



INDEPENDENT STUDY PACKET

THE WONDER OF WATER

Science Distance Learning

The Wonder of Water

Science activities for ages 7–11

| | |
|--------------------------|----|
| Get Started with Tigtag | 3 |
| Water in the World | 4 |
| The Wonder of Water | 6 |
| What Is the Water Cycle? | 9 |
| States of Water | 13 |
| Water Shortages | 16 |

Copyright 2020 by Twig Education, Ltd.

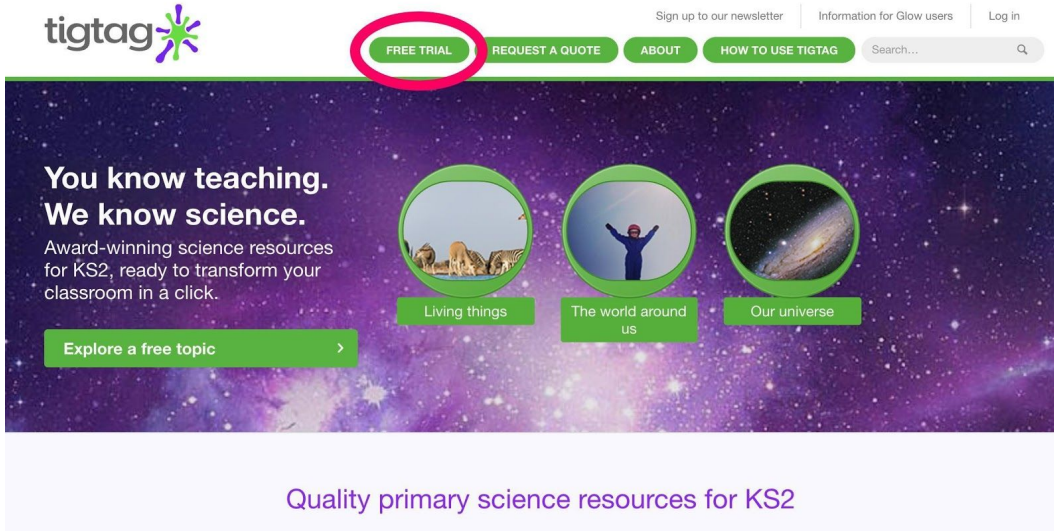
Credit: Permissions obtained for all images.

Full credit list available at www.tiqatqworld.com.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying or recording, or by any information storage and retrieval system, without prior written consent of Twig Education, Ltd. 14 North Claremont Street, Glasgow, UK G3 7LE

Get Started With **tigtag**

1. To begin, navigate to www.tigtagworld.com



The screenshot shows the Tigtag website homepage. At the top left is the Tigtag logo. To its right is a navigation menu with buttons for 'FREE TRIAL' (highlighted with a red circle), 'REQUEST A QUOTE', 'ABOUT', and 'HOW TO USE TIGTAG'. Further right are links for 'Sign up to our newsletter', 'Information for Glow users', and 'Log in'. A search bar is also present. The main content area features a purple and blue space-themed background with the text 'You know teaching. We know science.' and 'Award-winning science resources for KS2, ready to transform your classroom in a click.' Below this is a green button labeled 'Explore a free topic'. Three circular icons represent 'Living things', 'The world around us', and 'Our universe'. At the bottom of the page, it says 'Quality primary science resources for KS2'.

2. Select [Free Trial](#) and fill out the form:

Sign up for your free 90-day trial

First name *

Last name *

Email address *

I am a... *

If asked, save your user name and password in your browser.

3. Continue to the Independent Learning packets or Tigtag website. When you click on a digital activity (video or another type of media), you should be logged in. If not, use the above credentials to access digital activity.

Water in the World

You will watch a video and answer questions about the Earth's water.

You will:

Be able to identify the Earth's sources of water.

You will use:

Digital

- Characteristics of Water—Did You Know? video
<https://www.tigtagworld.co.uk/mindmap/#/lessons/CLASS00258/present/film/PRM00530>

Instructions

1. Think about the following questions and make notes.
 - Where does water come from?

 - Where do you think water is located on Earth?

2. Play the [Characteristics of Water—Did You Know?](#) video.



3. Answer the following questions.

- Describe where water on Earth comes from.

- Describe the different places on Earth where water is found. List the forms of matter that water takes in each place.

- Draw three diagrams of water in different forms in different locations on Earth.

- What forms can water take?

2. Play the [The Wonders of Water](#) video.



3. Answer the following questions.

- What are the three states that water naturally occurs in?

- What happens to water molecules when water begins to freeze?

- What happens to water when it is heated to boiling point?

- What do you think the molecules look like when water is a gas? Draw a diagram showing water molecules and gas molecules, and describe the differences between the molecules.

What Is the Water Cycle?

You will watch a video about the water cycle, then complete a diagram to show how the water cycle works.

You will:

You will be able to explain and identify the different stages of the water cycle.

You will use:

Digital

- [Water Cycle video](https://www.tigtagworld.co.uk/film/water-cycle-PRM00075/)
<https://www.tigtagworld.co.uk/film/water-cycle-PRM00075/>

Materials

- [Water Cycle Activity worksheet](#)

Instructions

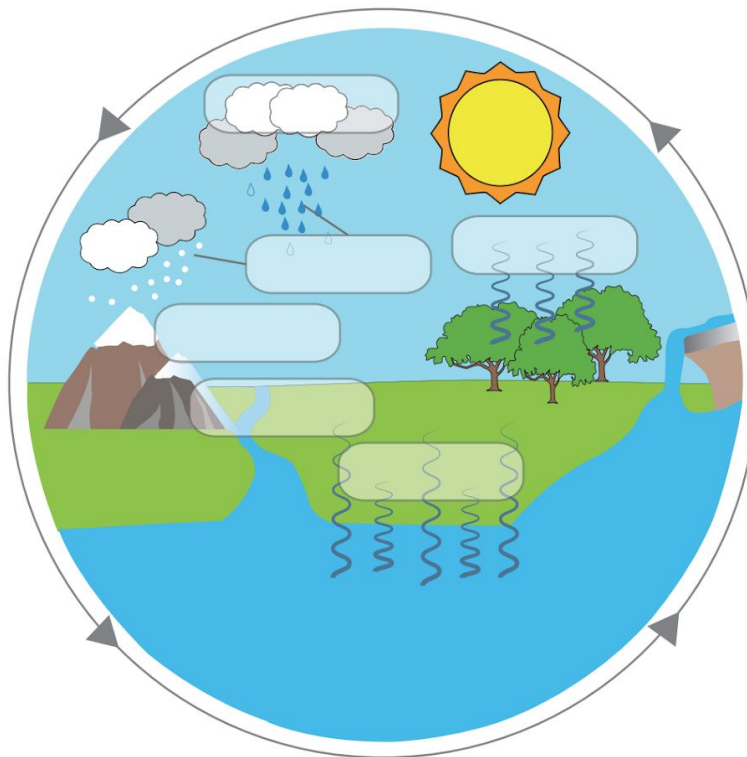
1. Play the [Water Cycle video](#).



2. Answer the following questions:

- What do we call water when it is in the form of a gas?
- What is evaporation?
- What causes precipitation?

3. Complete the [Water Cycle Activity worksheet](#) on the following page, using the word bank to identify the different stages of the water cycle.



Freezing

Evaporation

Evaporation

Melting

Condensation

Precipitation

4. Answer the following questions.

- What happens during the process of evaporation in the water cycle?

- What happens during the process of condensation in the water cycle?

- What happens during the process of precipitation in the water cycle?

States of Water

You will watch a video and complete a chart about the states of water.

You will:

Learn about condensation and evaporation, and how this works within the water cycle.

You will use:

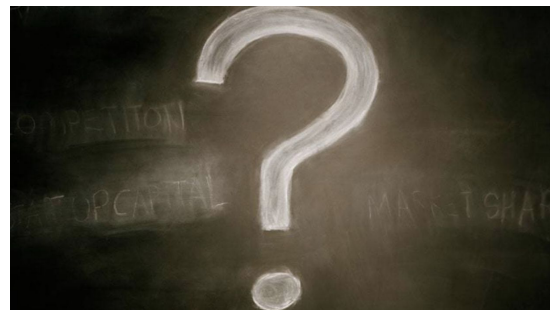
Digital

- [Water—Did you know? video](https://www.tigtagworld.co.uk/film/characteristics-of-water-did-you-know-PRM00530/)
<https://www.tigtagworld.co.uk/film/characteristics-of-water-did-you-know-PRM00530/>
- [Changes of State—Did you know? video](https://www.tigtagworld.co.uk/film/changes-of-state-did-you-know-PRM00526/)
<https://www.tigtagworld.co.uk/film/changes-of-state-did-you-know-PRM00526/>

Instructions

Did you know?

Play the [Water – Did you know? video](#) to find out about water molecules.



1. Think about the following questions and make notes.
 - Where does water come from?

- Where do we find water on Earth?

- Where does rain come from?

2. Play the [Changes of State – Did you know? video](#).



3. Answer the following questions.

- How does a boiling kettle create steam?

- What is the name of the gas that forms steam?

4. Look carefully at the Changing Materials diagram.



Changing materials

Freezing

The process of a liquid changing state to become a solid.



Condensing

The process of a gas changing state to become a liquid.



Melting

The process of a solid changing state to become a liquid.



Evaporating

The process of a liquid changing state to become a gas.



5. Complete the chart to explain how each process works in the water cycle, and whether water is in a solid, liquid, or gas state in each process.

| Freezing | Condensing |
|----------|-------------|
| | |
| Melting | Evaporating |
| | |

Water Shortages

You will watch videos, then complete a chart to explain the advantages and disadvantages of solutions to water shortages.

You will:

Explain why water shortages occur and identify advantages and disadvantages of water shortage solutions.

You will use:

Digital

- [Overusing Resources video](https://www.tigtagworld.co.uk/film/overusing-resources-PRM00609/)
<https://www.tigtagworld.co.uk/film/overusing-resources-PRM00609/>
- [Evaporation video](https://www.tigtagworld.co.uk/film/separation-by-evaporation-clip-PRM00570/)
<https://www.tigtagworld.co.uk/film/separation-by-evaporation-clip-PRM00570/>
- [Teeny Greeny video](https://www.reachoutreporter.com/feature/teeny-greeny/)
<https://www.reachoutreporter.com/feature/teeny-greeny/>

Instructions

1. Answer the following questions.

- Why do you think some places have less water to drink than others?

- Where does fresh water come from?

2. Play the [Overusing Resources](#) video.



3. Play the [Evaporation](#) video.



4. Answer the following questions.

- What happens during the process of desalination?

- How can desalination help with water shortages?

5. Play the [Teeny Greeny video](#).



6. Answer the following questions.

- Where does the water in rain come from?
- What does it mean when something is described as environmentally friendly?
- Do you think that water barrels are a good solution for finding fresh water? Why or why not?
- What are some of the ways that humans can conserve water?

7. Complete the chart with advantages and disadvantages of solutions to water shortage. Research and add some solutions of your own.

| Solution | Advantage | Disadvantage |
|--------------------|-----------|--------------|
| Rain water barrels | | |
| Desalination | | |
| Conservation | | |
| | | |
| | | |