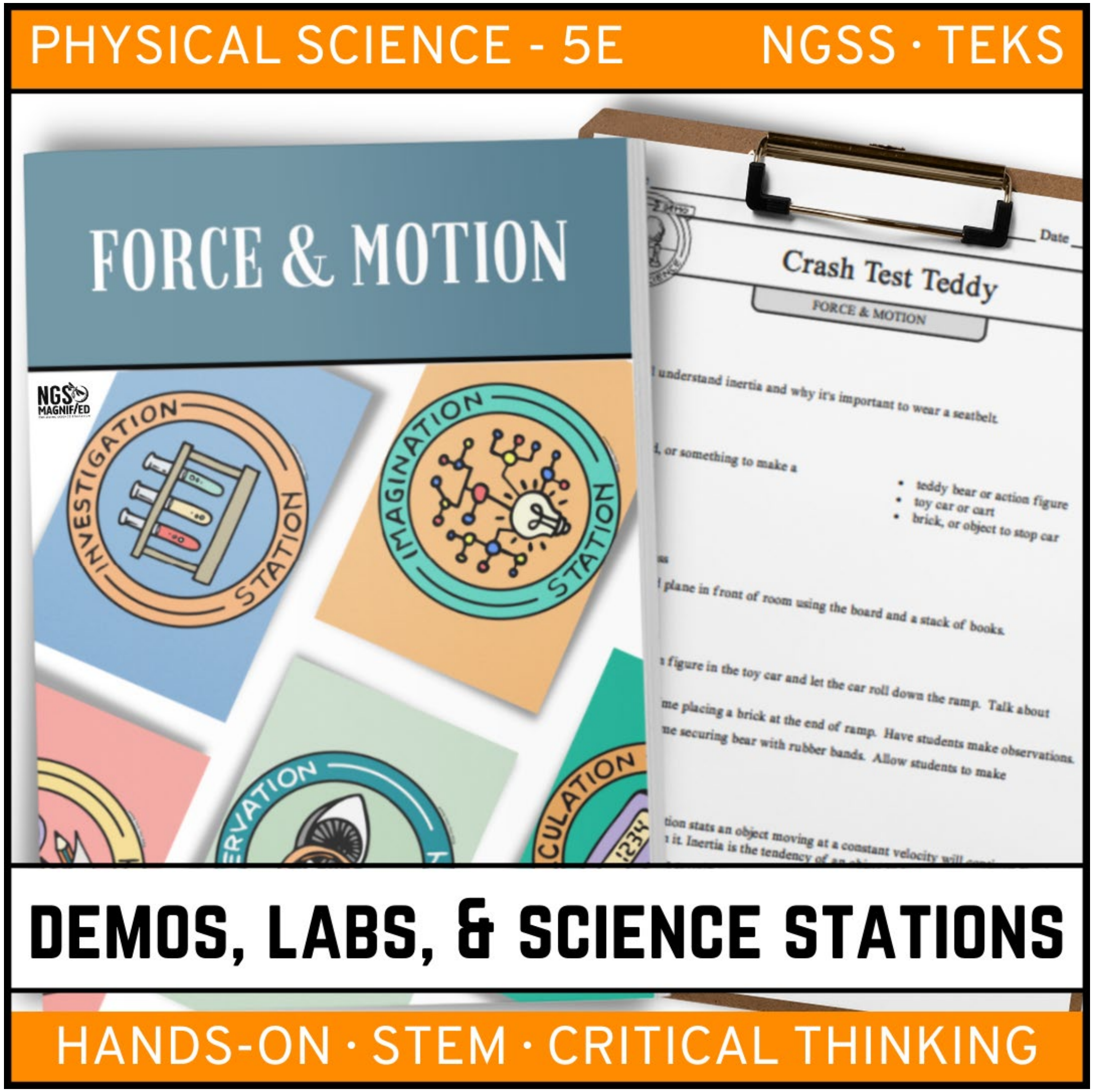
Demos, Labs, & Science Stations Feature:

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

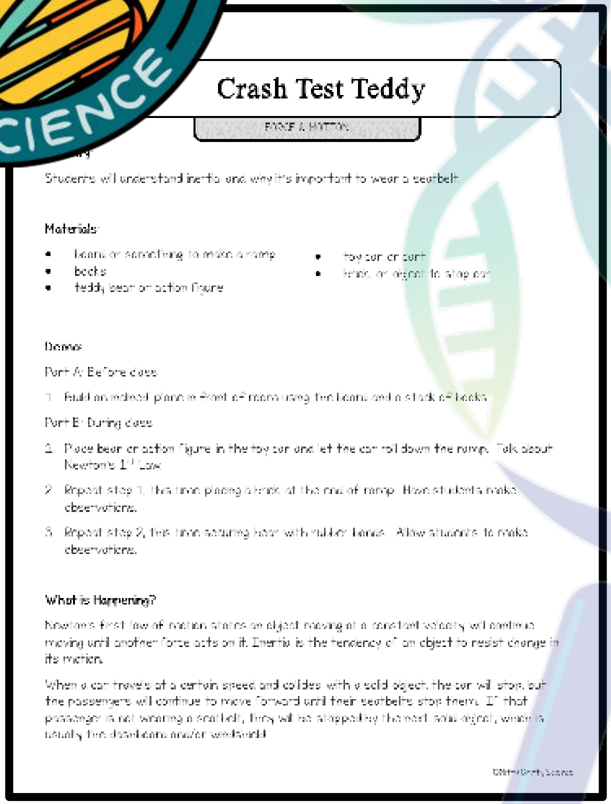


ALL Station Signage Included!!

Color & Black and White

Teacher guide and answer key offered for every lab!

Easy-to-get materials!


Crash Test Teddy

FORCE & MOTION

Students will understand inertia and why it's important to wear a seatbelt.

Materials:

- board or something to make a ramp
- books
- teddy bear or action figure
- toy car or cart

Demo:

Part A: Before class

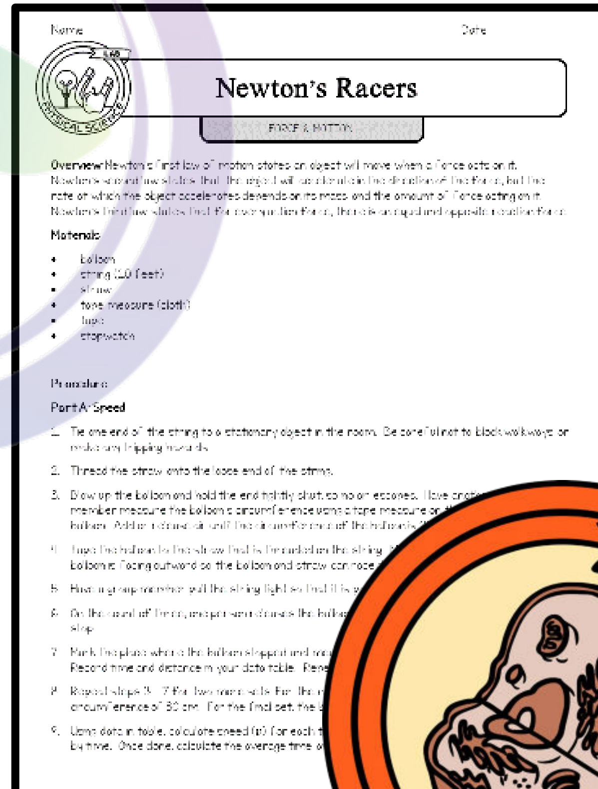
1. Build an inclined plane in front of room using the board and a stack of books.

Part B: During class

1. Place bear or action figure in the toy car and let the car roll down the ramp. Talk about Newton's 1st Law.

What is Happening?

Newton's first law of motion states an object moving at a constant velocity will continue moving until another force acts on it. Inertia is the tendency of an object to resist change in its motion.


Name Date

Newton's Racers

FORCE & MOTION

Overview: Newton's first law of motion states an object will move when a force acts on it.

Materials:

- balloon
- string (10 feet)
- straw
- tape measure (cloth)
- tape
- stopwatch

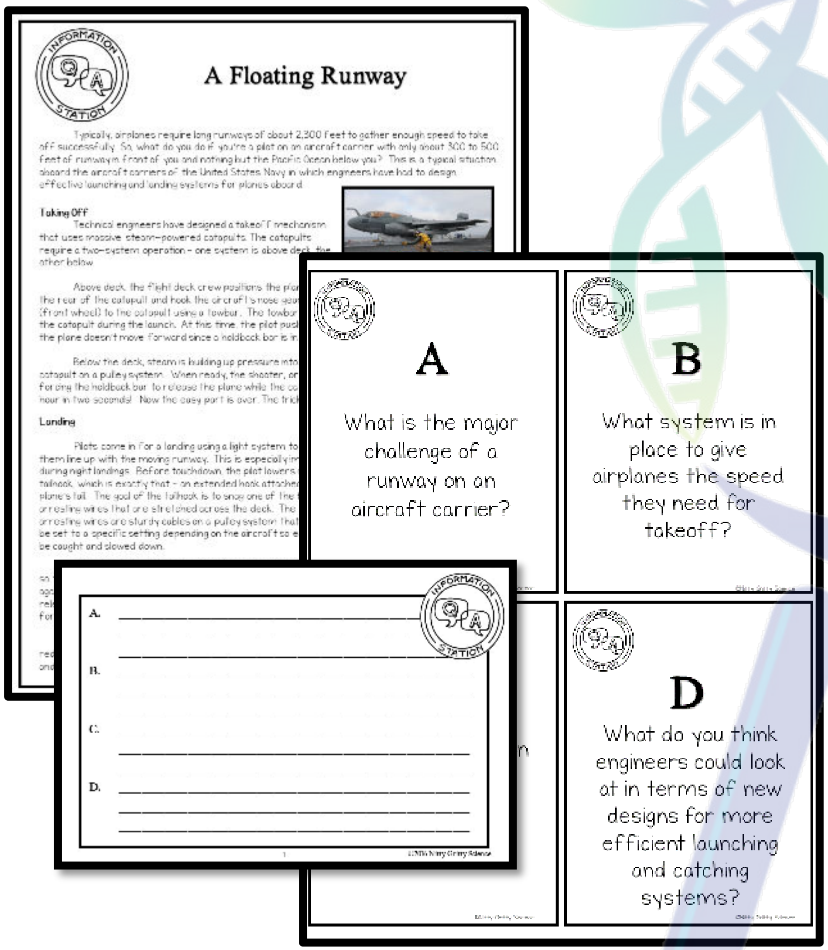
Procedure:

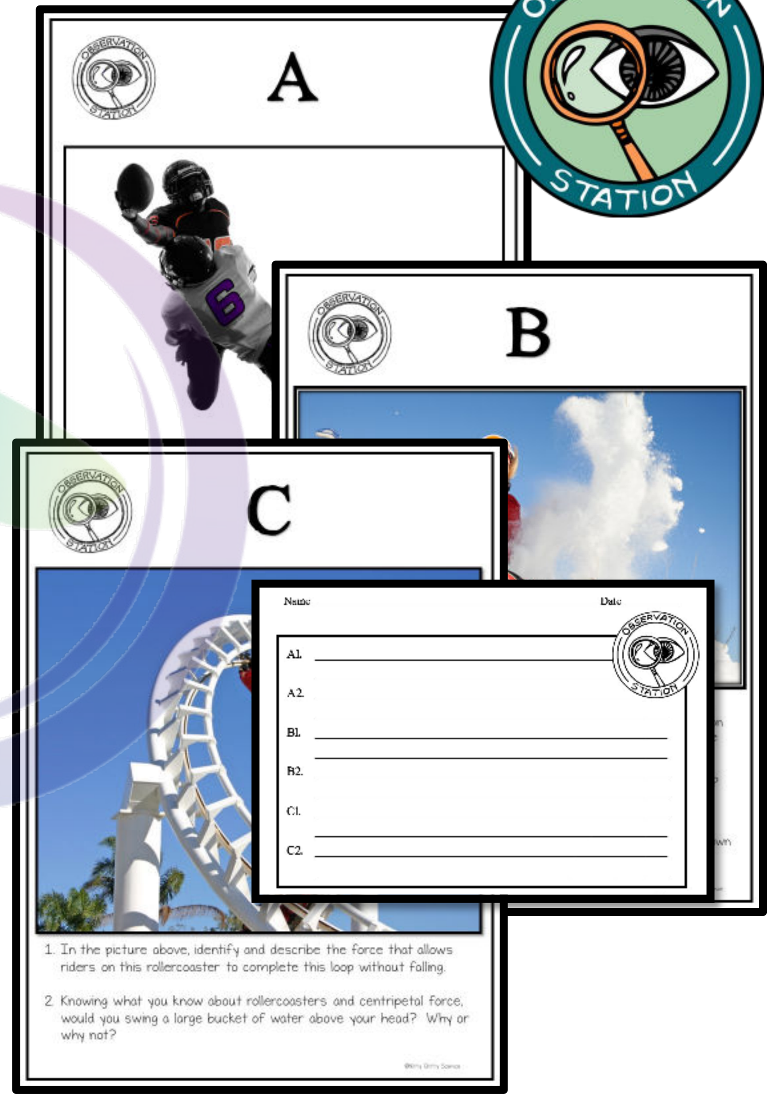
Part A: Speed

1. Tie one end of the string to a stationary object in the room.
2. Thread the straw onto the loose end of the string.

Discussion questions and teacher set-up included!

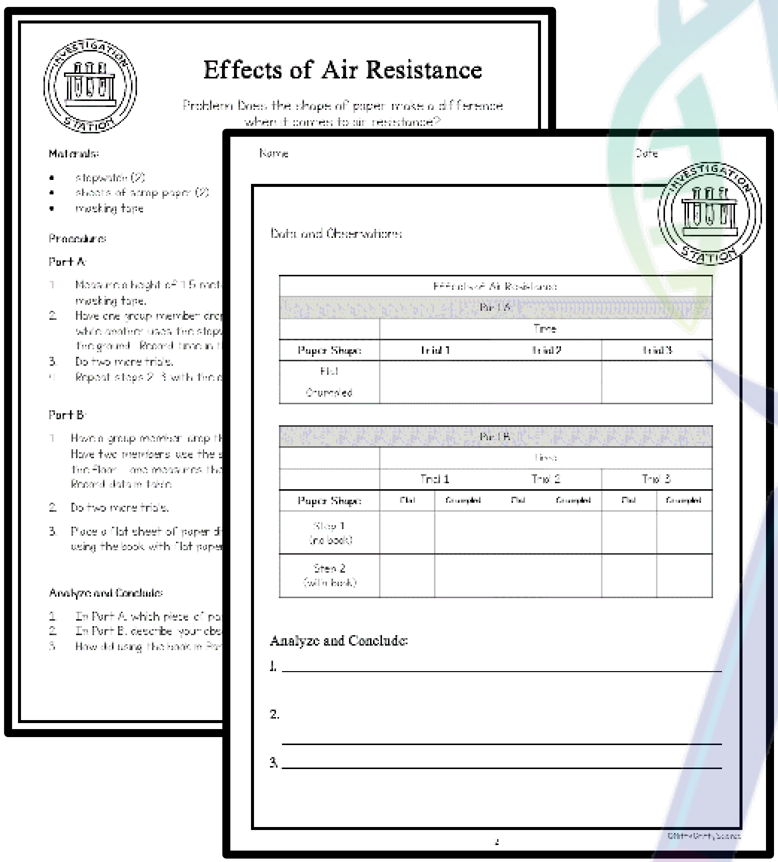
Group members will read a passage and then complete a task to help increase science literacy and deepen their understanding of the science concept.

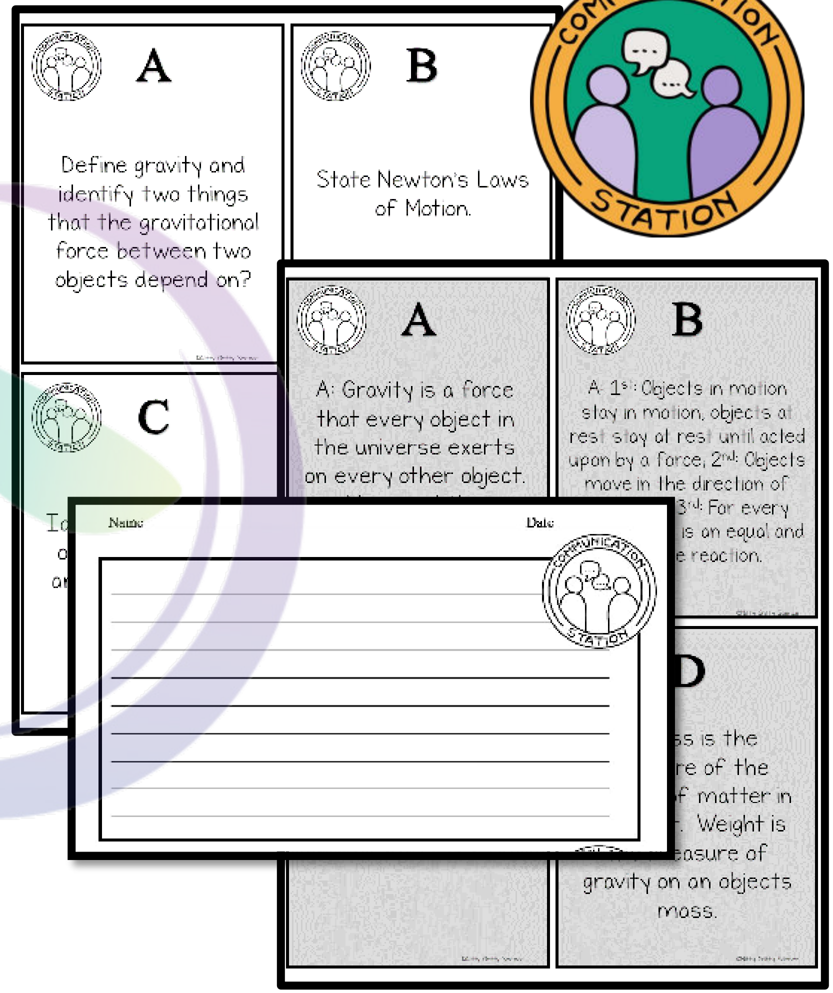




Group members will have images, illustrations, or actual samples at this station that show applications or processes of the science topic.

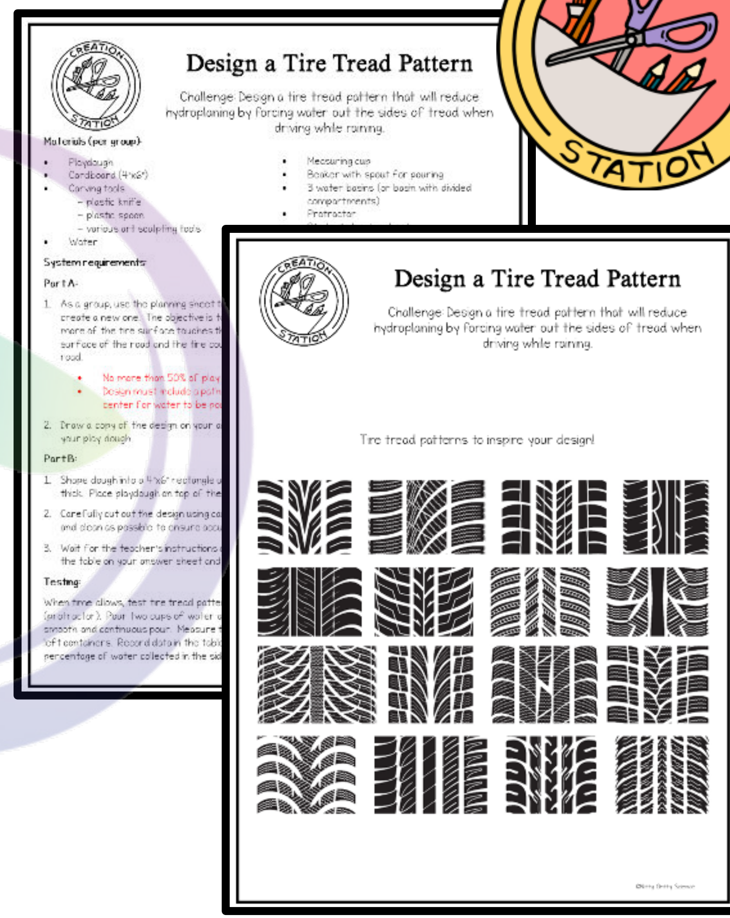
Group members will work with one another to explore the concept through hands-on activities, so they may practice specific inquiry process skills as they learn.





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.

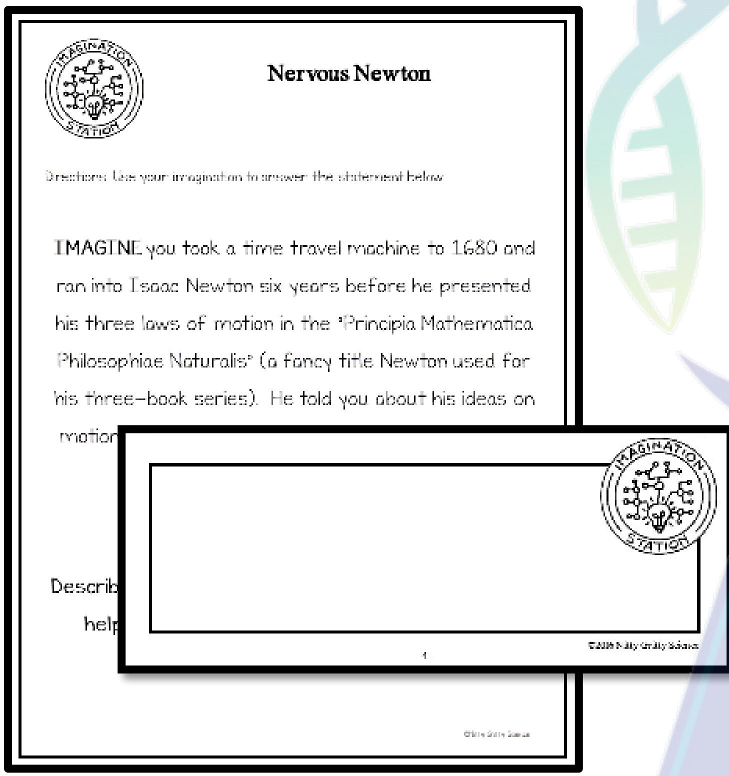
Group members use their math skills to complete the station challenge. Skills may include graphing, analyzing data, using models, measurement, and calculating formulas or word problems.



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.

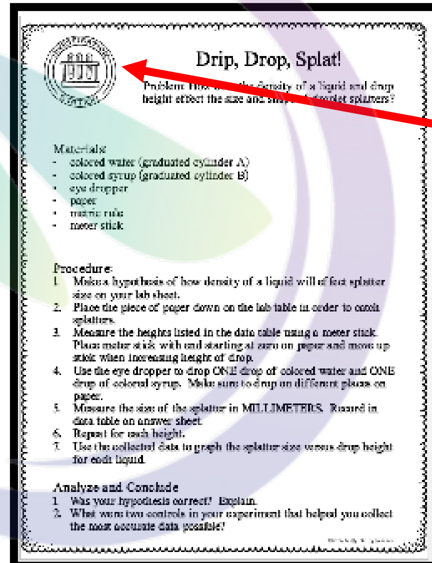
USER-FRIENDLY PAGES: Students easily recognize which answer sheet to use at each station by matching station icons located on each page!


Nervous Newton

Directions: Use your imagination to answer the statement below.

IMAGINE you took a time travel machine to 1680 and ran into Isaac Newton six years before he presented his three laws of motion in the "Principia Mathematica Philosophiae Naturalis" (a fancy title Newton used for his three-book series). He told you about his ideas on motion

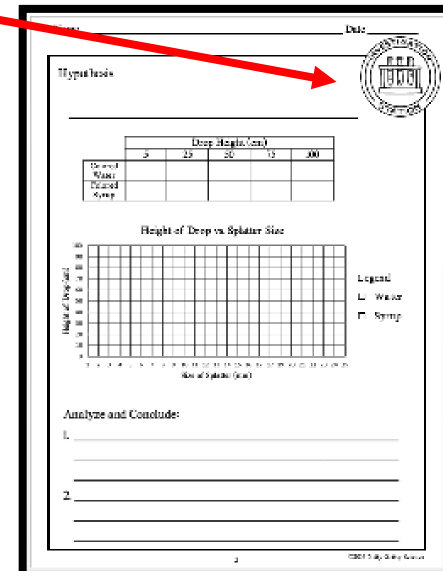
Describ
help


Drip, Drop, Splat!

Materials:
- colored water (graduated cylinder A)
- colored syrup (graduated cylinder B)
- eye dropper
- paper
- metric ruler
- meter stick

Procedure:
1. Make a hypothesis of how density of a liquid will affect splatter size on your lab sheet.
2. Place the piece of paper down on the lab table in order to catch splatters.
3. Measure the heights listed in the data table using a meter stick. Place meter stick with end starting at zero on paper and move up stick when increasing height of drop.
4. Use the eye dropper to drop ONE drop of colored water and ONE drop of colored syrup. Make sure to drop on different places on paper.
5. Measure the size of the splatter in MILLIMETERS. Record in data table on answer sheet.
6. Repeat for each height.
7. Use the collected data to graph the splatter size versus drop height for each liquid.

Analyze and Conclude
1. Was your hypothesis correct? Explain.
2. What were two controls in your experiment that helped you collect the most accurate data possible?


Name: Date:

Hypothesis:

Height of Drop vs Splatter Size

Legend
Water
Syrup

Analyze and Conclude:

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

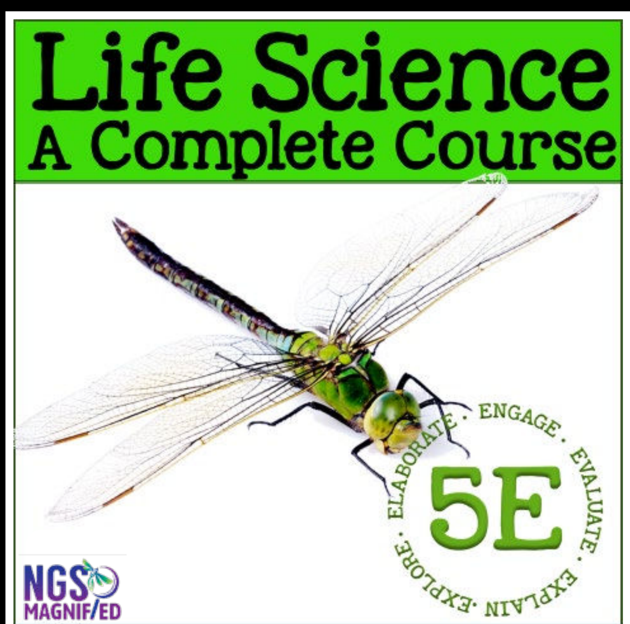
Inquiry and Process Skills

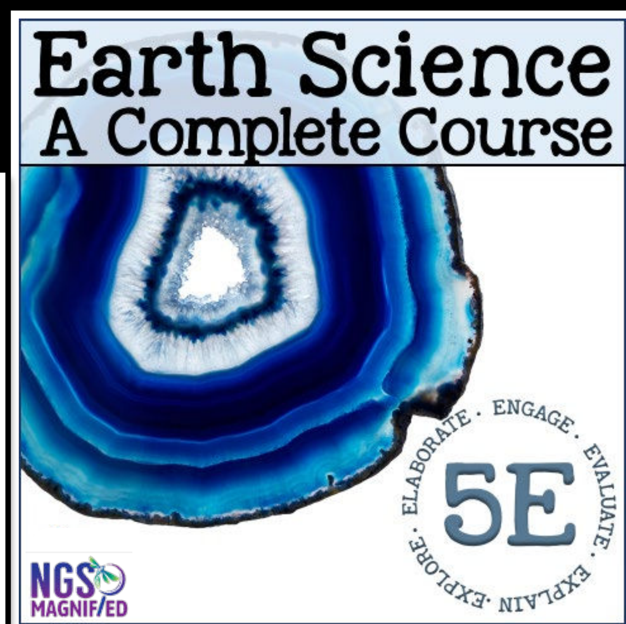
Demo — Guided Inquiry Lab — Science Stations

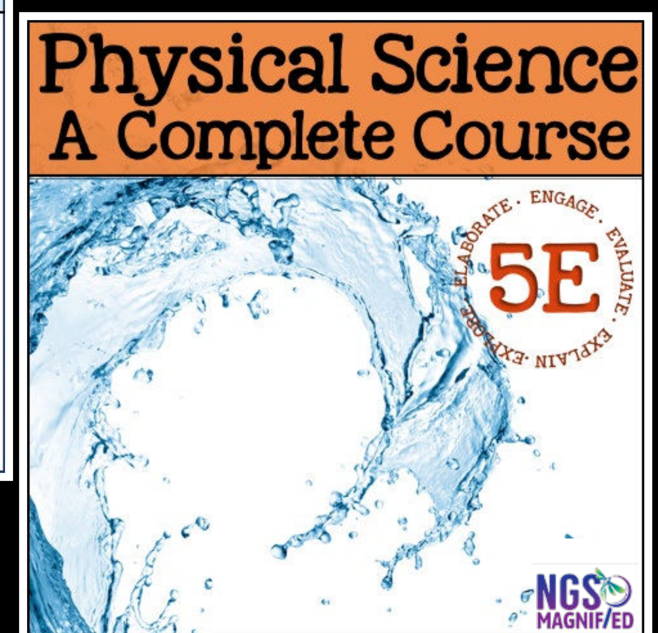
Inquiry-Based Science Unit: Force and Motion	Classifying	Communicating	Compare & Contrast	Creating Models	Gather/Organize Data	Generalizing	Identifying Variables	Inferring	Interpreting Data and Graphs	Making Decisions	Manipulating Materials	Measuring / Calculating	Observing	Predicting
Crash Test Teddy	X	X	X			X		X		X	X		X	
Force and Momentum		X	X			X	X			X		X		
Newton's Racers		X	X	X	X		X		X		X	X		X
Information Station: A Floating Runway					X	X		X						
Observation Station: Images & Questions	X		X		X	X		X					X	
Investigation Station: Effects of Air Resistance	X		X		X		X		X		X	X	X	
Calculation Station: Domino Derby					X		X			X		X		
Communication Station: Questions	X	X				X				X				
Creation Station: Tire Tread Patterns		X		X	X				X	X	X	X	X	X
Imagination Station: Nervous Newton		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 NGS MAGNIFIED Complete Course Collection. Click below to learn more.







Thank you for sharing NGS Magnified with your students!

Terms of Use

Contact Information:

Email: admin@nittygrittyscience.com

Website: www.NGSmagnified.com

TPT: https://www.teacherspayteachers.com/Store/Nitty-Gritty-Science