**Year 4 Science –**

**Ideas to support your child with Science learning**

**Living things and habitats-**

**Investigation 1: Can you investigate and research environments that change and how this poses danger on living things?**

Have a go at this investigation which looks at the problems and dangers of pollution.

An underwater habitat is very important for underwater creatures – but what happen when we pollute our waters? Simulate water pollution by filling a bowl with water and then adding different polluting materials to it (string/thread, cling film, oil, cotton wool). Now run your hand through the water. What happens to your hand? Why might this be dangerous for creatures that live in underwater habitats like the ocean?

**Sound-**

**Investigation 1: Sound waves**

 See the effects of sound waves traveling through the air in this investigation where sound waves actually make things move!

You will need some cling form, an elastic band, a bowl, rice and a music speaker.

Cover a bowl with cling film and secure it with a plastic band. Put the rice on top of the bowl and play music loudly. What happens to the rice? Bring the speaker nearer to the rice. What happens now?

Discuss- What happens? Why does this happen?

You will see that the grains of rice start dancing. The loud music produces noise which vibrates. This makes the air vibrate as well, producing sound waves. When these waves hit the bowl, the bowl vibrates, making the rice jump about.

**Investigation 2: Making a musical instrument.**

Design and make an instrument which makes 2 sounds. Think about which parts make the sound? How do you make the sound? What sound does it make? Can you change its pitch? Can you change its volume?

Design the instrument first. This could be with the design sheet below. Then use different materials to make your instrument. Materials might include: kitchen roll, plastic cups, different size boxes, elastic bands or rice. Once your instrument is made, you could decorate it.

 **Musical Instrument: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Section of orchestra**

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**What materials are you going to use?**

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**How do you hold it?**

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**How will you play it?**

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**How is the sound changed?**

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**How do you change the volume it produces?**

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**Labelled Diagram**