Phone to investigate how sound travels through the string from one cup to another. You will need two paper or plastic cups and about 2m of string. Ask a grown up to help you to carefully poke a small hole in the bottom of the cup (use a pencil or paper clip). Thread the string through both holes and tie a knot at each end inside the cup. Get your partner to hold the cup to their ear while you speak or whisper into the other cup. **It is important to keep the string tight.** Can your partner hear? What happens if you loosen the string? What happens to the volume of the sound if you make the cups bigger or use Pringle tubes? TCH 1-09a

Maths

In the story, Badger liked heavy metal music best. Ask your grown up to help you complete a survey with your friends and family. To find out what kind of music they like. Use tally marks to record and count how many people like each type of music.

Type of music	Number of people
Heavy Metal	
K-Pop	
Rap	
Country	

What is the most popular type of music?

What is the least popular type of music?

I have explored a variety of ways in which data is presented and can ask and answer questions about the information it contains.