

Complete 5E Lesson Bundle

- **Lessons**
- **Activities**
- **Assessment**



SCROLL
to take a look inside!

Newton's Three Laws of Motion 5E Lesson

- Teaching Timeline
- Grade 9-12

- Lessons
- Activities & Assessment



The 5 E's



Engagement Phase - Creates interest and excitement for your students by asking questions and probing their initial conceptions.



Exploration Phase - Students use and develop creative thinking skills, make observations, record results, and make connections through an investigation → Lab Station Activity



Explanation Phase - This is the instructional phase where concepts are presented to the students in a clear and applicable way → Lesson.



Elaborate Phase - This phase involves the students completing an activity or assignment that forces them to expand their thinking and knowledge of the topic. They will propose solutions and extend their learning to new situations → Scavenger Hunt Activity



Evaluate Phase - Your students will demonstrate their understanding and evaluate their own progress through an assessment → activity, assignment, or quiz.

Newton's 3 Laws of Motion Lesson

Grade 10-12

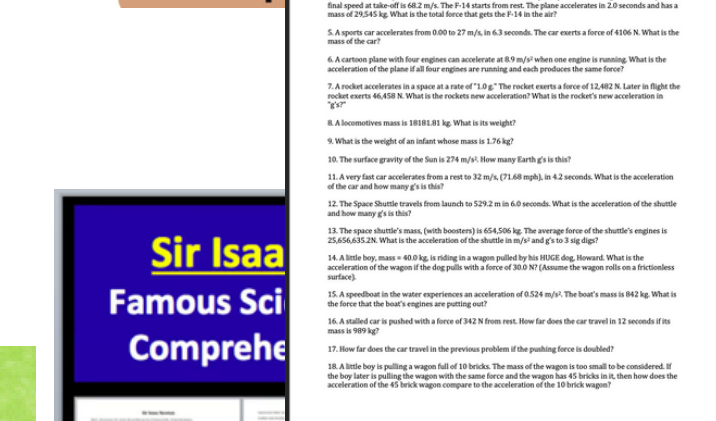
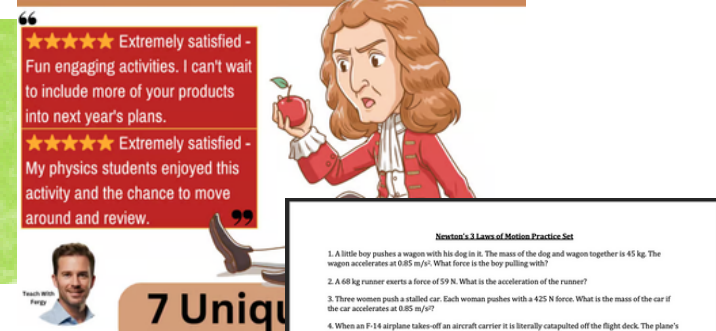
No-Prep & Fully Editable



Newton's Three Laws of Motion Lab Station Activity

Video-Enhanced
ice Compatible
Included

Units Sold!



1 Fully Editable & Engaging Lesson, Worksheets, Quizzes

Videos embedded directly in your lesson

Worksheet & Answer Key

Student Notes

Student and Teacher Versions

- Newton's 3 Laws of Motion Practice Set**
1. A little boy pushes a wagon with his dog in it. The mass of the dog and wagon together is 20 kg. The wagon accelerates at 0.85 m/s^2 . What force is the boy pulling with?
 2. A 68 kg runner exerts a force of 59 N. What is the acceleration of the runner?
 3. Three women push a stalled car. Each woman pushes with a 425 N force. What is the mass of the car if the car accelerates at 0.85 m/s^2 ?
 4. When an F-14 airplane takes-off an aircraft carrier it is literally catapulted off the flight deck. The plane's final speed at take-off is 68.2 m/s . The F-14 starts from rest. The plane's acceleration is 2.0 m/s^2 . What is the total force that gets the F-14 in the air?
 5. A sports car accelerates from 0.00 to 27 m/s , in 6.3 seconds. The car exerts a force of 4106 N . What is the mass of the car?
 6. A cartoon plane with four engines can accelerate at 8.9 m/s^2 when one engine is running. What is the acceleration of the plane if all four engines are running and each produces the same force?
 7. A rocket accelerates in a space at a rate of "1.0 g." The rocket exerts a force of $12,482 \text{ N}$. Later in flight the rocket exerts $46,458 \text{ N}$. What is the rocket's new acceleration? What is the rocket's new acceleration in "g's"?
 8. A locomotive's mass is 18181.81 kg . What is its weight?
 9. What is the weight of an infant whose mass is 1.76 kg ?
 10. The surface gravity of the Sun is 274 m/s^2 . How many Earth g's is this?
 11. A very fast car accelerates from a rest to 32 m/s , (71.68 mph), in 4.2 seconds. What is the acceleration of the car and how many g's is this?
 12. The Space Shuttle travels from launch to 529.2 m in 6.0 seconds. What is the acceleration of the shuttle and how many g's is this?
 13. The space shuttle's mass, (with boosters) is $654,506 \text{ kg}$. The average force of the shuttle's engines is $25,656,635.2 \text{ N}$. What is the acceleration of the shuttle in m/s^2 and g's to 3 sig figs?
 14. A little boy, mass = 40.0 kg , is riding in a wagon pulled by his HUGE dog, Howard. What is the acceleration of the wagon if the dog pulls with a force of 30.0 N ? (Assume the wagon rolls on a frictionless surface).
 15. A speedboat in the water experiences an acceleration of 0.524 m/s^2 . The boat's mass is 842 kg . What is the force that the boat's engines are putting out?
 16. A stalled car is pushed with a force of 342 N from rest. How far does the car travel in 12 seconds if its mass is 989 kg ?
 17. How far does the car travel in the previous problem if the pushing force is doubled?
 18. A little boy is pulling a wagon full of 10 bricks. The mass of the wagon is too small to be considered. If the boy later is pulling the wagon with the same force and the wagon has 45 bricks in it, then how does the acceleration of the 45 brick wagon compare to the acceleration of the 10 brick wagon?

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Important: Before you click, make sure you're signed in to the Google account you'd like the resources placed into. If the resources are added to the wrong account, simply sign out and then into the correct one and repeat the process.

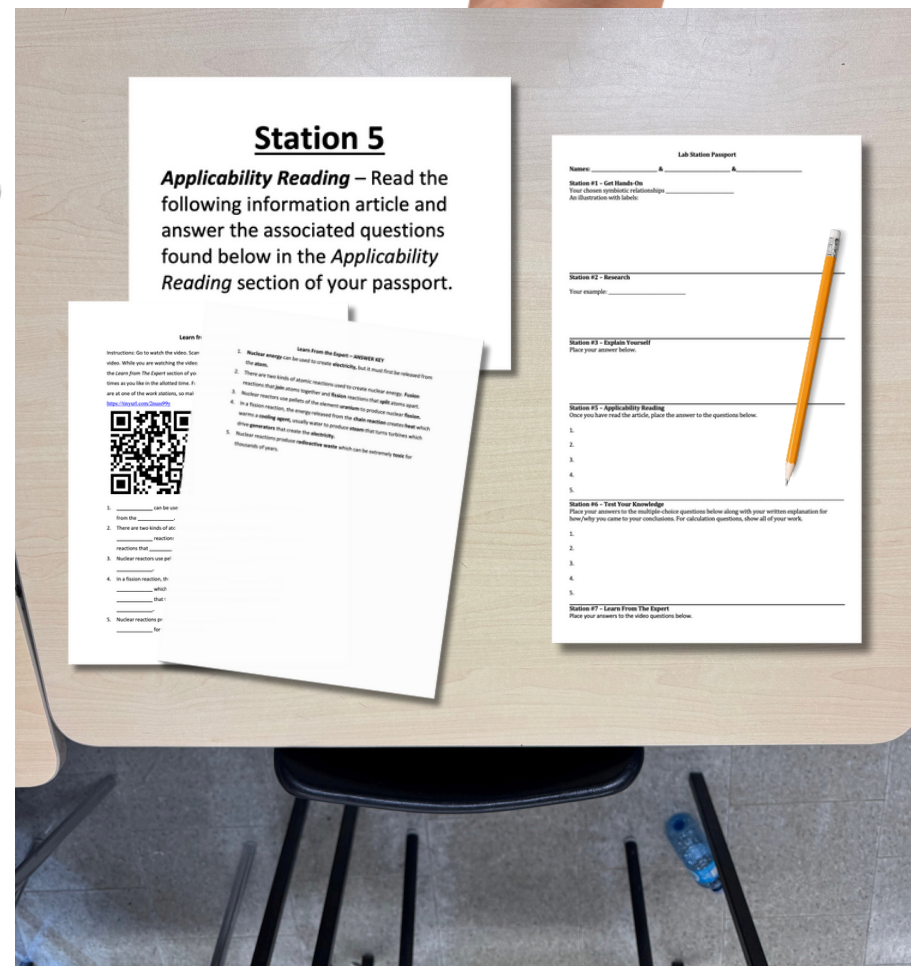
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Google Classroom Ready
One-Click Google Slides Access



Extremely satisfied - A great resource! Engaging and informative.

Engaging Activities



✓ 1 Lab Station Activity
with 7 Engaging Station
Tasks

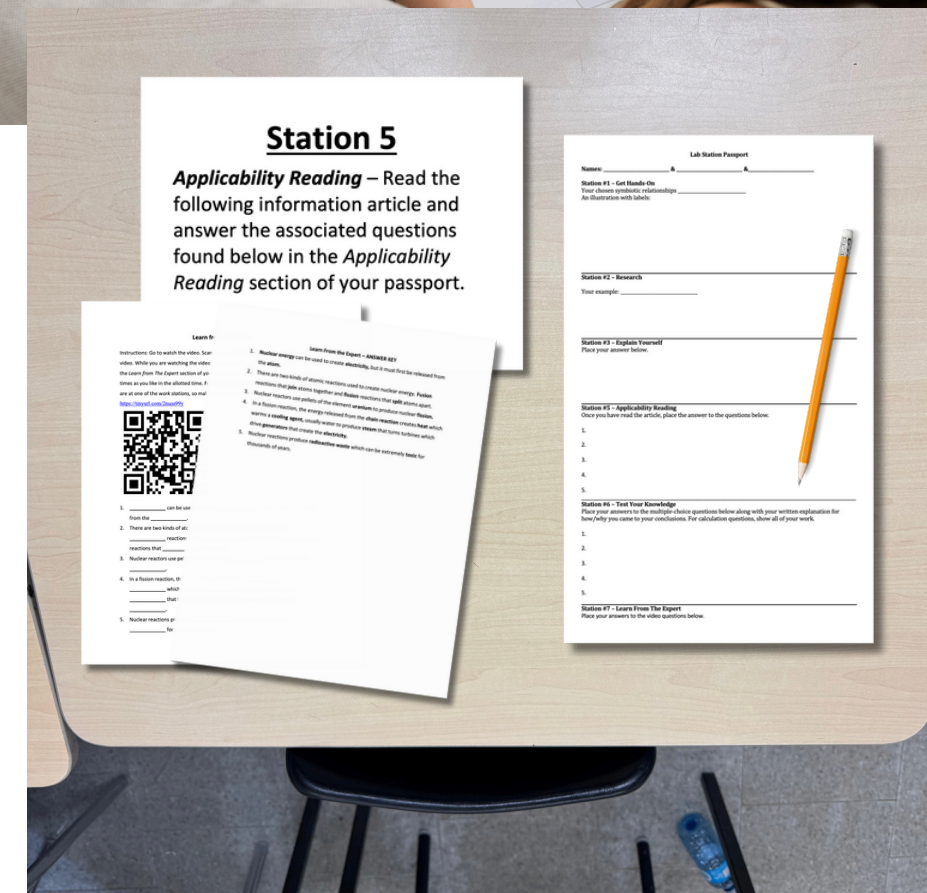
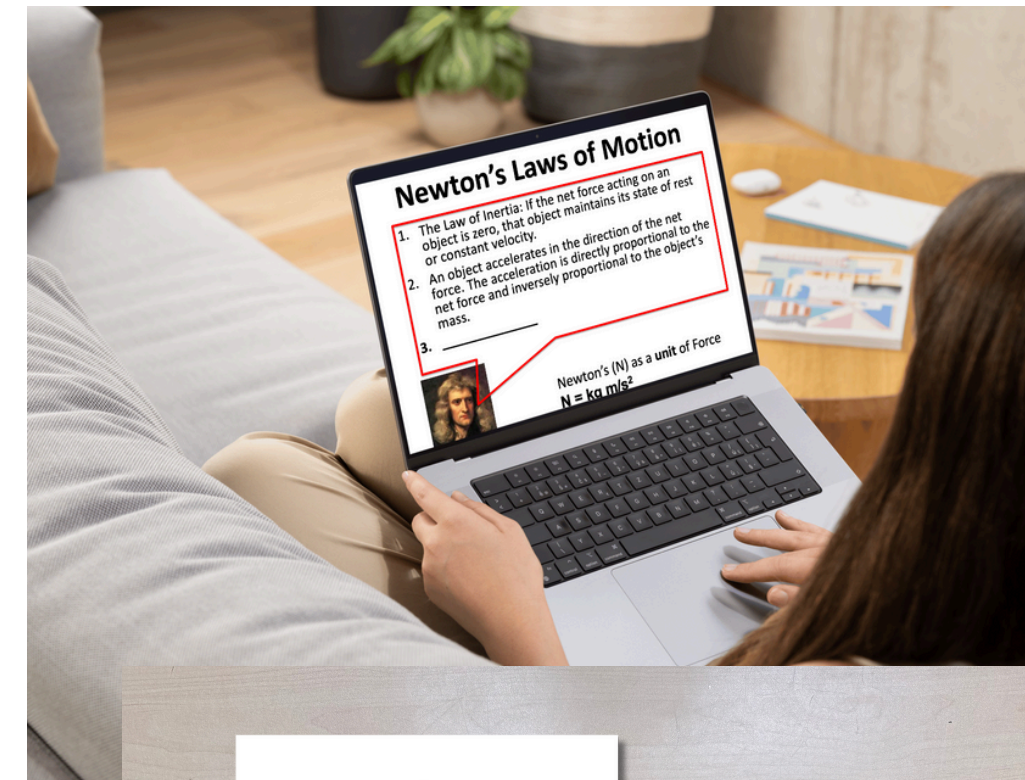
✓ 1 Worksheet with
Answer Key

✓ 1 Project

✓ 1 Isaac Newton Reading
Comprehension Article

MY 5E LESSON BUNDLES SOLVE...

- ★ **Prep-time crunch** — ready-to-use slides, stations, activities, and quizzes cut planning to near zero.
- ★ **Engagement** — hands-on stations + readings and projects keep students active and curious.
- ★ **Unit flow** — 5E structure (Engage → Evaluate) gives a coherent, day-by-day sequence.
- ★ **Assessment** — activities, assignments, and auto-graded quizzes, provide evidence of learning that is quick to mark.



BY THE END OF THIS BUNDLE, STUDENTS WILL UNDERSTAND

- Newton's three laws of motion in verbal or written form.
- how to apply Newton's laws to real-life physical situations.
- how to perform calculations involving force, mass, and acceleration.
- relationships among force, mass, and acceleration.
- vector and free-body diagrams to represent forces.
- how motion changes based on net force and mass.
- how forces affect motion.
- Newton's second law and be able to interpret experimental results related to it.
- background information about Isaac Newton.

Newton's Three Laws of Motion 5E Lesson

- Teaching Timeline
- Grade 9-12

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Daily Teaching Schedule

Day-by-day teaching schedule so you'll know what to teach and when each day.

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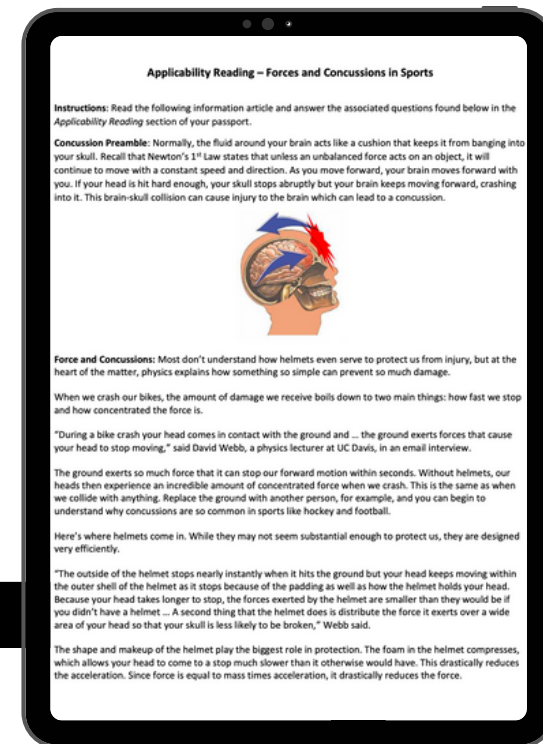
Newton's 3 Laws of Motion - 5E Lesson	
Engagement Phase Student discovery Your students will research and engage with Newton's Laws right out of the gate. This is a high energy, fast-paced activity to get them going. The instructions can be found in the file – <i>Engagement – Newton's 3 Laws Discovery</i> Teacher Note: This activity works very well at getting the students quickly engaged in and thinking about the topic. I never mark them on this but I also don't tell them that they aren't being marked.	Duration 35-45 min. Teacher Role – Facilitate learning and guide student understanding Goals ☐ Connect student's experiences ☐ Create interest ☐ Ask questions ☐ Understand the objectives of the lesson
Exploration Phase Newton's Three Laws of Motion Lab Station Activity - In groups of 2-3, have your students complete the <i>Exploration - Newton's Three Laws of Motion Lab Station Activity</i>. 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 <i>START HERE – Instructions</i> file.	Duration: 55-60 min. Teacher Role – Facilitate learning and guide student understanding Goals ☐ Students receive real experience with the topic ☐ Students use and develop creative thinking skills ☐ Students make observations, record results, and make connections
Explanation Phase Newton's 3 Laws of Motion Lesson Over the course of 2-3 days, go through the <i>Explanation - Newton's 3 Laws of Motion Lesson</i>. There are nine embedded	Duration: 2-3 hours Teacher Role – Explain the concepts by presenting the material

★★★★★ Extremely satisfied - Great resource! This 5E lesson bundle is a well-rounded and practical resource for educators seeking to deliver engaging, effective, and coherent lessons.

Each Phase is Clearly Described

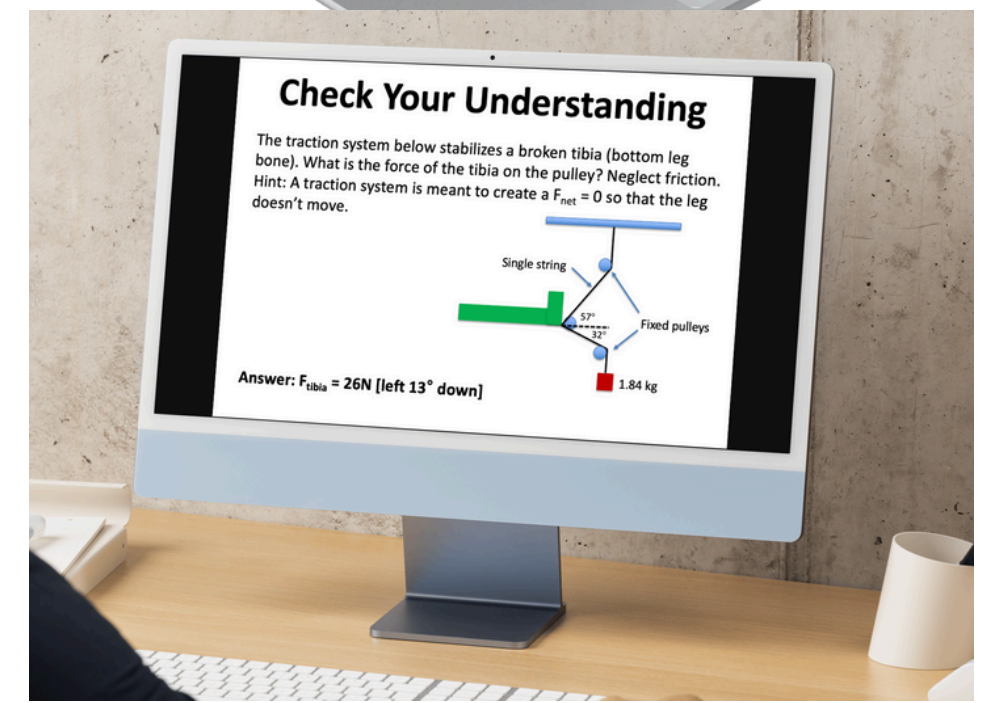
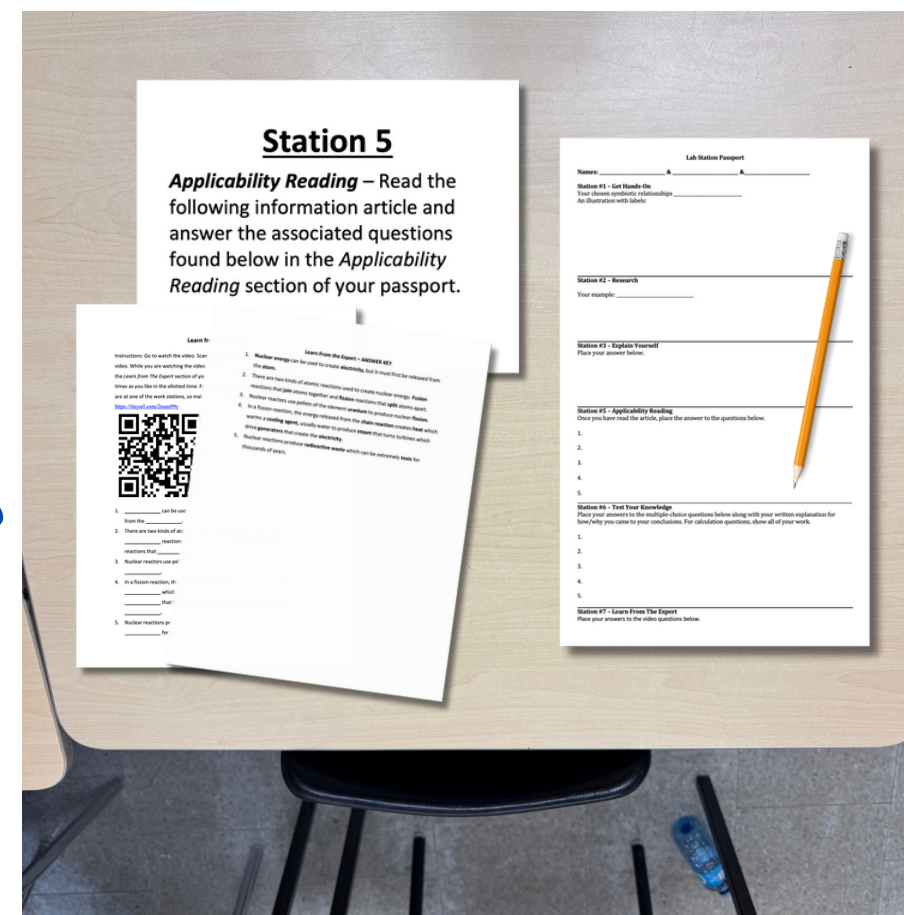
Editable and Interactive

Office, Google,
and PDF Versions
Fully Editable



Hands-on and
Interactive Activities

Engaging and Colorful Lesson



WHAT TEACHERS SAY

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This 5E lesson bundle is a well-rounded and practical resource for educators seeking to deliver engaging, effective, and coherent lessons.

★★★★★ Extremely satisfied - I absolutely love using this resource! It makes it so easy for the students and they always ask for them!

★★★★★ Extremely satisfied - My physics students enjoyed this activity and the chance to move around and review.

★★★★★ Extremely satisfied - I found this very thorough and very helpful for my students. Good product.

★★★★★ Extremely satisfied - Great sub assignment and way to incorporate writing into a subject that sometimes does not have many times for writing beyond labs.

★★★★★ Extremely satisfied - Thank you so much for putting in your time and energy on this resource! It was a life saver! It was used for each bell and much appreciated-Thank you.