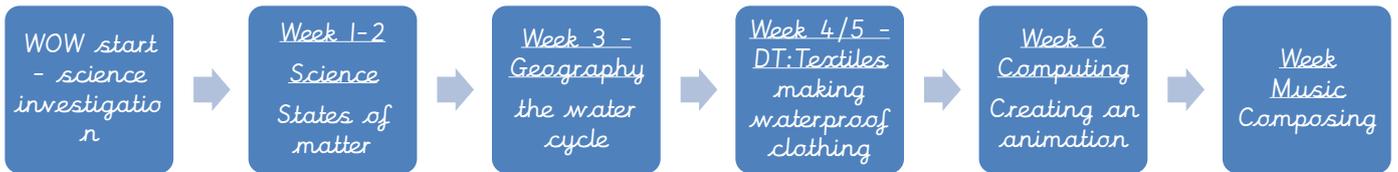


Year 3/4 Science & Geography based unit – Wonderful Water! (7 weeks)



Overview of unit: We will start with learning about different states of matter in science. We will then link this learning to finding out about the water cycle in Geography. This will lead on to us investigating the key aspects of the distribution of natural resources, focusing on water. In DT, the children will focus on textiles, learning how to use waterproof materials to make an item of clothing for wet weather. Next the children create an animation using Scratch linked to water, for example a waterfall or water park. Finally, the children compose music linked to water.

<u>Computing skills</u>	<u>Geography skills</u>
<ul style="list-style-type: none"> design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition 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 <p>Basic skills to be taught alongside:</p> <ul style="list-style-type: none"> Can choose the type of program for a given task – year 4 	<ul style="list-style-type: none"> Use maps, atlases to find key water features around the world (rivers, lakes, seas) particularly those in the UK and Europe; and sketch own maps. Describe and understand how the water cycle works. Describe and understand key aspects of the distribution of natural resources including energy, food, minerals and water.
<p><u>Vocabulary</u></p> <ul style="list-style-type: none"> Debug Sequence Algorithm Program <p><u>Previous Knowledge:</u> We are game testers (Toys) – programming on screen. Simple debugging</p>	<p><u>Vocabulary</u></p> <ul style="list-style-type: none"> Maps Atlases Water Cycle Evaporation Precipitation Condensation Run-off <p><u>Previous Knowledge:</u> New learning</p>

Science skills

<u>Thinking scientifically skills</u>	<u>Science knowledge for this unit</u>
<ul style="list-style-type: none"> Ask relevant questions. Set up simple, practical enquiries and comparative and fair tests. Make accurate measurements using standard units, using a range of equipment, e.g. thermometers and data loggers. Record findings using simple scientific language, drawings and tables Report on findings from enquiries, including oral explanations Use results to draw simple conclusions and suggest improvements, new questions and predictions 	<ul style="list-style-type: none"> 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 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.

for setting up further tests.	
<u>Vocabulary</u> <ul style="list-style-type: none"> - Accurate measurements - Thermometer - Tables - Oral explanation - Conclusion - Prediction <p>Previous Knowledge: Seasonal change - chrn will have used thermometers to record temperature throughout the seasons</p>	<u>Vocabulary</u> <ul style="list-style-type: none"> - Observe - Solid - Liquid - Gas - Degrees Celsius - Heated - Cooled - Evaporation - Condensation

<u>Ongoing DT skills</u> <ul style="list-style-type: none"> • Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. 	<u>Specific DT skills for this unit</u> <ul style="list-style-type: none"> • Understand the need for a seam allowance when cutting out templates. • Join textiles with appropriate stitching - back stitch or running stitch. • Cut materials accurately and safely by selecting appropriate tools. • Measure and mark out to the nearest millimetre.
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<u>Vocabulary</u> <ul style="list-style-type: none"> - Back stitch - Running stitch - Template - Seam allowance <p>Previous Knowledge: Tie dye and Running stitch sewing (Caribbean island) Design and create a delightful decoration (Celebrations)</p>
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<u>Music skills</u> <ul style="list-style-type: none"> • Improvise and compose music for a range of purposes using the inter-related dimensions of music. • Play and perform in solo and ensemble contexts, playing musical instruments with increasing accuracy, fluency and control. • Use and understand staff and other musical notations. • Appreciate and understand a wide and range of high-quality live and recorded music drawn from different traditions and from great composers and musicians.

<u>Vocabulary</u> <ul style="list-style-type: none"> - Improvise - Staff - Musical notation - Ensemble - Solo - Compose <p>Previous Knowledge: Play tuned (Glockenspiel) and untuned instruments. Use voices expressively when singing / chanting songs. Experiment with and create, select and combine</p>

sounds using inter-related dimensions of music

Knowledge

- Know that the water cycle is a continuous process that moves water from the sea through evaporation, forms clouds (condensation) that move across onto land and then falls to the ground through precipitation.
- Know that scratch is an example of computer programming and that you can create computer codes using it.
- Know that materials come in three forms: solid, liquid and gas and how they can change between states by melting, evaporating, dissolving, freezing and condensing.
- Know different types of stitches (back stitch or running stitch) and that stitches are used to connect materials together.

Planning notes

Geography: for describe and understand key aspects of the distribution of natural resources including energy, food, minerals and water - focus on water! Could we do a mini case study on a country where clean water is not available? A persuasive argument? This may have links to RE and SMSC.

Literacy: write an explanation text about the water cycle. Learn the -ation suffix for spelling pattern.

Science: comes from switched on science year 4 brilliant bubbles, looking at states.

DT: In DT, the children will focus on textiles, learning how to use waterproof materials to make an item of clothing for wet weather. - this will be for a fictional character (not to scale of human!) The specific DT skills (all linked to sewing) are not from the national curriculum so are not statutory. They are from Quigley but they might be helpful.

Computing: use scratch to create a water park/water ride?

Music - compose linked to water cycle? It's raining its pouring - could learn to play this?