Educational resources

Year 7-8: Geography

Water catchment, treatment and supply in our region



Lesson overview, to be utilised in conjunction with Water catchment, treatment and supply in our region PowerPoint presentation

Curriculum links

Geography / Levels 7 and 8 / Geographical Concepts and Skills / Place, space and interconnection - (VCGGC101)

Content description

• Identify, analyse and explain interconnections within places and between places and identify and explain changes resulting from these interconnections.

Elaborations

- Describing how water is an available resource when it is groundwater, soil moisture (green water), and surface water in dams, rivers and lakes (blue water), and a potential resource when it exists as salt water, ice, water vapour or waste water, and using the concept of the water cycle to show the connections between the different forms.
- Examining how urbanisation can affect environmental quality and analysing the effects of erosion and sedimentation produced by human activities on landscape quality.

Geography / Levels 7 and 8 / Geographical Concepts and Skills / Place, space and interconnection - (VCGGC099)

Content description

• Explain processes that influence the characteristics of places.

Elaborations

• Discussing urbanisation as a shift in where, how and why people live where they do.

Learning intentions

- To explore the various water sources in our region.
- To research how water is treated and stored in our region.
- To summarise key information about the movement of water in the local water sources.

Success criteria

- I can understand that we have multiple water supplies in our region.
- I can research how water moves in one of the water supplies/sources in our region.
- I can present my research to my class/small group.





Lesson overview

Using the supporting PowerPoint presentation: **Water catchment, treatment and supply in our region**, explore the content and discussion points as outlined below.

Slides 1 - 5:

Wannon Water information and introduction.

Slides 6 - 7:

Unpack the Learning intentions and Success criteria.

Slide 8:

Lesson introduction - 'How does water move through our environment?' - discuss.

(Teacher prompt examples - ocean, rain, cloud, river, catchment. Could introduce technical vocab, e.g., evaporation, condensation, precipitation, transpiration, reservoir, etc).

Slide 9:

Whole class discussion - teacher led summary of the Natural Water Cycle diagram.

To assist with the exploration and discussions of content/diagrams on Slides 9 - 12, you can print or distribute the editable <u>Venn</u> and <u>Top Hat</u> diagram templates provided.

Slide 10:

Whole class brainstorm - 'What does urbanisation' mean?' 'How would this diagram look different in an urban environment?'

Slide 11:

Whole class discussion - teacher led summary of the Urban Water Cycle diagram.

Slide 12:

Compare and Contrast - Natural Water Cycle vs Urban Water Cycle.

- Observe and discuss the similarities and differences between The Natural Water Cycle and The Urban Water Cycle.
- Refer to the editable <u>Venn</u> and <u>Top Hat</u> diagram templates.

Slide 13:

Discussion prompts: What is urbanisation?

What are the similarities and differences between the Natural Water Cycle and Urban Water Cycle?

How has urbanisation impacted on the Water Cycle?

Slide 14:

Introduce task - Small group research - water catchment, treatment and supply in our region.

- We are going to research the movement, treatment and supply of water in our region.
- Discuss why does our region need multiple water source/supply areas?

Optional - Explore the Wannon Water region as a class using Google Maps. Discuss and highlight the vast and varied types of communities and natural environments in our region, e.g., farming, small rural towns, regional cities, regional centres, natural environments, e.g., forests, rivers, lakes, streams, national parks, etc.

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Slide 15:

Utilise the Wannon Water factsheets to complete research in mixed ability groupings.

Utilise the printable/downloadable <u>Student research</u> <u>PowerPoint template</u> to scaffold the research process.

Slide 16:

Region factsheets to select from -

Casterton, Coleraine, Sandford and Merino's water source

Grampians Water Supply System

Otway Water Supply System

Port Campbell, Peterborough and Timboon's water source

Portland, Port Fairy, Heywood and Dartmoor's water source

Slides 17 - 19:

Jigsaw grouping - Create groups of 5 students.

Within each group, allocate a different water source/ supply to each member of the group.

Students will move off to work with students from the other groups who have been allocated the same water supply. Aim for mixed ability groupings to assist in reading and comprehending the information sheets.

Students can use the **<u>Student research PowerPoint</u>** <u>template</u> to summarise the key information about their allocated water supply/source.

Slide 20:

Present and share. Once research is complete, each student moves back to their original Jigsaw group of 5 to present their research.

Option - each expert group could present one at a time to the whole class.

Slide 21:

Share and reflect.

Slide 22:

For consideration, extension opportunities are provided.

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