

Supreme Incursions

Polymer Snow

Geography



History



Science



Mathematics



Health & Wellbeing



Design & Technology



STEM



Celebration



English



Adult Supervision Essential



30 Minutes



Grade Foundation+

This powder looks underwhelming at first glance. But with a splash of water, it is truly magical. Let's explore the properties of this material and why it really is so awesome!

The aim

- To understand the properties of instant snow and why it is a physical reaction.
- To explore why and where this material might serve a useful purpose.
- To learn about the process of osmosis.



Warning: Polymer snow contains small objects not suitable for children under 5. Do not leave children unattended. Do not ingest. Adult supervision is required at all times.

Watch the video

Scan the QR code to watch the instructions



What you will need

Polymer Snow (1 tsp makes a lot of snow)

Measuring cups & bowls

Water



Follow these steps

Step 1 Take 1 tsp of polymer and place it into a small bowl. **Step 3** Using a pipette gradually add 1/4 cup of water, a few drops at a time. Pause after every few drops to observe the reaction.

Step 2 (Optional) Add a few drops of food colouring to the water before mixing it with the powder to create coloured snow! **Step 4** Is this a reversible change? _____

It will start to dehydrate after a few days due to evaporation. Document how long this takes, recycle and use it again!



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The Science behind it

The scientific name for magic snow is **sodium polyacrylate (C₃H₃NaO₂)**. It is super **absorbent** which means that it **loves water-based products!** It is often used as a 'thickening agent'. It is mixed with things such as paint to make them thicker. It is also used in soaps and it's great for binding (sticking) things together.

The process that we have just seen is called osmosis. This is when **water molecules pass through a barrier** from one side to the other.

The reaction is a **physical reaction** and **NOT** a **chemical reaction**. This is because the **substance itself does not change**. Its elastic qualities allow it to stretch and hold the water. In contrast, during a chemical reaction, a **new substance** is formed and energy is either given off or absorbed.

Take it further

Using recycled jars and Play Dough get creative in making a diorama. Stick items such as LEGO and toys inside the lid. Decorate the jar, add the magic snow and shake!

Can you think of where this material might be useful in serving an important purpose for babies?

• Hint: This chemical can be found inside something that babies wear. When a baby needs to go to the toilet this chemical comes in handy!

Make your own! Can you get your hands on a few nappies? Open the nappies up and carefully extract the elements that look similar to this powder. Using the same methods, add water and discuss what you observe.

