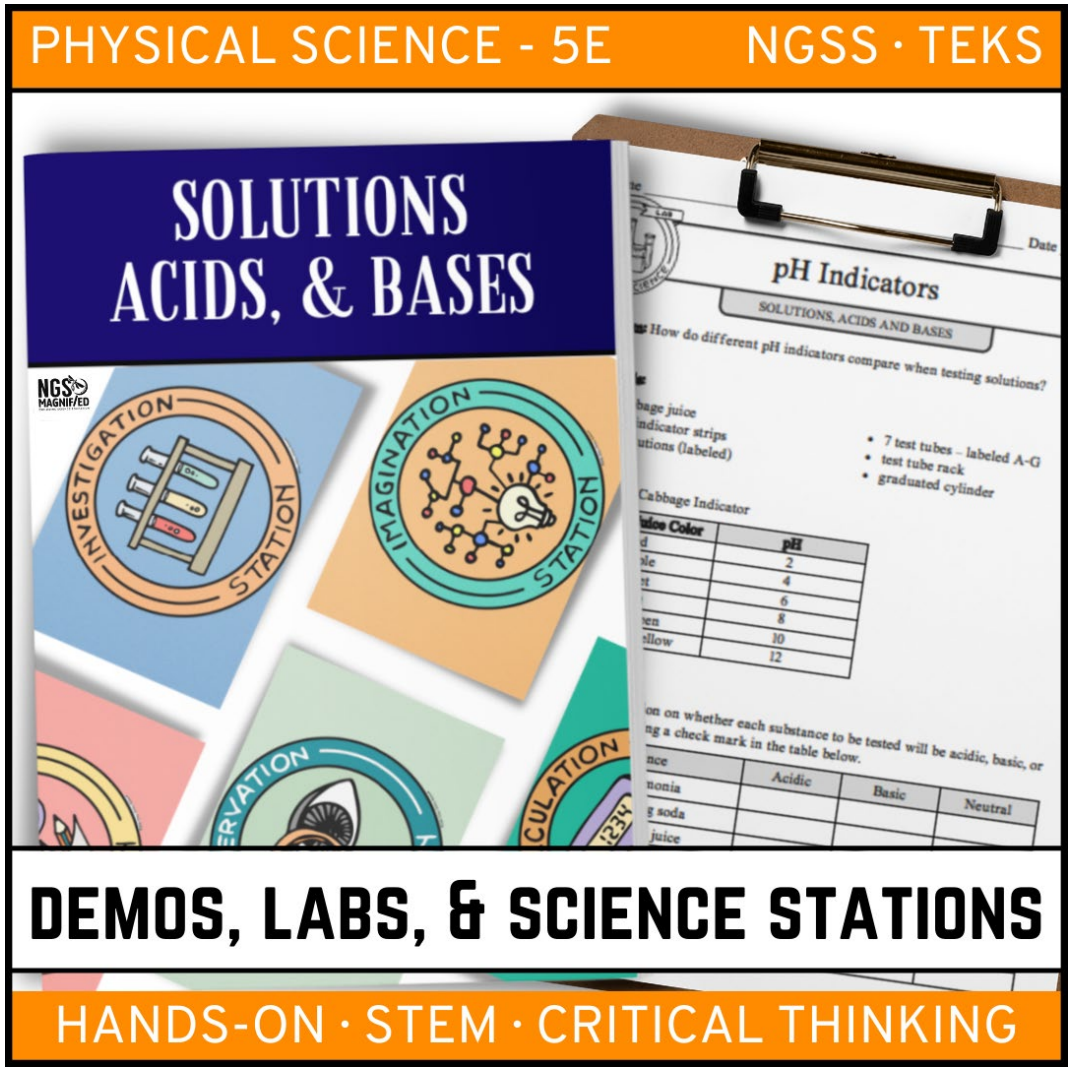
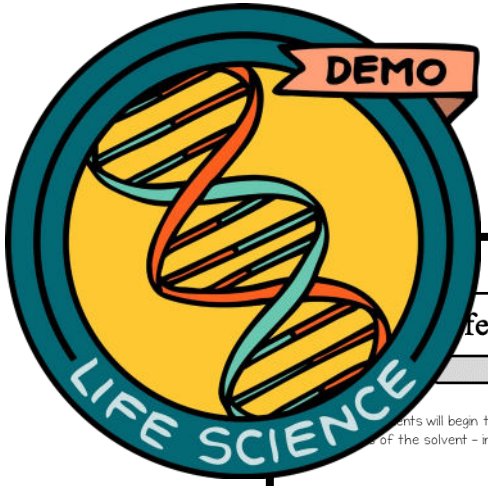
Demos, Labs, & Science Stations Feature:

- Hands-on Investigations
- STEM Challenge
- Scientific Literacy
- Inquiry Process Skills



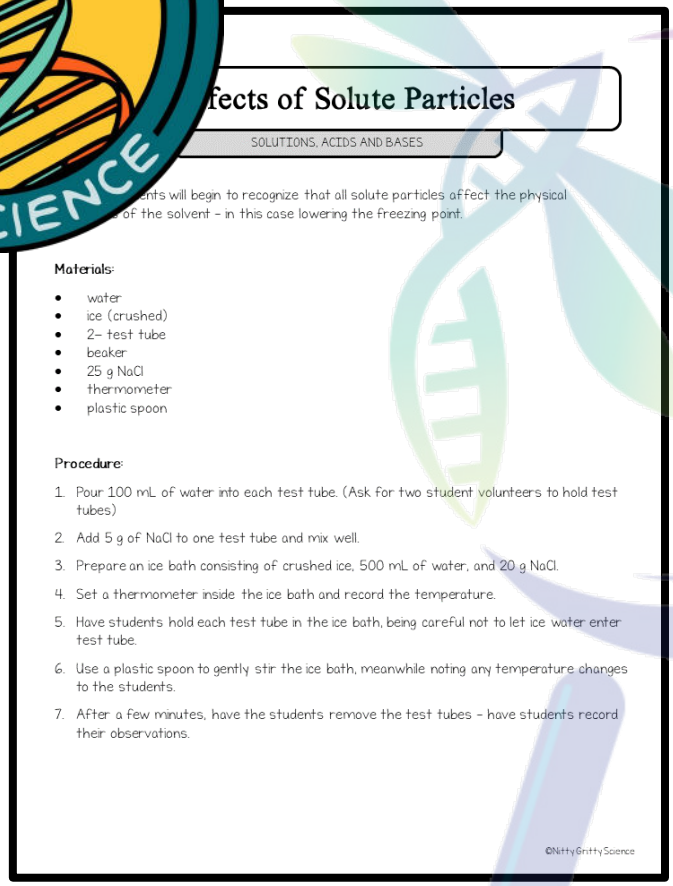
ALL Station Signage Included!!

Color & Black and White



Teacher guide and answer key offered for every lab!

Easy-to-get materials!



fects of Solute Particles

SOLUTIONS, ACIDS AND BASES

ents will begin to recognize that all solute particles affect the physical
of the solvent – in this case lowering the freezing point.

Materials:

- water
- ice (crushed)
- 2– test tube
- beaker
- 25 g NaCl
- thermometer
- plastic spoon

Procedure:

1. Pour 100 mL of water into each test tube. (Ask for two student volunteers to hold test tubes)
2. Add 5 g of NaCl to one test tube and mix well.
3. Prepare an ice bath consisting of crushed ice, 500 mL of water, and 20 g NaCl.
4. Set a thermometer inside the ice bath and record the temperature.
5. Have students hold each test tube in the ice bath, being careful not to let ice water enter test tube.
6. Use a plastic spoon to gently stir the ice bath, meanwhile noting any temperature changes to the students.
7. After a few minutes, have the students remove the test tubes – have students record their observations.

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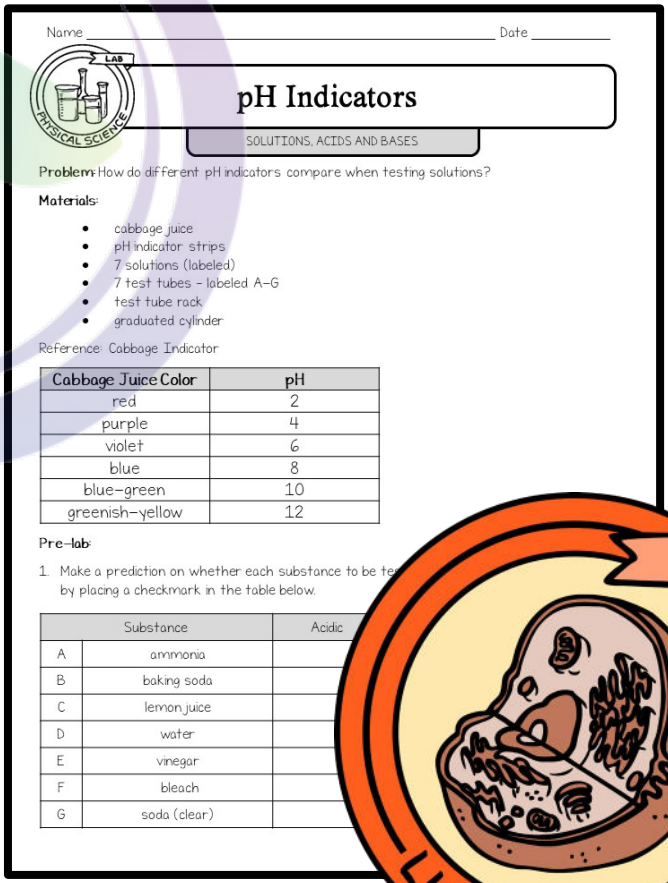


Name _____ Date _____

LAB

PHYSICAL SCIENCE

pH Indicators

SOLUTIONS, ACIDS AND BASES

Problem: How do different pH indicators compare when testing solutions?

Materials:

- cabbage juice
- pH indicator strips
- 7 solutions (labeled)
- 7 test tubes – labeled A–G
- test tube rack
- graduated cylinder

Reference: Cabbage Indicator

Cabbage Juice Color	pH
red	2
purple	4
violet	6
blue	8
blue–green	10
greenish–yellow	12

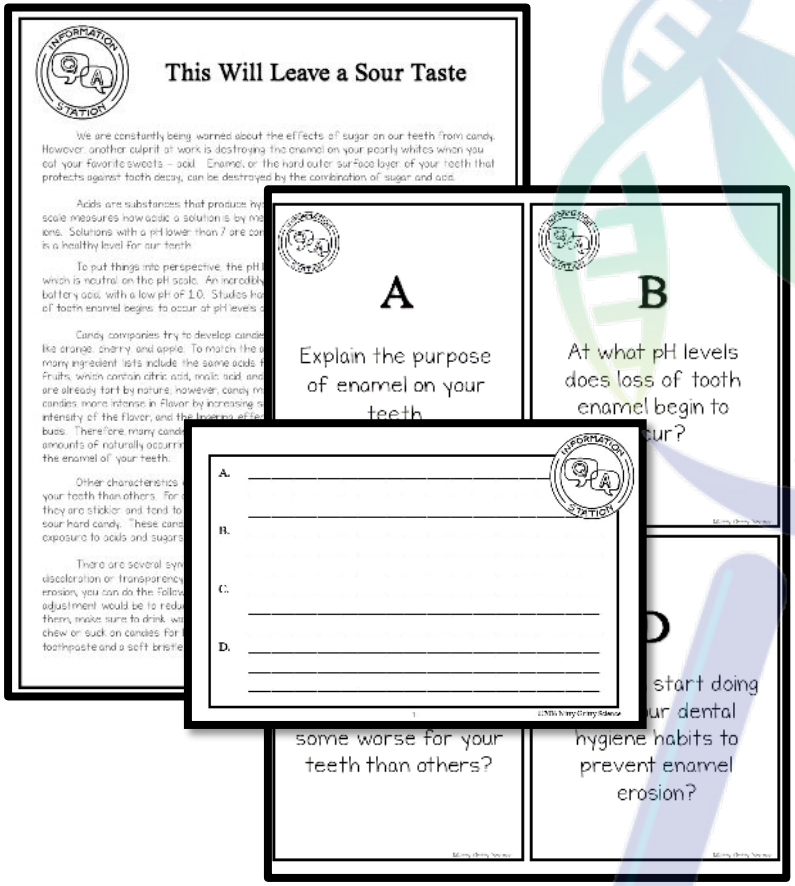
Pre-lab:

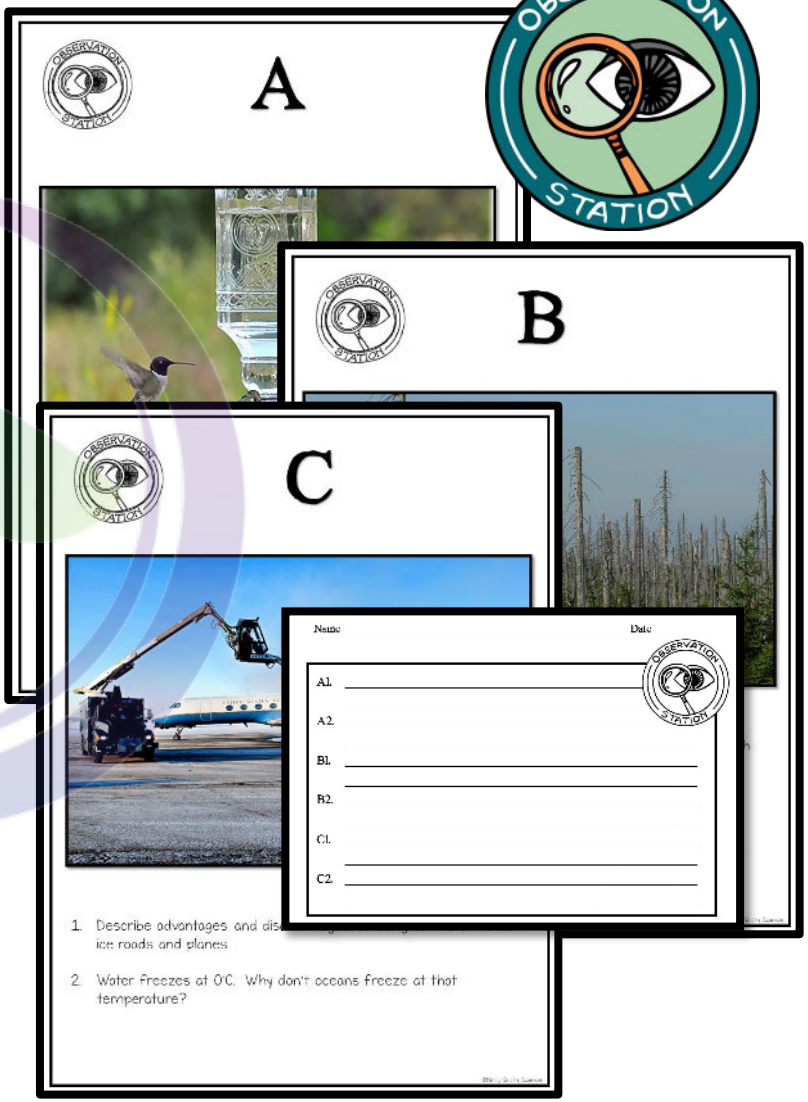
1. Make a prediction on whether each substance to be te
by placing a checkmark in the table below.

	Substance	Acidic
A	ammonia	
B	baking soda	
C	lemon juice	
D	water	
E	vinegar	
F	bleach	
G	soda (clear)	

Discussion questions and teacher set-up included!

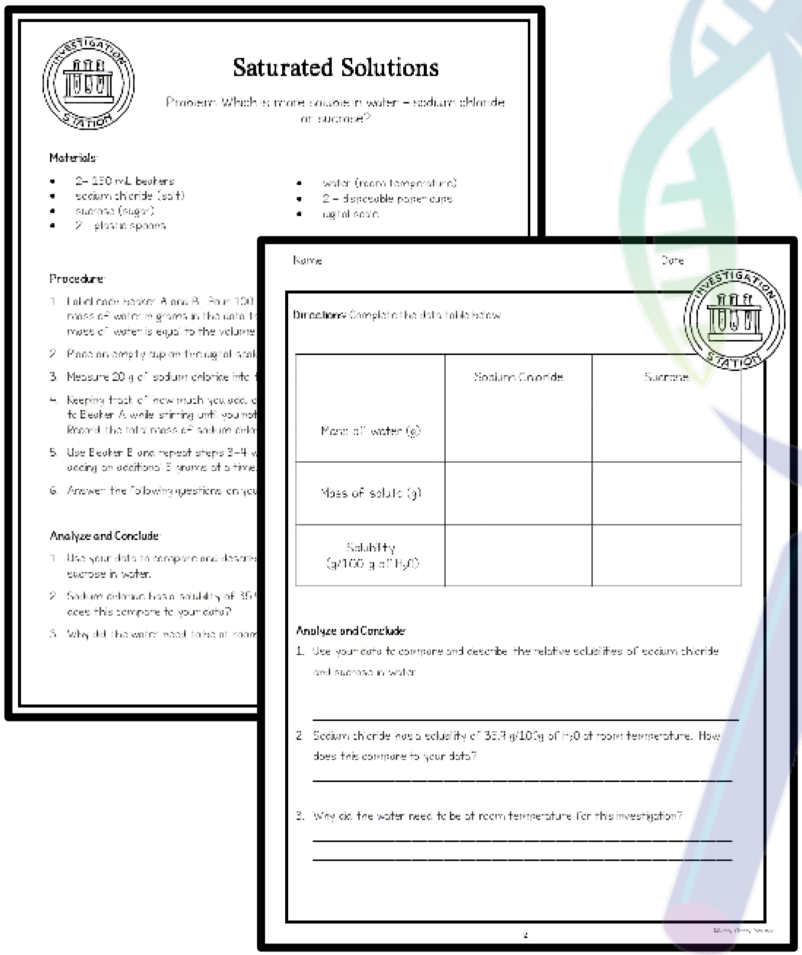
Group members will read a passage and then complete a task to help increase science literacy and deepen their understanding of the science concept.

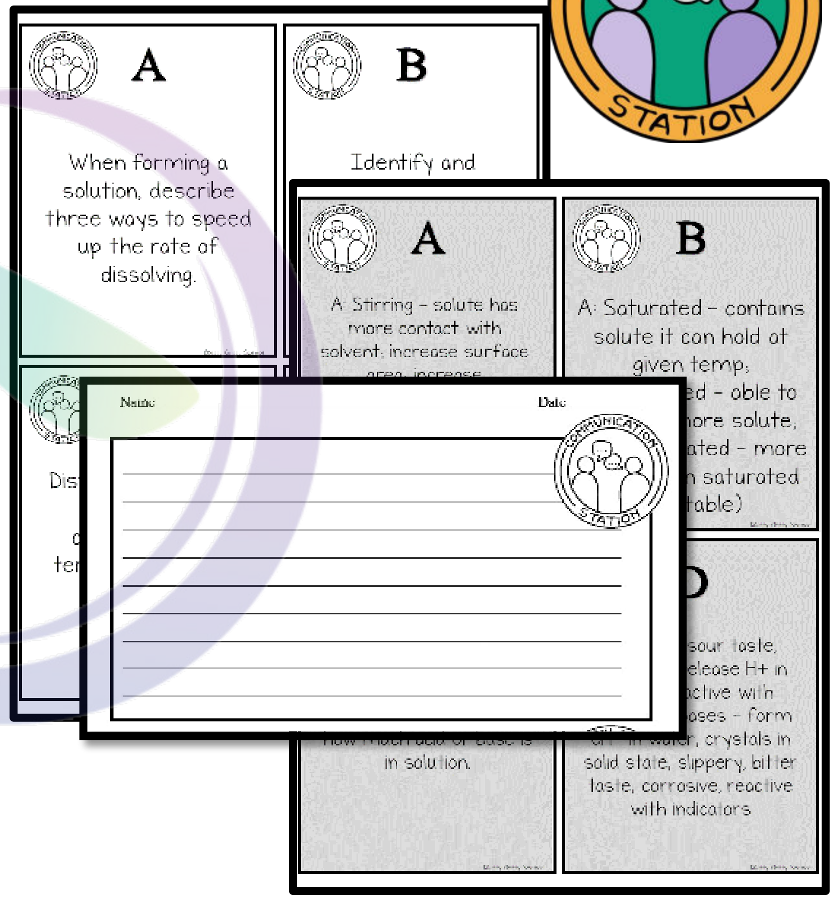




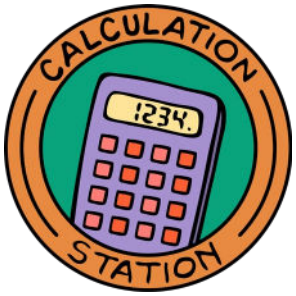
Group members will have images, illustrations, or actual samples at this station that show applications or processes of the science topic.

Group members will work with one another to explore the concept through hands-on activities, so they may practice specific inquiry process skills as they learn.

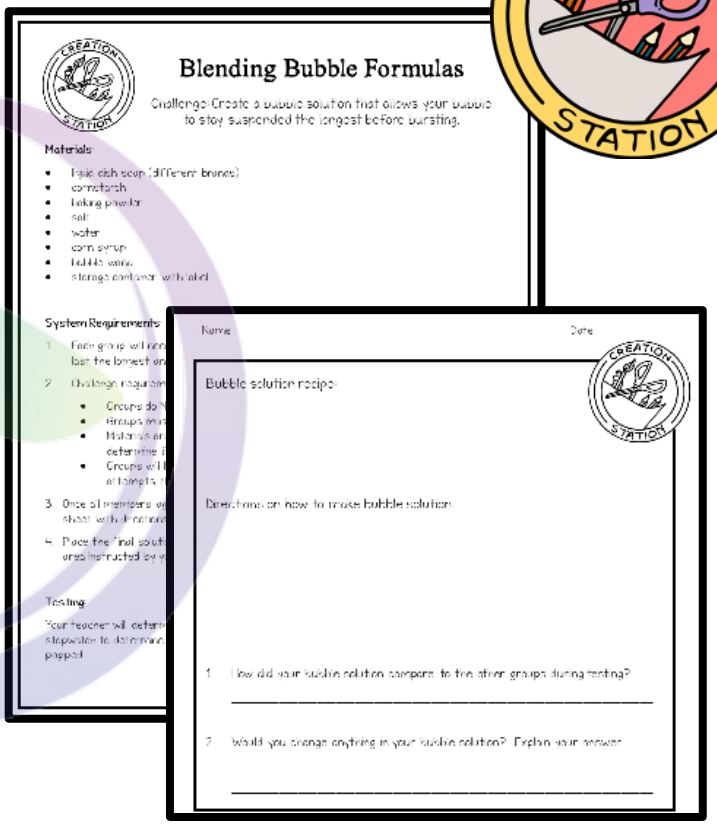




There are three different options for this station: interviews, videos, or group essay. Depending on the option you choose, group members will communicate what they know by answering questions in creative ways.

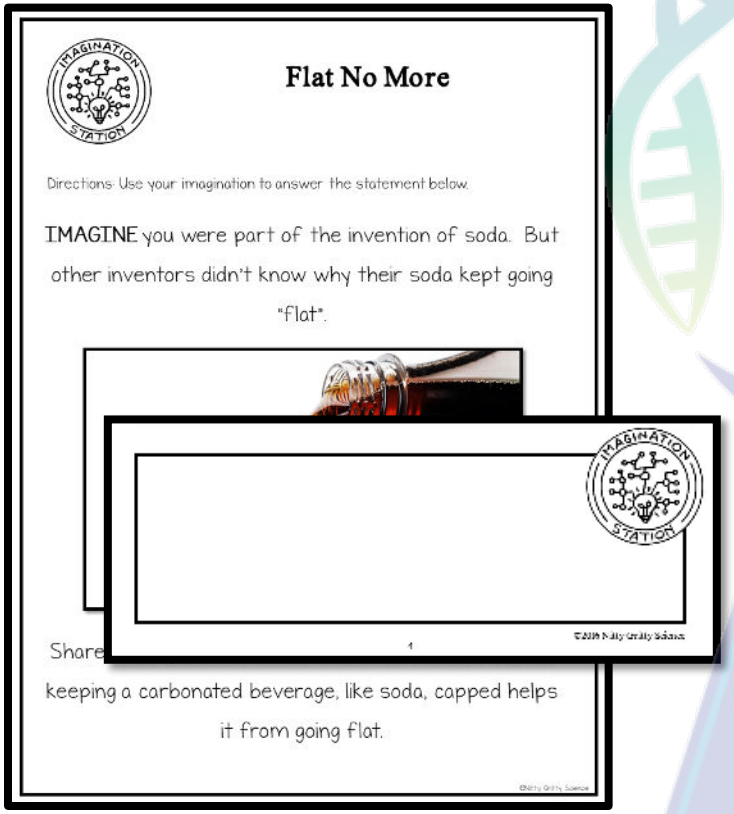


Group members use their math skills to complete the station challenge. Skills may include graphing, analyzing data, using models, measurement, and calculating formulas or word problems.

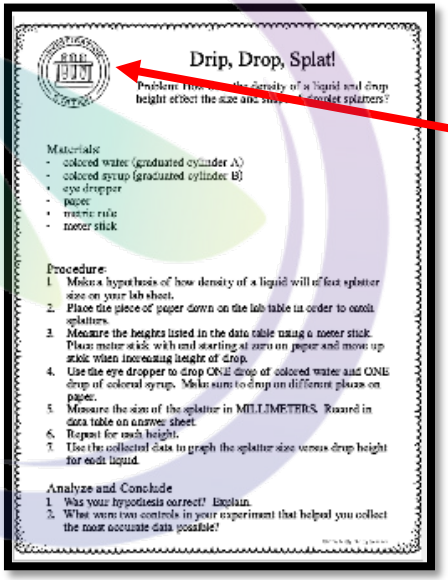


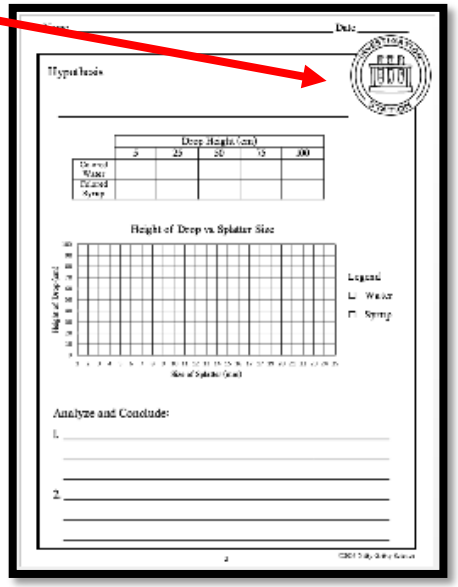
Group members will work together to solve a STEM (Science, Technology, Engineering, Math) challenge by creating models or designs that demonstrate their understanding of the science topic being taught.

This station makes science concepts relevant for students by asking them to imagine scenarios that will bring about discussion and critical thinking.



USER-FRIENDLY PAGES:
Students easily recognize which answer sheet to use at each station by matching station icons located on each page!





TEACHERS SAVE TIME:
Laminate station pages and reuse for each class and for years to follow!

Inquiry and Process Skills

Demo Guided Inquiry Lab Science Stations

Inquiry-Based Science Unit: Solutions, Acids, and Bases	Classifying	Communicating	Compare & Contrast	Creating Models	Gather/Organize Data	Generalizing	Identifying Variables	Inferring	Interpreting Data and Graphs	Making Decisions	Manipulating Materials	Measuring / Calculating	Observing	Predicting
Effects of Solute Particles	X	X	X			X		X		X	X		X	
pH Indicators		X	X	X	X		X		X		X	X		X
Information Station: Sour Taste			X		X	X		X						
Observation Station: Images & Questions	X		X		X	X		X					X	
Investigation Station: Saturated Solutions	X		X		X		X		X		X	X	X	
Calculation Station: Solubility Curve					X		X		X	X		X		
Communication Station: Questions	X	X				X				X				
Creation Station: Blending Bubble Formulas		X	X	X	X				X	X	X	X	X	X
Imagination Station: Flat No More		X		X						X				X

NGS Magnified promotes scientific inquiry throughout the curriculum. Students become more confident and effective learners while developing problem-solving and critical thinking skills. Process skills, such as planning, organizing, and evaluating, help students to complete projects and assignments. These skills allow students to independently gather information, analyze it, and draw their own conclusions.

This download is part of the
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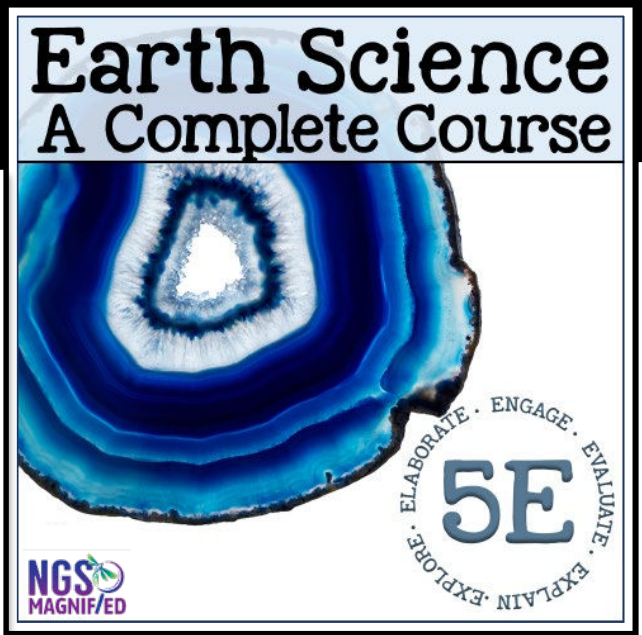
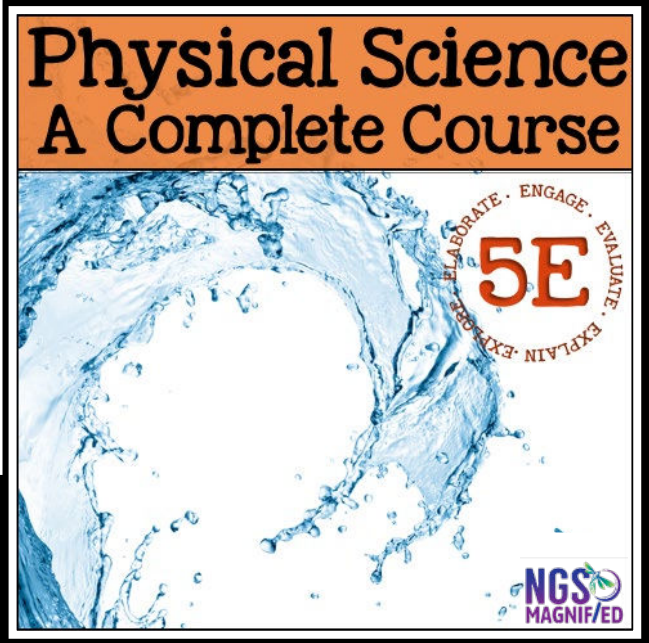
Click below to learn more.





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