



Ocean World Lesson Three



Activity 3 - Why is water so important?

1. PPT 3 Importance of water
2. 3a Water Cycle Image
3. 3b Water Cycle Card Game

Teachers' Resources

'Ocean World' Lessons

KS1 - Year 3 - UK Curriculum: Science

Lesson Three

'Why is Water so important?'

Resources in this unit are:

- 1.Ocean World Powerpoint (8 slides.)
- 2.Worksheets: Water Cycle Card Game (Info sheet 3a is the coloured image, Info sheet 3b is text. For the game. The cards are made from using both 3a and 3b back to back.)
3. Activity Sheet Guide for teachers, includes key words, ideas and literacy work.
4. A list of 'sea music' is also included for use throughout the eight-lesson project.
- 5.The BIG Question (pupils are encouraged to discuss and/or write a sentence to answer - The BIG question: - 'Why is water so important?'

Teachers can establish pupil progress when discussing with pupils what they have learnt so far. It is suggested that work can be glued into a BIG BOOK/JOURNAL where pupil's work can be built up over the full teaching unit of 8 lessons.

All lessons are flexible - so spend a whole day on the lesson, or one section a day or one a week to suit your Geography/Science time slot.

*All materials (c) gloria barnett
The Weird Fish Lady*



Why is water so important?

Resources:



3: Importance of Water



3a Info Sheet
3b Water Cycle Cards



Water Cycle Cards

Suggested Activities:



**A: Teacher led discussion – Use PPT 3:
“The Importance of Water”**

Discussion:

Show and discuss the whole presentation.

Info Sheet 3a

Fact sheet / diagram for pupils to cut & paste.



B: Teacher led discussion – On the Water Cycle

Things to think about:

- Why is water so important?
- Does all our fresh water really come from the sea?
- What is the water cycle?
- Use of words, evaporation, condensation, precipitation (KS3 - transpiration, respiration)
- Where does our water come from?
- KS3 – Use ICT skills to research how long ago water arrived on Earth and where it came from.



C: Water Cycle Game

Use the Water Cycle Cards (Info Sheet 3b) to enhance knowledge of the travels of a water droplet. Pupils work in groups of 6 with each pupil taking the part of one journey each, to tell the stories from the cards (a - f) of the water droplets. Listening to each other's stories and discuss what they hear.

Always start with the 3 sentences:

- 1: I am evaporated from the Ocean.
- 2: I am condensed into a cloud.
- 3: The cloud releases me as rain.
- 4: *then tell their story.*

Everyone should have their water droplet ending up back in the ocean.

The Importance of Water



ACTIVITY **3**



D: Teacher led discussion on the Water Cycle (2)

Things to think about:

Show and discuss the whole presentation. Water droplets take different times to return to the Ocean:

- which is the slowest route?
- which is the fastest route?



E: Teacher to put Key Words on the board.

EVAPORATION

CONDENSATION

PRECIPITATION

CYCLE



F: Pupil Activity

Using the key words and a diagram, explain how the water cycle operates.



G: Pupil Activity

Make sure that pupil science journals are up to date with all the information on the water cycle.

Extension:

Ask pupils to replace the grass and cow (**Story F**) with a cabbage and a human - get them to write their story of the water droplet's journey.

Research:

- Find out if water could also be a gas? What sort of water is expelled from animals and humans when they breathe out (respiration?).
- Importance of water.
- Find out how much fresh water there is in the world.
- What does "drought" mean?
- What does the organisation "Water Aid" do? Get the facts!



H: Key Fact

Fresh water originates from the oceans - evaporated by the Sun and transported in the water cycle.

The Importance of Water



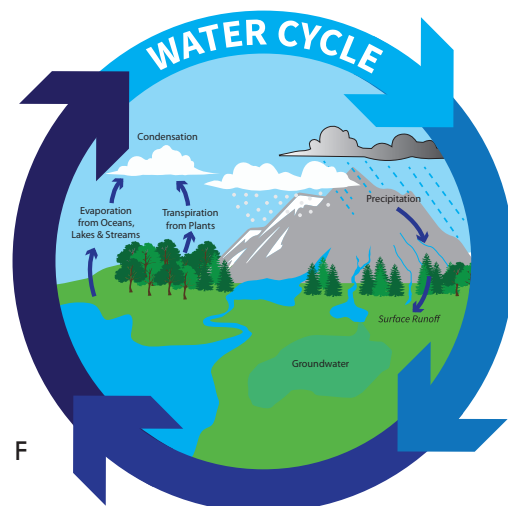
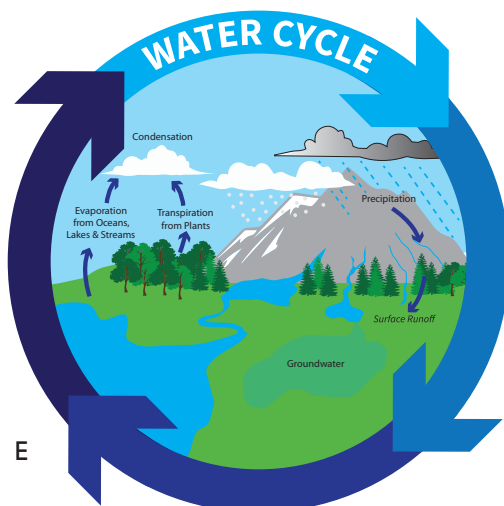
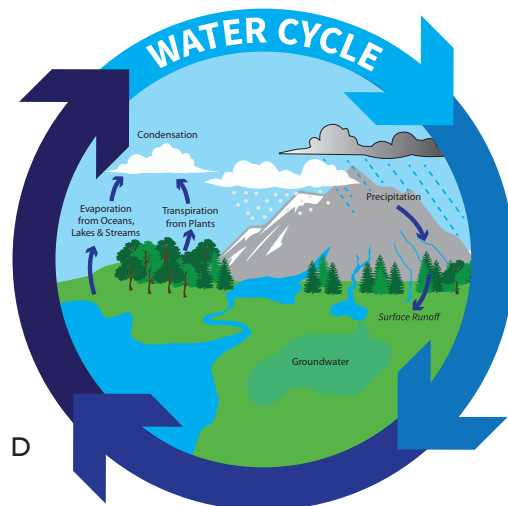
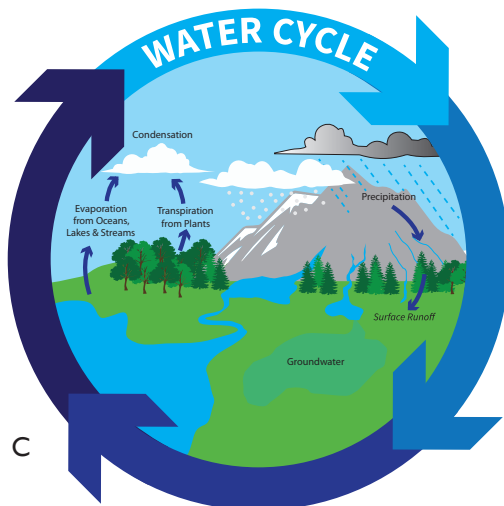
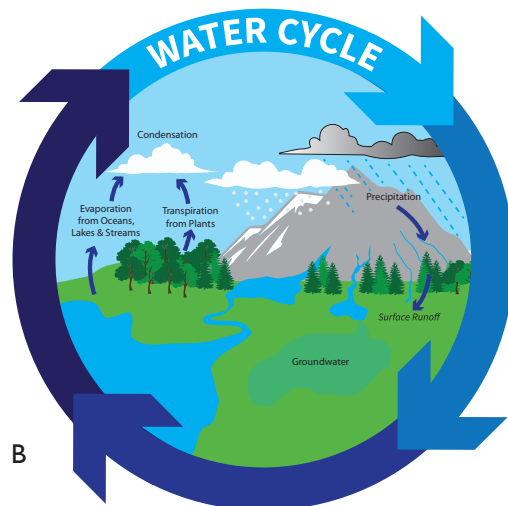
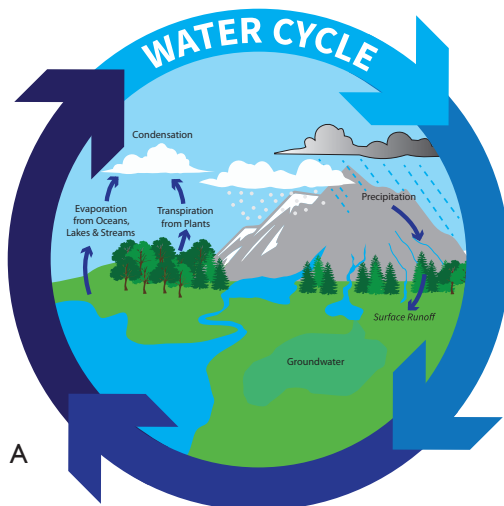
ACTIVITY **3**



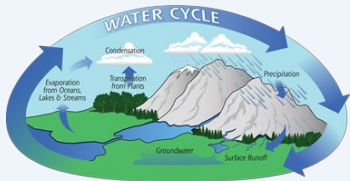
I: Answer the Big Question

Why is water so important?

The answer is.....?

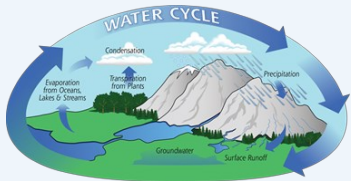


Ocean World



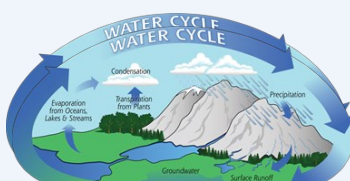
Water Cycle

Ocean World



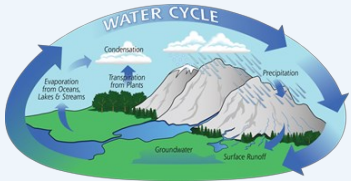
Water Cycle

Ocean World



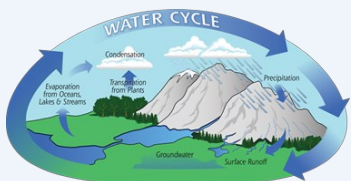
Water Cycle

Ocean World



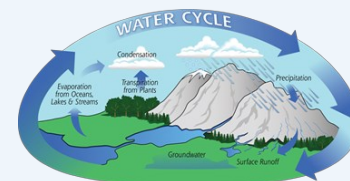
Water Cycle

Ocean World



Water Cycle

Ocean World

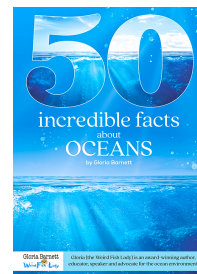
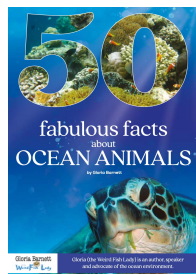
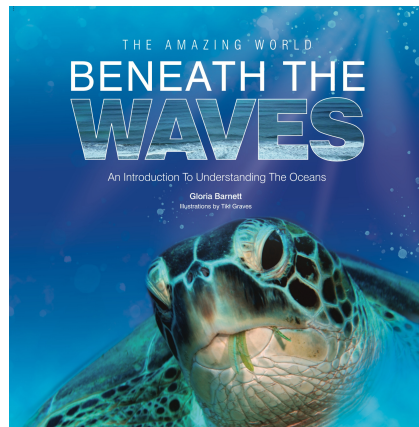


Water Cycle

<p>Story C</p> <p>Ground Water</p> <p>I am inside the rain which falls on a field I get soaked down under the earth: - sometimes near the surface (go to Story E or sometimes deep underground. (go to Story D) I eventually end up back in the Ocean.</p>	<p>Story F</p> <p>Respiration</p> <p>I find myself under the grass. The roots of the grass pull me up into the blades of the grass. A cow comes along and eats me. I get released when the cow breathes out. Respiration I get caught up in a cloud and travel around the water cycle again, and eventually end up back in the Ocean. You could tell this story with a cabbage being eaten by a human—what happens to the water droplet then?</p>
<p>Story B</p> <p>Run-Off</p> <p>I am inside the rain which has fallen on a mountain side. The rain runs down the mountain side. I reach a stream and flow down to a river. The river flows down to the Ocean and I am released into the Ocean.</p>	<p>Story E</p> <p>Transpiration</p> <p>The Ground Water has left me near the surface, under a tree The tree's roots pull me up, through the inside of the tree to the leaves. I help the leaves to make glucose and oxygen (photosynthesis) The water not needed for photosynthesis is released from the leaves into the air as transpiration. I get caught up in a cloud and travel around the water cycle again, and eventually end up back in the Ocean</p>
<p>Story A</p> <p>Domestic Water</p> <p>I am inside the rain which has been collected. I am now in a water collection point for household water. I travel down a tap into a house. I am used in a bath before a child's bedtime. I get released down the plug hole into the water disposal system. I travel along pipes and am released back into the Ocean.</p>	<p>Story D</p> <p>Deep Underground</p> <p>I am taken deep under the surface and fall into spaces between the rocks. These spaces can store water for ages. I think I might be here for some time before I eventually get soaked back up and returned to the cycle and ending up in the Ocean again.</p>

Ideas to enhance this lesson ...

Buy '*The Amazing World Beneath the Waves -Guide to the Oceans*' or the '*50 Facts*' Books for your classroom from the book section on www.barnettauthor.co.uk



Slides - Copy and paste into Powerpoint Presentation

Ocean World



The Water Project

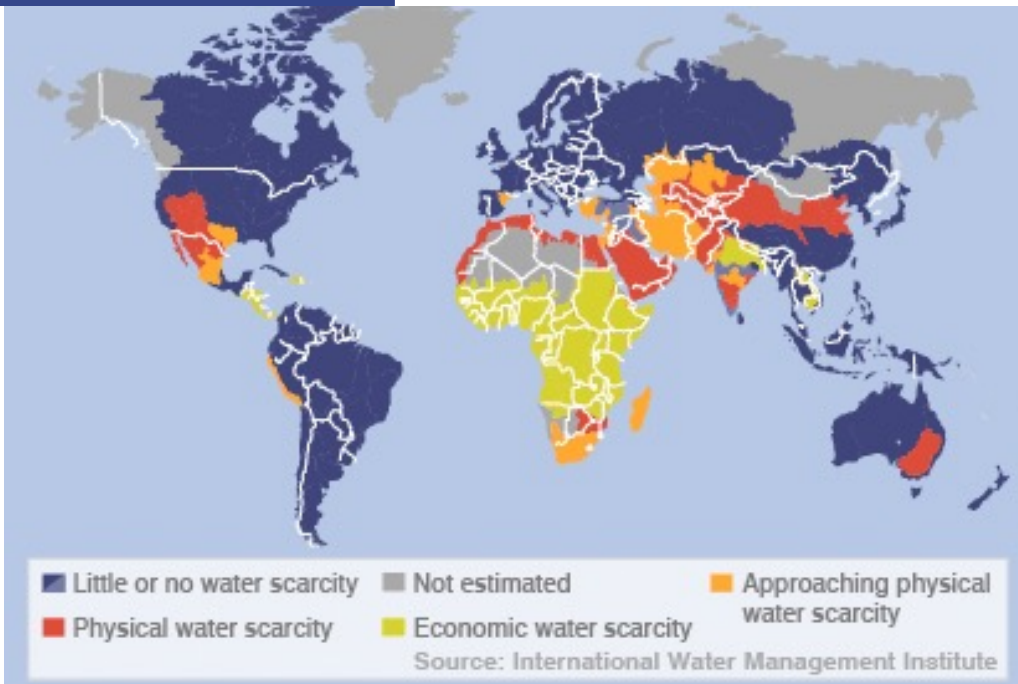
Importance of Water

Ocean World

Planet Earth



On a planet so full of ocean water why is there so little fresh water to drink?



Clean water is essential to a healthy life

- One in nine people are still living without clean water close to home
- The world's poorest people don't have clean water to drink, decent toilets or hygiene
- Dirty water carries disease which kills humans

Salt Water & Fresh Water

► Salt Water

- Contains lots of mineral salts
- It is poisonous to humans to drink salty sea water
- 70% of the surface of the Earth is covered by salty water.
- 97% of all water on the Earth is the salty water in the Oceans.

► Fresh Water

- Is essential for humans to live.
- If you are without fresh water for more than 3 days you will die.
- Most fresh water is found in glaciers, lakes and rivers on land.
- There is only 3% fresh water on Earth

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Where does our drinking water come from?

- Fresh water from glaciers, lakes and rivers can be treated to ensure complete cleanliness and then piped into homes
- Used fresh water (not sewage) can be filtered and treated to go back to homes
- Fresh water is often stored in reservoirs

Desalination Plants

- Desalination is a process which takes the salty minerals out of seawater and produces fresh drinking water
- It is expensive to build the large factory/plant to do this
- It is expensive to run the plants on 'normal' energy
- Desalination plants using renewable energy (solar power, wind energy) are being designed for the future

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An Idea for a Charity Event.

Recommended for Year FOUR

All pupils will be interested in how children live in other countries.

In some countries of the world, children spend many hours a day walking to a water source to acquire essential water for their families. Pupils can research information and write how they feel about other children not having water on tap.

Children to learn about the work of Water Aid and organise a charity walk to raise money for Water Aid.

They bring in a plastic milk bottle (parents or teachers suggest the size - 2 litre, 1 litre or 1/2 litre.) Fill the bottles with water at the school.

Pupils to walk around the school grounds - over a **marked** route and distance - carrying the heavy water bottles.

Have a special Day when this event is happening e.g. Water Day.

Pupils to be sponsored by family and friends and all money raised goes to Water Aid.

Prizes to be awarded to the pupils who walked the furthest /carried the most water. Calculations of distance walked with the weight of water - will even out the smaller children who might carry smaller loads but actually walk further.

Suggested Prizes - I know schools where I live who give out my books - as prizes on this day - a Set of Lucy Morgan Adventures - or sets of 50 Facts environmental books. Contact me and I will supply you with books at £6 each - signed as well.

Contact: [gloria @barnettauthor.co.uk](mailto:gloria@barnettauthor.co.uk) for bulk buying books.