



Seaside's Science Spot

Try some of these science experiments, projects or activities at home this half-term. The aim of these activities is to allow you and your child/children to engage with fun, but simple activities at home that will promote their excitement and interest in this subject.

Each half-term we will update Seaside's Science Spot with a range of different activities to try at home. Most of these activities will require adult supervision, but this is an excellent opportunity for you to engage with your child's science learning beyond the classroom. We have included some information on the science behind each activity that you could also discuss.

We would love to see some photos or short videos of the science learning you have been getting involved in at home so we can share this on the school website. Please send any photos or videos to:

schooladmin@seasideprimary.co.uk – FAO Mr Nicholas

Please note, by sending photos or videos to the above address, you are giving your permission for the school to use these on the school website.

Activity 1: Sky in a jar

You will need:

- A clear, straight-sided drinking glass
- Water
- Milk
- Measuring spoons
- Torch
- Darkened room



Method:

1. Fill the glass about $\frac{2}{3}$ full of water.
2. Add $\frac{1}{2}$ to 1 teaspoon of milk and stir.
3. Take the glass and torch into a darkened room.
4. Hold the torch above the surface of the water and observe the water in the glass from the side. It should have a slight bluish tint.
5. Now, hold the torch to the side of the glass and look through the water directly at the light. The water should have a reddish tint.
6. Put the torch under the glass and look down into the water from the top. It should have a deeper reddish tint.

What's the Science?

The small 'particles' of milk suspended in the water scatter the light from the torch, in the same way that dust particles and molecules in the air scatter sunlight. Sunlight is a mixture of all the colours of the rainbow, and different colours of light are scattered by different amounts when they encounter stuff like dust particles. Light at the blue end of the rainbow is scattered most easily. The red end of the rainbow represents light that's less easily scattered. When the light shines in at the top of the glass, the water looks blue because you see blue light scattered to the side. This is like the midday sky. However, when you look through the water directly at the light, it appears red because more of the blue was sent elsewhere by scattering.

Activity 2: Spinning juice

You will need:

- An empty 1 litre fruit juice carton
- A piece of string
- Scissors
- A washing up bowl
- Water

Method:

1. Poke a hole in the bottom left hand corner of each of the four faces of the carton.
2. Poke an extra hole in the top flap of the carton and tie string through it.
3. Knot the string, so that you can hang the carton from it.
4. Pour some water into the bowl so that it's about one quarter full.
5. Place the carton into the bowl of water.
6. Pour water into the carton until it is full to the top.
7. Now lift the carton out of the water by the string and watch what happens. The carton will be spinning around!

What's the Science?

Water shoots out the holes, and pushes back on the carton with equal force.



Activity 3: The Blubber Glove

This lets you find out for yourself how whales, seals and penguins all manage to stay warm in the cold.

It's gross, but it works....

You will need:

- Four waterproof plastic bags, big enough for your hands to go in.
- Parcel tape
- A big bowl of ice and water
- A few packs of solid vegetable fat
- A spoon

Method:

1. Cut the tops off two of the plastic bags if they have any handles or flaps and place one inside the other.
2. Start to fill the gap between the bags with vegetable fat.
3. Once the gap is filled with about 2cm of fat all around, seal the gap between the bags with parcel tape leaving the inner bag open so you can put your hand in it. You've now made your blubber glove.
4. Put one hand inside the blubber glove. Spread the fat around as necessary as to cover your hand completely.
5. Put your other hand inside the two other plastic bags. Now dip both hands into the icy water. Which one do you have to pull out first? Don't leave either in there too long as they will start to hurt.

What's the Science?

You should notice that you can keep your blubber-gloved hand in the bowl of ice much longer than the hand protected only by the plastic bags. This is because the fat acts as an insulator, keeping the heat inside and not letting it pass through to the icy water.

In the wild, many sea animals have a thick layer of blubber to protect them from the cold.

