

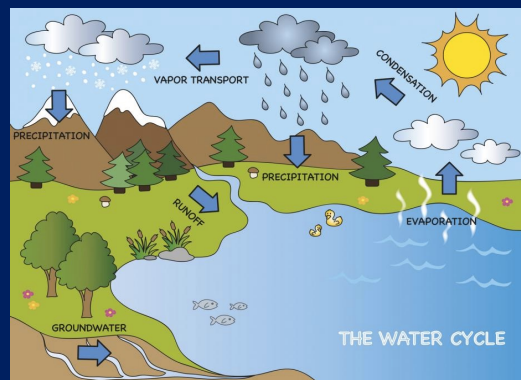
Water

5E Lesson



The 5E model is a scientifically proven method to improve student engagement and learning in your classroom

- ✓ Engagement
- ✓ Exploration
- ✓ Explanation
- ✓ Elaborate
- ✓ Evaluate



Complete Teacher Instructions



Water and its Properties 5E Lesson

Water and its Properties - 5E Lesson

Grades 6-9	Water and its Properties	Ongoing
Lesson Objective: Students will learn about the following: - Groundwater - Saturated (Phreatic) and Unsaturated (Vadose) zones - What the water table is - Natural and human impacts on the water table - The troposphere - What causes weather? - The hydrosphere - Impact of water bodies on weather - Oceans and weather - Lakes and weather - What watersheds are - How watersheds are divided - How water moves through watersheds - What the water cycle is and why we need it - The parts of the water cycle - The cryosphere - Permafrost - Global warming and the cryosphere - Types of clouds - High atmosphere clouds - Cloud formation		
Possible Student Misconceptions: - Water is different depending what state it is in - Humans don't affect the water cycle or water table - Water is only found in lakes, rivers, and oceans		
Materials: 1 device (smartphone, Chromebook, laptop, tablet, or computer) per 3 stu - A means of projecting a presentation - Internet access - General classroom objects		
Teacher Notes: - The presentations as well as the student notes are in Google and Office fo easily be used in class or online - All videos can be accessed directly from the presentation. To retrieve the icon while in slideshow mode and it will automatically open for you. If it do reason, right-click on the image and click Edit Hyperlink or something sir - I've created a video walkthrough if needed. It can be accessed here - https://youtu.be/oCIkIP9SaDQ - I don't believe in long lessons. If you feel your students are losing their fo Stop the presentation and give them a 5-minute break. If you'd like to sho recommend my video collection here - http://www.teachwithfergy.com/scie are tons of brain-break videos to choose from all grouped by category.		

Engagement Phase

Your students will watch the video located in the file 'Engagement Phase' and answer the associated questions.

Teacher Notes:

- You will need access to YouTube to play the following clip
- The clip is under 5 minutes and may need to be played twice for students to get all the answers.

Exploration Phase

Exploration – Lab Station Activity

- In groups of 2-3, have your students complete *Exploration – Cloud Types Lab Station Activity*. Once they're done, they will submit their passport to you.

Teacher Notes:

- The complete instructions for my Lab Station activity can be found in the *START HERE – Instructions* file.

Explanation Phase

Lessons

- The lessons include – 'The Water Table' and 'Water and Weather'
- There are multiple embedded videos and plenty of opportunity to engage, interact and check for your students' understanding throughout the lesson

Teacher Notes:

- All videos can be accessed directly from the presentation. To retrieve them, click on the video icon while in slideshow mode and it will automatically open for you. If they don't open, right-click the image and select Edit Hyperlink or something similar.
- I've created a video walkthrough if needed. It can be accessed here - <https://youtu.be/oCIkIP9SaDQ>
- I have also enclosed a .PDF version of both the teacher and student versions.

Duration: 10-15 minutes

Teacher Role – Facilitate learning and guide student understanding

Goals

- ☐ Connect student's experiences
- ☐ Create interest
- ☐ Ask questions
- ☐ Understand the objectives of the lesson

Duration: 1 hour

Teacher Role – Facilitate learning and guide student understanding

Goals

- ☐ Students receive real experience with the topic
- ☐ Students use and develop

Elaborate Phase

Elaborate – Scavenger Hunt

Your students will complete – *Elaborate – Hydrosphere and Cryosphere – A Digital Scavenger Hunt Activity*. This activity will require your students to move beyond what was covered directly in the lesson and allow them to further develop their understanding.

Teacher Notes:

- Students will work individually or in small groups
- Students will need one device per group

Evaluate Phase

Quiz

Have your students complete one of either - *Evaluate – The Water Cycle – Grade 5-7 or Watersheds – Grade 8 and Up*

Teacher Notes:

- The two readings are at different reading levels depending on the strength of your students

Duration: 1 hour

Teacher Role – Facilitate learning and keep students focused

Goal

- ☐ Students use their newly obtained knowledge to propose solutions and extend their learning to new situations

Duration: 50 min

Teacher Role – Distribute and collect evaluation

Goal

- ☐ Students are given the opportunity to demonstrate their understanding and evaluate their own progress

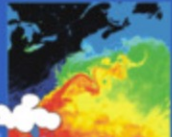
Each phase is clearly described

Two Complete Lessons

TWF

Water and Weather Lesson

- The Troposphere
- What Causes Weather?
- The Hydrosphere
- Effects of Water Bodies on Weather
- Oceans and Weather
- Lakes and Weather



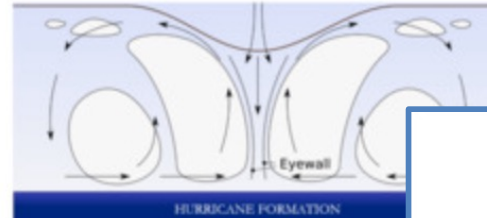
The Water Table Lesson

- Groundwater
- Saturated (Phreatic) Zone
- Unsaturated (Vadose) Zone
- The Water Table
- Natural Effects on the Water Table
- Human Effects on the Water Table



Videos Embedded Right Into Your PowerPoint

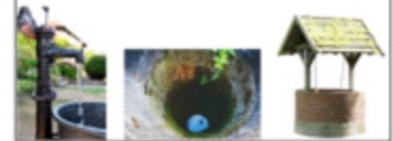
Oceans and Weather



Teacher Version

Groundwater

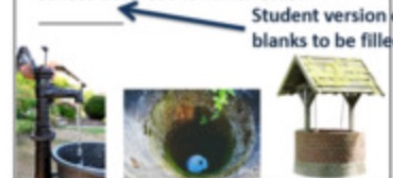
- **Well:** where groundwater becomes surface water due to human action (e.g., digging, drilling, inserting a pipe).



Student Version

Groundwater

- _____: where groundwater becomes surface water due to human action



Student version contains blanks to be filled in

Interactive and Engaging Activities

TWF

Cloud Types

Lab Station Activity



7 Lab Station Activities to get your kids out of their seats and engaged in their learning

The Water Cycle

Scientific Reading Comprehension Article and Extension Activity – **Grades 5-7**



Improve your students' **Literacy and Analysis Skills**, use as an **Emergency Substitute Plan**, or create **Applicability** in your classroom

Device-Based Scavenger Hunt

Hydrosphere and Cryosphere



Includes

- 5 Unique Locations
- Online form submission
- Answer Key

Works on all smartphones, tablets, Chromebooks, and laptops

- 100% Digital
- Simulations
- Quizzes
- Videos
- Games
- and more



Watersheds

Scientific Reading Comprehension Article and Extension Activity



Improve your students' **Literacy and Analysis Skills**, use as an **Emergency Substitute Plan**, or create **Applicability** in your classroom

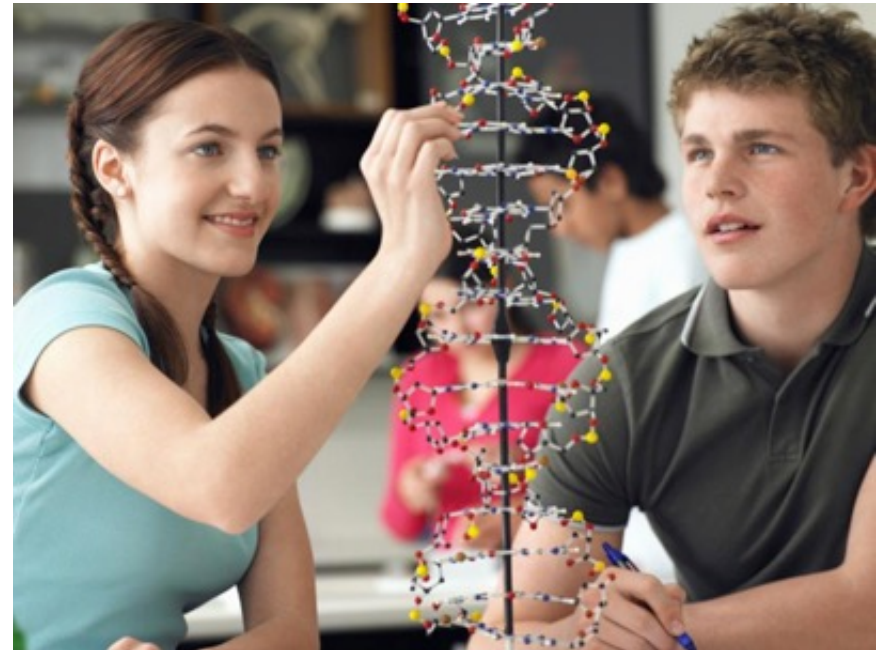
Get away from tired practices and unengaged students



TWF

Provide a Scientifically-Proven means of instruction

TWF



Incorporate Technology and Increase Collaboration



TWF

