

Why does it snow?

WOW!

(An **engaging** event to capture interest and energise. Guided by an adult initially; a supported experience)

Make fake snow

An engaging event, inspire children and families to learn more, generating excitement and intrigue. The WOW does not have to be related to the challenge, although it must lay the foundations for immersion.

Learners could discover an unmarked object; off-site visit or visitor; unexpected email; watch film or performance; challenged to produce something, etc.

Try it: skills

(Developing **empathy** of events, processes or people, exploring and enhancing language and social skills)

- Setting up simple practical enquiries, comparative and fair tests
- Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers.
- Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, line graphs and tables
- Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.

Milestone

Children will know how and why scientific investigations are conducted

Use it: skills

(Building on immersion, children have opportunities to acquire and **practice** skills in numerous ways)

- Plan and conduct whole scientific investigations
 - Variables
 - Prediction
 - Method
 - Diagram
 - Results
 - Conclusion
 - Evaluation
- Draw a bar chart to show how long it takes items to melt
- Draw a line graph to show temperature changes

Milestone

Children will know how to set up and conduct a scientific investigation and how to draw conclusions from their results

Try it: knowledge

(Developing **knowledge** of events, processes or people, exploring and enhancing language)

- Identify materials that are solids, liquids or gases.
- Know that some materials change state when they are heated or cooled.
- Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
- Temperature can be measured in degrees Celsius (°C)
- Name and identify different cloud types

Milestone

Children will know key scientific vocabulary

Use it: knowledge

(Building on immersion, children have opportunities to acquire and **develop** knowledge in numerous ways)

- Compare and group materials together, according to whether they are solids, liquids or gases.
- Investigation: melting butter, chocolate and an ice cube
- Research the temperature at which materials change state when they are heated and cooled.
- Draw the water cycle/Create a water cycle comic
- Cloud watching and cloud art
- Write a non-chronological report on the three states of matter

Milestone

Children will be able to use key scientific vocabulary

Thinking about the skills and knowledge children will develop in Have-a-Go, what language and/or experiences will they need before this?

Learners could: create tableaux; hot seat; create work banks, glossaries; draw/make something, mindmap, visit off-site, interview visitors, explore something, research, create learning walls, etc.

In order for learners to be successful and independent in the challenge, what skills and knowledge will they need to **practice** and become familiar with?

Learners need opportunities to prepare for the challenge, or have-a-go at any tricky or unfamiliar elements, complicated tasks, team work, etc.

A challenge should be challenging, and enable children to **independently** show off newly acquired skills and knowledge. It should be as public as possible, different from the last and promote co-operation with others. Challenges can single, whole cohort events, or comprised of many elements. They should always be documented in some way and reflected upon by learners.

The Challenge

(Combines skills and knowledge practiced in Have-a-go to, independently of adults, prove what they have learnt, by answering the question)

In groups, children to give a presentation on the water cycle using a large water cycle in a bag.

Documenting the challenge

Record and put on class website

Celebrating the challenge

Children make and take home their own mini water cycle in a bag.