snowyhydro

SNOWYSTEMACADEMY

Teacher Lesson Guide

Weather's role in hydropower

The important stuff			
This unit was designed for		**Total content duration**	
Target audience	**Year 3 & 4**	**Total content duration**	**60-70 minutes**
Curriculum links also for		**This unit contains**	**Duration**
Scientific understanding	Year 3-5	**Weather Video + Comprehension**	15 min
Science Inquiry	Year 3-6	**Snowflakes**	20 min
		Making your own snow	30 min
Detailed curriculum code alignment for ACARA v9 is available in the Curriculum Alignment section of this unit guide.		Check the timing and notes of these activities and find links to all of the individual resources in the Lesson Breakdown section of this unit guide.	

An overview of the lesson

This unit goes over weather's role in the creation of hydropower. From the snowfall in the mountains to the rivers, the way weather interacts with our environment has an effect on the water available for creating hydropower. Students will learn about the weather from Dr Kirsten Banks with a comprehension sheet before learning about snow and having an opportunity to make their own snow from household materials. From snow's origins high in the snowy mountains, students will explore how weather helps to deliver the source of energy used for hydropower.

Lesson breakdown

Activity timing and delivery guide			
Order	**Duration**	**Activity description**	**Notes**
1	15 min	**Weather Video + Comprehension**	Watch the video with Kirsten Banks and do the comprehension activity
2	20 min	**Snowflakes**	Read about snowflakes and do the colouring in. Make your own six sided snowflake to practice symmetry and fine motor skills
3	30 min	**Making your own snow**	Make your own snow using household items.

For this lesson you will need	
Teaching resources	
Video	Weather with Dr Kirsten Banks
Comprehension answer sheet	Video comprehension answer sheet
Student resources	
Snowflake fact sheet	Snowflake fact sheet and colouring in
Make a 6 sided snowflake	Instruction video for the 6 sided snowflake 6 sided snowflake template and guide Materials: Craft paper, scissors
Make your own snow	Make your own snow guide Household items: Bicarbonate soda, hair conditioner (white in colour), mixing bowls, one per group of 2-3

Curriculum alignment

Years 3 & 4

Science understanding	
Year 3	
Chemical sciences	AC9S3U04 investigate the observable properties of solids and liquids and how adding or removing heat energy leads to a change of state
Year 4	
Earth and space sciences	AC9S4U02 identify sources of water and describe key processes in the water cycle, including movement of water through the sky, landscape and ocean; precipitation; evaporation; and condensation
Science as a human endeavour	
There are no direct year 3 or 4 science as a human endeavour curriculum links in this unit	
Science inquiry	
Questioning and predicting	AC9S3I01/AC9S4I01 pose questions to explore observed patterns and relationships and make predictions based on observations
Processing, modelling and analysing	AC9S3I04/AC9S4I04 construct and use representations, including tables, simple column graphs and visual or physical models, to organise data and information, show simple relationships and identify patterns

Years 5 & 6

Science understanding	
Year 5	
Chemical sciences	AC9S5U04 explain observable properties of solids, liquids and gases by modelling the motion and arrangement of particles
Year 6	
There are no direct year 6 science understanding curriculum links in this unit	
Science as a human endeavour	
There are no direct year 5 or 6 science as a human endeavour curriculum links in this unit	
Science inquiry	
Processing, modelling and analysing	AC9S5I04/AC9S6I04 construct and use appropriate representations, including tables, graphs and visual or physical models, to organise and process data and information and describe patterns, trends and relationships

All year level curriculum areas in focus

Science Learning Area	Cross curriculum priorities	General capabilities
Key ideas	**Sustainability**	**Critical and Creative Thinking**
• Stability and change • Matter and energy • Systems	**Systems**: SS2: Sustainable patterns of living require the responsible use of resources, maintenance of clean air, water and soils, and preservation or restoration of healthy environments.	• Inquiring **Numeracy** • Measurement and geometry