

Autumn 2 OVERVIEW YEAR 3/4 – Geography

Term 2 Book - The Lion, The Witch and The Wardrobe - 'The World Beyond Us'

Topic – The Water Cycle		
Assessment:	VIP quiz at the end of lessons asking children to recap. Then recapping VIPs from the previous lesson at the start of the next one. Teacher judgement through the final pieces of work.	Very Important Points (VIPs): <ul style="list-style-type: none"> • More than three quarters of the Earth's surface is water. • Water evaporates in the heat of the Sun in the form of water vapour. • Clouds are formed from this water vapour that has condensed to form water droplets. • When the water droplets get too big, they fall from the clouds in the form of rain, hail, sleet or snow. • Three hundred million litres of water falls on dry land each day. • Not everyone has access to clean water. • Some adults and children walk miles daily to get dirty water as this is the only form of water they have. • Water is collected and treated before it safely arrives at our homes and schools. • Water pollution is when pollutants (waste, chemicals etc) contaminate the water which makes it harmful for everybody. • Some of the causes of water pollution include; natural disasters like earthquakes and volcanic eruptions, human and animal waste, litter, industrial waste and chemical waste from factories and manufacturing plants, fuel leakage. • Some of the effects caused by water pollution include; disruption to the food chains, illness/disease, death.
Links to prior learning (sequencing) and canon book	The Lion, The Witch and The Wardrobe. Children will build upon their prior KS1 learning understanding the term physical geography and what this entails using basic vocabulary referring to this. In the previous half term in LKS2 we looked at another aspect of physical geography – volcanoes and earthquakes.	
Links to other learning (cross fertilisation)	<p>Science – Looking at states of matter which is linked closely to the water cycle.</p> <p>Art – researching the famous artist Simon Beck and how he uses snow to create different pieces of art.</p> <p>DT – designing, creating and evaluating a sledge.</p> <p>English – a written explanation of the water cycle.</p> <p>Thematic Questions</p> <p>The World Beyond Us</p> <p>How could the water cycle be linked to space?</p> <p>Does water exist in space? On the moon?</p> <p>Modern Britain</p> <p>Has the UK always had access to clean water?</p> <p>How would water now compare to the water the Romans drank?</p> <p>Healthy Bodies & Healthy Minds</p> <p>Is clean water easily accessible for all people?</p> <p>The World Around Us</p> <p>How does water pollution differ from country to country?</p> <p>Is clean water easily accessible in all countries?</p> <p>Culture</p>	

	<p>How do humans impact water pollution? Discuss positives and negatives.</p> <p>Technology in Action</p> <p>Has technology helped to improve water pollution? How?</p>	<p>Fat Question:</p> <p>Would the water cycle still work if one of the parts were removed?</p> <p>If we weren't aware of the water cycle would it still exist? Do humans impact the cycle?</p> <p>If you didn't have access to clean water, do you think you would be as healthy as you are now?</p> <p>Do animals and humans suffer differently from water pollution?</p>
<p>Links to future learning</p>	<p>This unit will support the children's learning when moving onto UKS2 and again looking at physical and human geography. This learning is linked heavily to the science and the states of matter learning which is being taught alongside this topic.</p>	
<p>Character/Wider Development ('50 things', cultural capital, skills)</p>	<p><u>Visit to Yorkshire Water</u> – this will allow children to reinforce their learning of the water cycle but enable them to see the importance of keeping our water clean and safe. They will understand how they can play a part in keeping the water cycle as clean as possible and learn about the impact of water pollution. They will be able to see the different jobs perspectives as a result of learning about these topics.</p>	

OVERVIEW OF TEACHING SEQUENCE

Key Facts/Learning	Learning Focus or Key Question	Learning Outcomes (NC)	Key Words/Vocabulary	Greater Depth/SEN D	Misconceptions	Activities and Resources
<p>LO: To understand the water cycle.</p> <p>To know the four main stages in the water cycle.</p> <p>Evaporation - This is when warmth from the sun causes water from oceans, lakes, streams, ice and soils to rise into the air and turn into water vapour (gas).</p> <p>Condensation - the process by which water vapour (water in its gas form) turns into liquid. It happens when molecules of water vapour cool and collect together as liquid water. Water vapour can be found on the outside of cold glasses, the warm side of windows, and in the clouds up in the air.</p>	<p>To understand the water cycle and its main parts and how they follow on from one another.</p>	<p>Describe and understand key aspects of physical geography of the water cycle.</p>	<p>water, the water cycle, evaporation, condensation, precipitation, collection, run off, rivers, lakes, seas, oceans, rainfall, snow, sleet, hail, saturation, infiltration, surface, vapour, gas, cloud, stored, sun, energy, air.</p>	<p>GD- To complete a leaflet on the water cycle. Including drawing diagrams to go alongside the explanation of the water cycle. Include a paragraph on the importance of the water cycle. Discuss why is water important? It keeps humans, animals, plants alive etc.</p> <p>SEND - To label the vocabulary on the</p>	<p>-The water cycle involves freezing and melting of water. – They should think; The water cycle involves evaporation of liquid water, condensation of water vapour, and precipitation (rain, sleet, hail, or snow.)</p> <p>-Water only gets evaporated from the ocean or lakes. – They should think; water can evaporate from plants, animals, puddles, and the ground in addition to bodies of water.</p> <p>-The water cycle only includes rain and snow. – They should think; Ice in</p>	<p>Children will start by discussing the four main parts of the water cycle and seeing if they can come up with a simple definition using the information they already know. Then go through the water cycle and the four main parts; evaporation, condensation, precipitation and collection. Then look at the diagram followed by a video.</p> <p>https://www.bbc.co.uk/bitesize/clips/zh4rkqt</p> <p>OR</p> <p>https://www.bbc.co.uk/bitesize/topics/zkgg87h/articles/z3wpp39</p> <p>TASKS-</p> <p>Blue task - To label the vocabulary on the diagram using the words to support you. Use a range of materials to make your diagram 3D. E.g. cotton wool for clouds, tissue paper etc. Rivers and streams, precipitation, collection, underground water, sea, sun, evaporation, condensation.</p> <p>Red task - To label the vocabulary on the diagram using the words to support you. Rivers and streams, precipitation, collection, underground water, sea, sun, evaporation, condensation. Then write a simple sentence about the four main parts of the water cycle; evaporation, condensation, precipitation, collection.</p> <p>Orange task - To label the vocabulary on the diagram using a ruler and using the words to support you. Rivers and streams, precipitation, collection, underground water, sea, sun, evaporation, condensation. Then write a sentence to explain the four main parts</p>

<p>Precipitation - is the release of water from the sky, it can be liquid or solid, for example, rain, sleet, hail and snow. Rain begins when small droplets of water join together in the clouds until they become too heavy and gravity pulls them down to earth.</p> <p>Collection - This is when water that falls from the clouds as rain, snow, hail or sleet, collects in the oceans, rivers, lakes, streams. Most will infiltrate (soak into) the ground and will collect as underground water and is used as drinking water for animals and plants. This water is then evaporated and the cycle starts all over again!</p>				<p>diagram using the words to support you. Use a range of materials to make your diagram 3D. E.g. cotton wool for clouds, tissue paper etc.</p>	<p>all its forms (sea ice, glaciers, ice sheets, icebergs) is part of the global cycle.</p> <p>-When water evaporates it disappears or ceases to exist.</p> <p>-Water comes from a tap then you drink it or it disappears down the drain.</p> <p>-Clouds are made of smoke, cotton or wool etc.</p>	<p>of the water cycle; evaporation, condensation, precipitation, collection.</p> <p>Green task - To complete a leaflet on the water cycle. Including drawing diagrams to go alongside the explanation of the water cycle and including writing about the importance of water.</p> <p><u>Deepen the moment</u></p> <p>Bob thinks the water cycle will not work in Antarctica because it isn't very sunny so therefore the water will not be able to evaporate. Do you agree? Give reasons for your answer.</p>
<p>LO: To understand how water needs to be cleaned for drinking.</p>	<p>To understand the importance behind having clean</p>	<p>Describe and understand key aspects of physical geography</p>	<p>water, the water cycle, clean, dirty, sanitise, hygiene,</p>	<p>GD - To rewrite the water cleaning stages into</p>	<p>- That clear water is okay to drink. - That clean water just comes out of taps and you drink</p>	<p>Children will start by recapping the previous session on the water cycle and its importance to life. Then they will discuss the important things in school – the things they can't live without. They will write a list and then number the list saying which is most important.</p>

<p>Some countries have limited access to clean water.</p>	<p>water and how this impacts our health and life.</p>	<p>of the water cycle.</p>	<p>reservoirs, ocean, sea, solid, liquid, chemicals, gravel, particles, pesticides, filter, chlorine, bacteria, distribution.</p>	<p>your own words.</p> <p>SEND - To create actions for each stage of the cleaning water process. Take pictures to show your actions and stick them in your book.</p>	<p>it or it disappears down the drain.</p>	<p>This will lead the discussion onto water through discussing clean water and taps / toilets. Discuss how this should be high on the list of things needed in school.</p> <p>What about water? What about having access to clean water? Taps? Toilets? Wouldn't these be the most important? What do we have to do to get clean water? Is it like this everywhere in the world?</p> <p>Discuss if people everywhere have clean water. This is not the case. A case study included on the slides looking at Mulu who is a 10 year old girl who collects water. This is from the WaterAid website.</p> <p>https://www.wateraid.org/uk/get-involved/teaching/ks2-resources</p> <p>Different videos look at how our water is treated. You may wish to show one or both.</p> <p>- https://www.bing.com/videos/search?q=how+does+water+get+to+your+house&docid=608004306115101543&mid=BDB0278DC435813DFB5BDB0278DC4358813DFB5&view=detail&FORM=VIRE</p> <p>- https://www.bbc.co.uk/programmes/p0114f7c</p> <p>Discuss the process of how our water is cleaned. A task follows on from this.</p> <p>Blue task - To create actions for each stage of the cleaning water process. Take pictures to show your actions and stick them in your book.</p> <p>Red task - To fill in the missing words on how to clean water.</p> <p>Orange task - To complete the sentences on how to clean water.</p>
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					<p>Green task - To rewrite the water cleaning stages into your own words.</p> <p>Next activity includes making clear water using a filter / funnel system. STEM shows videos on how to complete these which is shown below.</p> <p>https://www.stem.org.uk/resources/elibrary/resource/315596/how-can-we-clean-our-dirty-water</p> <p>Children to look at the materials given to them to then create their own filtering system. Sand on top of sponge / a scourer is a good filter.</p> <p>Materials / equipment needed include; stones, sand, salt, cotton wool, sponge/scourer, beaker, funnel, filter paper, sieve.</p> <p>Mucky water includes soil, bits of plastic, paper etc.</p> <p>The point of this exercise is for them to be able to see the little process of the objects being removed to help the water become more pure. It's important to discuss that even though the water is becoming purer it is still not drinkable as there's lots of bacteria still within this and would need the chemicals including chlorine to remove the bacteria.</p> <p>Children will write about the activity, then list the equipment, draw a diagram, predict what will happen and then write a conclusion. In the conclusion children can include how they would improve this and GD to talk about whether their new filtered water is drinkable or not explaining how the process would need to be completed safely.</p> <p>To help with the conclusion ask questions like; what did you notice about the water collected in the beaker? How does the water differ visually from the water before and after?</p> <p>Deepen the moment</p>
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						Sandra thinks it is okay to drink water as long as it is clear. Do you agree? Give reasons for your answer.
LO: To understand the causes and effects of water pollution.	To understand how water pollution impacts human life. To understand what causes water pollution.	Describe and understand key aspects of physical geography of the water cycle.	pollution, water, cause, agriculture, water bodies, lake, river, ocean, groundwater, pollutants, plant, chemicals, fertilisers, habitat, effect, litter, reduce.	GD: To complete a newspaper report on water pollution and how this is affecting sea life. Focus on the cause, effects and how to prevent it. (You could include research as a part of this task. SEND: To create a poster about water pollution asking people to stop littering.	-If the water isn't brown then it is safe. -If I don't swallow the water then I can't become ill. However, if you fail to wash your hands before eating then you can still become ill.	Start the lesson by recapping the water cycle and how to get clean water. Then introduce the words water pollution. What do the children think it means? Discuss in pairs / groups. Then look at the definition before watching a video to learn about water pollution. https://www.bing.com/videos/search?q=wha+is+water+pollution+ks2&view=detail&mid=7E0EC9B39EFFCF7135AD7E0EC9B39EFFCF7135AD&&FORM=VRDGAR&ru=%2Fvideos%2Fsearch%3Fq%3Dwha%2Bis%2Bwater%2Bpollution%2Bks2%26FORM%3DHDRSC3 Below is a fantastic resource that holds all of the information as written information which you can find in the resources but also as an interactive resource. Would highly recommend following this. https://mocomi.com/water-pollution/ Then discuss the causes and effects of water pollution which again are included in the website above. Blue task - To create a poster about water pollution asking people to stop littering. Red task - To create a poster about water pollution. Define water pollution and write some causes and how they can help prevent water pollution. Orange task - To design a detailed poster about water pollution. Define water pollution, write about the causes, effects and how to prevent water pollution.

						<p>Green task - To complete a newspaper report on water pollution and how this is affecting sea life. Focus on the cause, effects and how to prevent it.</p> <p>For green task the teach model focuses on 'saving the turtles' but this can be altered to suit your class/children.</p> <p><u>Deepen the moment:</u></p> <p>Miss Humphrey thinks if people stop littering water pollution won't exist anymore. Do you agree? Give reasons for your answers.</p>
<p>Context (big picture learning) In LKS2, we will be learning about the water cycle in geography alongside many other aspects of water. Children will be looking deeply into how the water cycle works and what it consists of. They will then use this knowledge to help understand how important clean water is and how lucky they are to have access to this. Then they will look at the impact water pollution has and what causes this. This topic will help to deepen their learning through looking at deeper contexts around water and understanding its importance. Geography will be cross fertilised heavily with the science topic which is based on states of matter. All these concepts help children to understand something they have access to daily and to put the meaning behind how the water comes safely to us.</p>						

Folder name (Trust shared > Primaries > KS2 > Year 3/4 Planning > Cycle B > Autumn 2 – The Lion, The Witch and The Wardrobe > Geography)

Lesson one – The water cycle

Lesson two – Clean water

Lesson three – Water pollution

Key Vocabulary

runoff – Precipitation that did not get absorbed into the soil or it didn't evaporate and goes to where water collects.

infiltration – Water soaks into soil and or moves through the gaps and cracks in rocks.

water bodies – Part of the earth's surface covered with water. E.g. lakes, rivers, oceans.

water vapour – Water in the form of a gas. When water is boiled, it evaporates into water vapour.

snow – Small white crystals of ice formed directly from the water vapour in the air.

sleet – Rain or melted snow that freezes into ice pellets before hitting the ground.

hail – Water that gets caught in strong upward moving winds. The water freezes and starts to fall, with more water attaching to the hailstone.

particle – an extremely small unit of matter.

gas – A substance (state of matter) that can move freely.

chemical – A substance that cannot be broken down without changing it into something else.

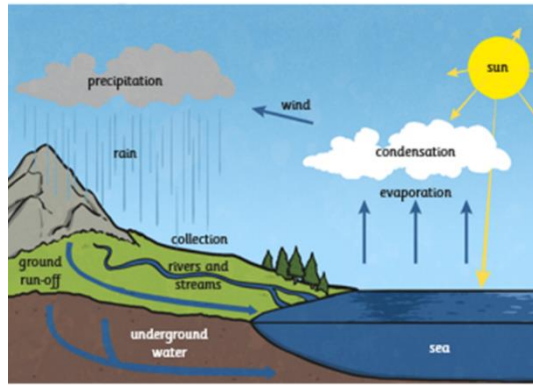
hygiene – The practice of keeping clean to stay healthy and prevent disease. E.g. washing hands.

sanitise – Make clean & hygienic.

pesticides – A substance used to kill insects or other organisms.

pollutant – A substance that pollutes something.

bacteria – Little organisms that are everywhere. They can be seen under a microscope.



Intent: For this topic based on water we will begin by looking into the water cycle and understanding the four main parts of this cycle. After this, we will go on to looking at how water needs to be cleaned and the importance of this. Finally, we will look at the causes and effects of water pollution. We will use our geographical skills to help us understand the importance of water.

The water cycle

The water cycle – The continuous cycle of water circulating throughout earth and the atmosphere through evaporation, condensation, precipitation and collection.

evaporation - This is when warmth from the sun causes water from oceans, lakes, streams, ice and soils to rise into the air and turn into water vapour (gas).

condensation - This is the process by which water vapour (water in its gas form) turns into liquid. It happens when molecules of water vapour cool and collect together as liquid water. Water vapour can be found on the outside of cold glasses, the warm side of windows, and in the clouds up in the air.

precipitation - This is the release of water from the sky, it can be liquid or solid, for example, rain, sleet, hail and snow. Rain begins when small droplets of water join together in the clouds until they become too heavy and gravity pulls them down to earth.

collection - This is when water that falls from the clouds as rain, snow, hail or sleet, collects in the oceans, rivers, lakes, streams. Most will infiltrate (soak into) the ground and will collect as underground water and is used as drinking water for animals and plants.

This water is then evaporated and the cycle starts all over again!

Clean water - Water that is taken from rivers, reservoirs, lakes and ground water is treated before flowing through the water main pipes. When the water arrives to be treated it goes through a large grate to prevent debris going through a machine. This includes objects like leaves, branches, litter etc. Next, chemicals are added to help make small particles stick together to form something known as 'floc' which then sinks to the bottom. After that, the floc is then removed. Then, water passes through a mixture of gravel and carbon to filter out the finer particles and traces of pesticides. Next, the chlorine is added to kill the bacteria. Finally, the water is now safe and clean and ready to be distributed to our schools and homes.

VIPs:

- More than three quarters of the Earth's surface is water.
- Water evaporates in the heat of the Sun in the form of water vapour.
- Clouds are formed from this water vapour that has condensed to form water droplets.
- When the water droplets get too big, they fall from the clouds in the form of rain, hail, sleet or snow.
- Three hundred million litres of water falls on dry land each day.
- Not everyone has access to clean water.
- Some adults and children walk miles daily to get dirty water as this is the only form of water they have.
- Water is collected and treated before it safely arrives at our homes and schools.
- Water pollution is when pollutants (waste, chemicals etc) contaminate the water which makes it harmful for everybody.
- Some of the causes of water pollution include; natural disasters like earthquakes and volcanic eruptions, human and animal waste, litter, industrial waste and chemical waste from factories and manufacturing plants, fuel leakage.
- Some of the effects caused by water pollution include; disruption to the food chains, illness/disease, death.

Fat Questions:

- Would the water cycle still work if one of the parts were removed?
If we weren't aware of the water cycle would it still exist?
Do humans impact the cycle?
If you didn't have access to clean water, do you think you would be as healthy as you are now?

