

Complete S.6.7.C Bundle

- **Lesson**
- **Activities**
- **Assessment**

TEKS Grade 6 - S.6.7.C

Newton's Third Law: Action- Reaction Force Pairs

- ✓ 6th Grade Science TEKS Curriculum Bundle
- ✓ Variety of Lesson and Activity Types
- ✓ Digital + Printable Formats



NEW 2024



SCROLL

to take a look inside!

Daily Teaching Timeline Included

Newton's 3rd Law of Motion Lesson Bundle

- Teaching Timeline
- Grade 6-8+

- Lessons
- Worksheets
- Activity
- Assessments



Newton's Third Law and Colliding Objects Activity

NGSS MS-PS2-1

Students design a solution to a problem involving motion of two colliding objects.

NGSS MS-PS2-1

Newton's Laws of Motion Word Search and Scramble

THREE Activities in One!

1. Basic 22-Term Word Search
2. Scrambled Words Word Search
3. Word Scramble and Define Activity

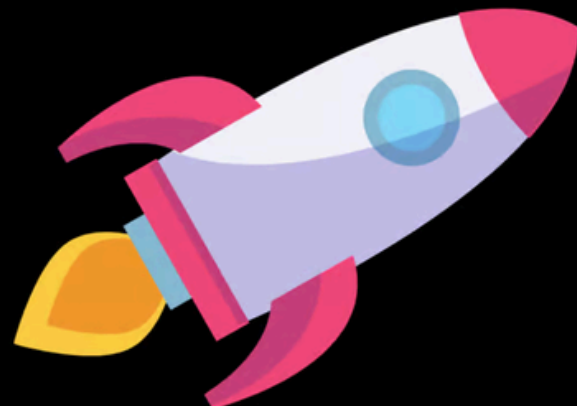


TWF



Case Study

Newton's 3rd Law: How Rockets Accelerate in Space



Build your students' scientific literacy, apply science to real-world issues, and stay prepared with a no-prep reading.

NEWTON 3RD LAW OF MOTION STEM INVESTIGATION

Water Bottle Jet - Thrust vs Nozzle Size - Newton 3rd Law STEM Investigation

Driving Question: How does nozzle diameter affect how far a water jet bottle will travel?

PURPOSE / OVERVIEW
Students build a simple water jet rocket (a partially filled plastic bottle) and vary only the nozzle opening size to measure how nozzle diameter changes thrust and therefore how far the bottle travels. Through repeated launches, controlled tests, data recording, class averaging, graphing, and a CER, students connect action-reaction forces and fluid momentum to real motion.

LEARNING TARGETS

- Plan and carry out a controlled investigation with repeated trials.
- Measure travel distance and compute averages.
- Graph class averages to compare thrust performance by nozzle size.
- Write a CER explaining the relationship between nozzle size, thrust, and motion using Newton's 3rd Law.

PREPARATION
Option 1 -- Drill Holes in Spare Bottle Caps (Easiest & Most Consistent)
Materials:

- Extra plastic bottle caps (same brand + same fit)
- Drill + drill bits (3 mm, 6 mm, 9 mm, 12 mm)
- Hot glue (optional)

How to make them:

1. Drill a centered hole using each drill-bit size.
2. Label each cap (e.g., "3 mm," "6 mm").
3. If the hole has rough edges, smooth with sandpaper.
4. Optional: Glue a short straw piece into the hole to keep the jet direction straight.

Option 2 -- Use Rubber Stoppers with Pre-Drilled Holes
Materials:

- Rubber stoppers (SPL #6) with 1 hole
- Hot glue or wax to seal

How to make them:

1. Insert stopper into bottle mouth (fits tightly).
2. Swap stopper to change nozzle diameter.

The bottle is placed in the launch cradle then released. How the bottle stays in the cradle



THRUST VS NOZZLE SIZE

TEKS – Grade 6

S.6.7 Force, motion, and energy. The student knows the nature of forces and their role in systems that experience stability or change. The student is expected to:

S.6.7.C - The student is expected to identify simultaneous force pairs that are equal in magnitude and opposite in direction that result from the interactions between objects using Newton's Third Law of Motion.

- Newton's 3rd Law of Motion Lesson
- Newton's Third Law and Colliding Objects Activity
- Newton's 3rd Law Case Study - How Rockets Accelerate in Space
- Newton's Laws of Motion Word Search and Scramble Activity
- Newton's Third Law of Motion STEM Investigation

TEKS Science Daily Teaching Plan

Lesson Length: 55 minutes

Timeframe: 5-6 Days

Day	Lesson / Activity
1	Newton's 3rd Law of Motion Lesson
2	Newton's Third Law and Colliding Objects Activity
3	Newton's 3rd Law Case Study - How Rockets Accelerate in Space
	Newton's Laws of Motion Word Search and Scramble Activity
4	Newton's Third Law of Motion STEM Investigation
5	Newton's Third Law of Motion STEM Investigation

NO PREP

Just Download and Teach

- ✓ **Complete S.6.7.C - 6th Grade Science TEKS Curriculum.**
- ✓ **Variety of Lesson Types** - Includes a lesson, activities, assessments, and more.
- ✓ **Daily Teaching Timeline Included** - Includes a ready-to-go, daily teaching timeline.
- ✓ **Digital + Printable Formats** - Ideal for classroom, hybrid, or remote learning environments with flexible access options.

Who is it for?

- **Teachers who teach 6th grade science in Texas**
- **Teachers who want multiple resources at their fingertips including lessons and a variety of activities, in order to prepare their students for the STAAR Science Exam**
- **Teachers who don't have time to develop their own resources or organize what to teach and when**

Fully Editable and Interactive