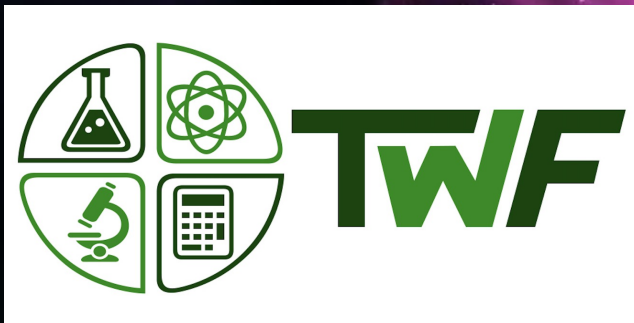


Liquids and Gases

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

Liquids and Gases 5E Lesson

Grades 6-9	Liquids and Gases	Ongoing Lesson
Lesson Objective: Students will learn about: • Matter • States of Matter • Matter Conversion • Fluids • Pascal's Law • Blaise Pascal • Hydraulics • Cloud Formation • Viscosity • Compressibility		
Possible Student Misconceptions: • Condensation is the process of air turning into a liquid. • Steam is hot air. • Heating air only makes it hotter. • Fluid pressure only acts downward. • Liquids can be compressed. • Gases have no mass and are not matter • Condensation on the outside of a container is water that has seeped through the walls of the container. • If a solid or a liquid is heated, the particles get bigger.		
Materials: • 1 device (smartphone, Chromebook, laptop, tablet, or computer) per student • A means of projecting a PowerPoint presentation • Internet access • General classroom objects		
Teacher Notes: ➢ All videos can be accessed directly from the PowerPoint. To retrieve them, click on the video icon while in slideshow mode and it will automatically open for you. If for any reason, right-click on the image and click Edit Hyperlink or something similar. 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 the focus, stop the PowerPoint and give them a 5-minute break. If you'd like to see more of my video collection here - http://www.teachwithfergy.com are tons of brain-break videos to choose from all grouped by category.		

Liquids and Gases – 5E Lesson

Engagement Phase Your students will watch the video 'Evaporation and Condensation' and complete the questions found in the file – Engagement – Evaporation and Condensation Video . Teacher Notes: - The video is about one minute long - You may need to show the video more than once or pause when an answer is given to one of the questions.	D T I L E U ☐ ☐ ☐ ☐
Exploration Phase Exploration – Lab Station Activity • In groups of 2-3, have your students complete Exploration – 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.	D T I L E U ☐ ☐ ☐ ☐
Explanation Phase PowerPoint Lessons • The lesson is found in the folder – Explanation – Liquids and Gases Lesson • This lesson is designed to be completed over one day • There are multiple embedded videos and plenty of opportunity to engage, interact and check for your students' understanding throughout the lesson • The lesson covers the following topics: ➢ Matter ➢ States of Matter ➢ Liquid ➢ Gas ➢ Conversion ➢ Fluids ➢ Pascal's Law Teacher Notes: • All videos can be accessed directly from the PowerPoint. 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	D T I L E U ☐ ☐ ☐ ☐

• I have also enclosed a .PDF version of both the teacher and student versions.	
Elaborate Phase Elaborate – Scavenger Hunt Your students will complete – Elaborate – Scavenger Hunt . This activity will require your students to move beyond what was covered directly in the lesson and allow them to further develop their understanding.	Duration: 1 hour Teacher Role – Facilitate learning and keep students focused
Teacher Notes: - Students will work individually or in small groups - Students will need one device per group	Goal ☐ Students use their newly obtained knowledge to propose solutions and extend their learning to new situations
Evaluate Phase Quiz Have your students complete – Evaluate – Liquids and Gases Quiz	Duration: 30 min Teacher Role – Distribute and collect evaluation
Teacher Notes: ➢ It's sometimes best to have the students peer evaluate ➢ Placing students in small groups and having them exchange papers to mark will accomplish two things 1) Provide immediate feedback on the questions they just completed 2) Significantly reduce your marking time ➢ Peer evaluation is not needed, only suggested when appropriate	Goal ☐ Students are given the opportunity to demonstrate their understanding and evaluate their own progress

Each phase is clearly described

A Complete Lesson

Pascal's Law

- Additional applications
 - Hydraulic brakes
 - Car lifts
 - Hydraulic jacks
 - Forklifts



← Make sure your students are on track

Student copies with blanks
Videos embedded right into
your slideshow

Pascal's Law

- Additional applications

- _____
- _____
- _____
- _____



Fluids



Fluids at rest



Fluids in motion

Interactive and Engaging Activities

Device-Based Scavenger Hunt Liquids and Gases

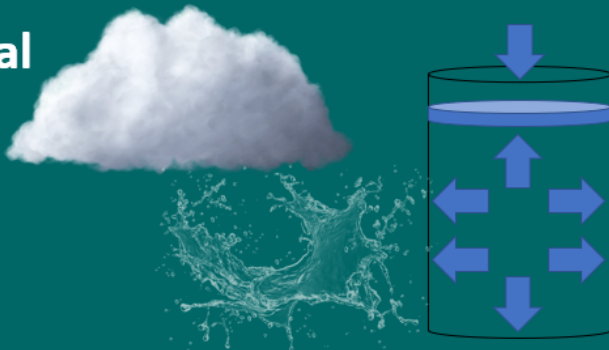


Includes

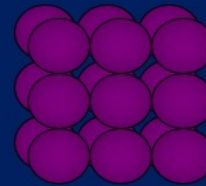
- 5 Unique Locations
- Online form submission
- Answer Key

Works on all smartphones, tablets, Chromebooks, and laptops

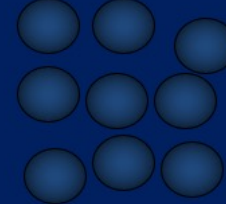
- **100% Digital**
- Simulations
- Quizzes
- Videos
- Games
- and more



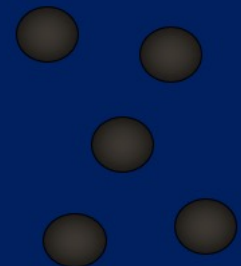
Liquids and Gases Lab Station Activity



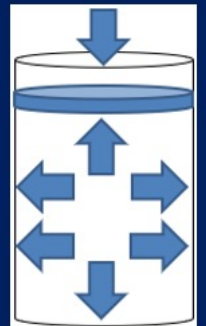
Solid



Liquid



Gas



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

Get away from tired practices and unengaged students



Provide a Scientifically-Proven means of instruction



Incorporate Technology and Increase Collaboration

