

Hook:
Ice Cube Experiment - how long does it take for ice to turn to water.



Topic Name: Misty Mountain Sierra



Focus: Science/Geography

Knowledge:

- What are the stages of the water cycle?
- How does evaporation and condensation effect the water cycle?
- What is the melting point and freezing points of a material?
- How do materials change state?
- What are the three states of material?
- What are the properties of the three states?
- What are particles?
- What are the stages of the water cycle?
- How do the rivers and seas play a part in the water cycle?
- What seas and oceans surround the UK?
- What hills and mountains are in the UK?
- How do the hills and mountains play a part in the water cycle?
- What are some human and physical characteristics of the UK?

Learning Journey:
Children will be sorting materials into groups and explaining reasons for their groupings. They will be introduced to the three states of matter and identifying the key properties of each state.
Children will be introduced to the water cycle and learn about each stage individually. They will learnt the key points of each stage—evaporation, collection, condensation and precipitation.

Learning Journey:
Recap of the three states. Children will investigate gases and their identifying properties. They will be investigating the weight of gas by carrying out an experiment in groups.
Children will learning to locate cities and countries of the UK in preparation for adding to their knowledge of the water cycle. They will identify what country and city they live in.

Vocabulary:	Hills	Condensation
Water cycle	Human vs physical	Precipitation
Seas	Temperature	Collection
Rivers	Particle	
Counties	Melting point	
Cities	Freezing point	
Mountains	Evaporation	

Learning Journey:
Recap of three states and properties of each state. Children will be investigating how materials can change shape. They will do this by carrying out experiments and seeing that heat can cause a material to change shape and freezing can also cause a material to change shape. They will be introduced to the terms melting point and freezing point.
Children will be able to identify rivers and seas of the UK including those surrounding the UK. They will be able to link this to their learning of the water cycle by identifying what role the rivers, seas and oceans play in the water cycle.

Characteristic foci:
Articulacy/Resilience

Learning Journey:
Recap key learning so far. Children will extend their learning on the freezing and melting points and their knowledge of materials/states—they will specifically focus on evaporation and condensation and what these terms mean.
Children will be able to link their learning of rivers to locating counties of the UK (link it to the counties the rivers flow through) . Children will be able to locate own county and surrounding counties—learning about their local area.

- Skills:**
- Identify the melting and freezing point of water
 - Ask and answer relevant questions
 - Design simple experiments
 - Recognise what state a material is in
 - Sort materials
 - Make observations and predictions.
 - Locate counties and cities of the UK on a map.
 - Use an atlas to find information
 - Conduct own research to find out key information
 - Identify key features of an area

- Curriculum Coverage:**
- name and locate counties and cities of the United Kingdom, and their identifying human and physical characteristics, key topographical features and land-use patterns; and understand how some of these aspects have changed over time.
 - physical geography, including: rivers, mountains and the water cycle
 - compare and group materials together, according to whether they are solids, liquids or gases
 - observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)
 - identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature

Learning Journey:
Children will learn to link the water cycle (knowledge they have gained from geography) with changing states. They will be able to identify the stages of the water cycle through pictures and explain how they know.
Children will be able to identify mountains and hills of the UK—looking at physical and human features as well. They will be able to link how the mountains and hills are part of the water cycle as well.

Trip:
Thornton Reservoir

Display Plan:
Water cycle—with pictures, description and water cycle poems surrounding.

Outcome:
Water Cycle Poem—explaining stages of the water cycle.
Create fact file on county and city we live in - understanding local area.



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What do they already know?

What different materials are there?

Can you describe...?

What is this object made of...?

Name a variety of everyday materials

Which materials are waterproof?

What materials can be found around the class-room/ school/ outside?

What is a material?

How many different materials can you name?

What everyday materials would be suitable to build a castle?

What does the material need to have?

How is sound made and how do we hear sound?

What is the pitch of a sound and how do we change the pitch?

How do sounds change over distance?

What is electricity?

Where does electricity come from?

What are insulators and conductors?

How do switches work?

What is a human feature?

What is a physical feature?

What are the 4 compass directions?

What is a map?

Why do we use a map?

What is a key?

What is a bird's eye view?

What is a continent?

What are the 7 continents?

What are the 5 oceans called?

Where is each ocean located?

What is a human characteristic of USA?

What is a physical characteristic of USA?

What are the similarities and differences between the UK and USA?

What is a country, city, state and continent?

How will they remember it?

- Recap previous learning from previous years by questions and answers.
- Using century AI to consolidate learning
- Mini quizzes at the end of lessons to retrieve learning from this and previous lessons
- Mini plenaries to bring learning altogether.
- Key vocabulary and learning displayed in classroom
- Recap previous lessons at the start of every lesson
- Make the links clear to the children so they understand how the knowledge connects and how they have built upon it
- When topic is finished—continue retrieval by using quizzes and linking (where possible) to next topic.

Which resources will I need?

- Experiment equipment - ice, beakers, thermometer, stopwatch, three types of chocolate, lemonade, plastic cups, scales.
- iPads—to conduct research
- Atlases