

Y5 Learning Challenge: Our Watery World

Prime question: Why is water so precious?

Subsidiary questions:

1. Where does rain come from?
2. How and why does the amount of rainfall vary in the world?
3. How does too little or too much rainfall affect the lives of people?
4. What is a river and how does it change the landscape?
5. How can you control the flow of a river?
6. How do gases change in the water cycle?
7. How does water affect the properties and changes in materials?

Science – Properties and changes of materials

- Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets
- Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.
- Use knowledge of solids, liquids and gasses to decide how mixtures might be separated, including through filtering sieving and evaporating.
- Give reasons based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.
- Demonstrate that dissolving, mixing and changes of state are reversible changes.
- Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.

Geography – Rivers in the UK

- Describe and understand key aspects of physical geography, including climate zones, biomes and vegetation belts, rivers and the water cycle.
- Describe and understand key aspects of human geography, including the distribution and management of water.
- Human geography, including; types of settlement and land use, economic activity including trade link, and the distribution of natural resources including energy, food minerals and water.

History

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Art - (Link to Water Lilies or one of the Japanese-inspired paintings by Claude Monet)

- Improve their mastery of art and design techniques including drawing, painting and sculpture with a range of materials (eg, pencil, charcoal, clay, paint)
- About great artists and designers in history (African artists)
- Create sketchbooks to record their observations and use them to review and revisit ideas

DT – Design and test a water catcher

- Design purposeful, functional, appealing products based on design criteria
- Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology explore and evaluate a range of existing products.
- Evaluate their ideas and products against design criteria

Music (Link to Handel's Water Music)

- Listen with attention to detail and recall sounds with increasing aural memory
- Use and understand staff and other musical notations.
- Improvise and compose music for a range of purposes using the interrelated dimensions of music.

Computing

We are game developers

- Design write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into small parts.
- Use sequence, selection, and repetitions in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.
- Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals

