

Make Gravity Come to Life!

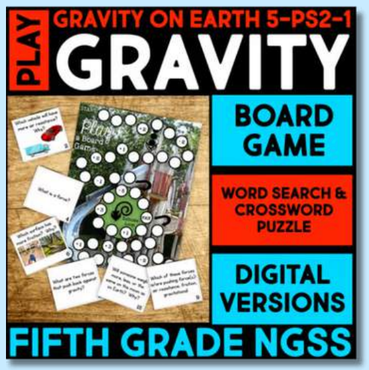
5TH GRADE

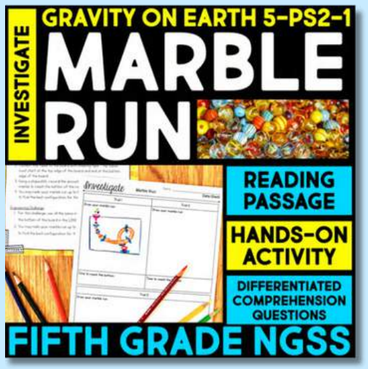
GRAVITY ON EARTH BUNDLE

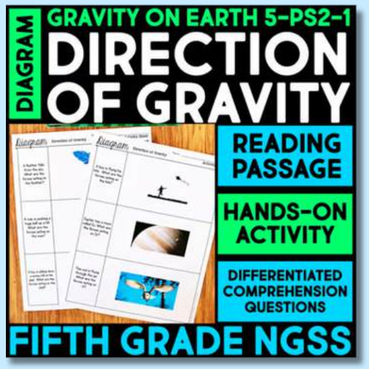
KEEP SCROLLING TO SEE WHAT'S INSIDE!

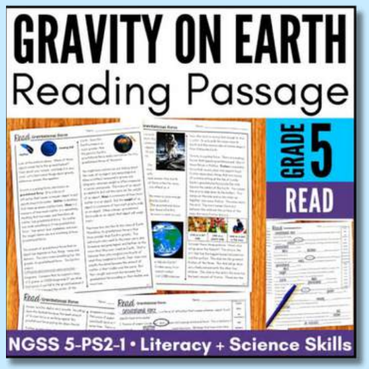
WHAT'S INCLUDED IN THE BUNDLE?

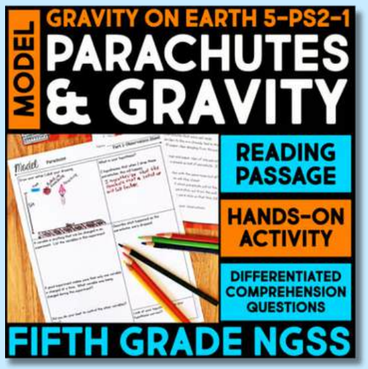




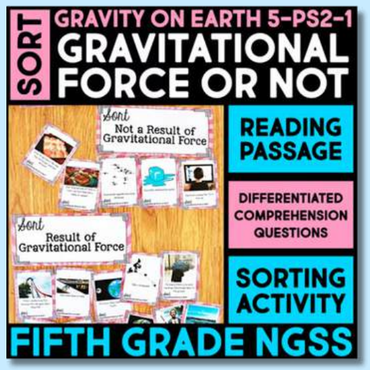






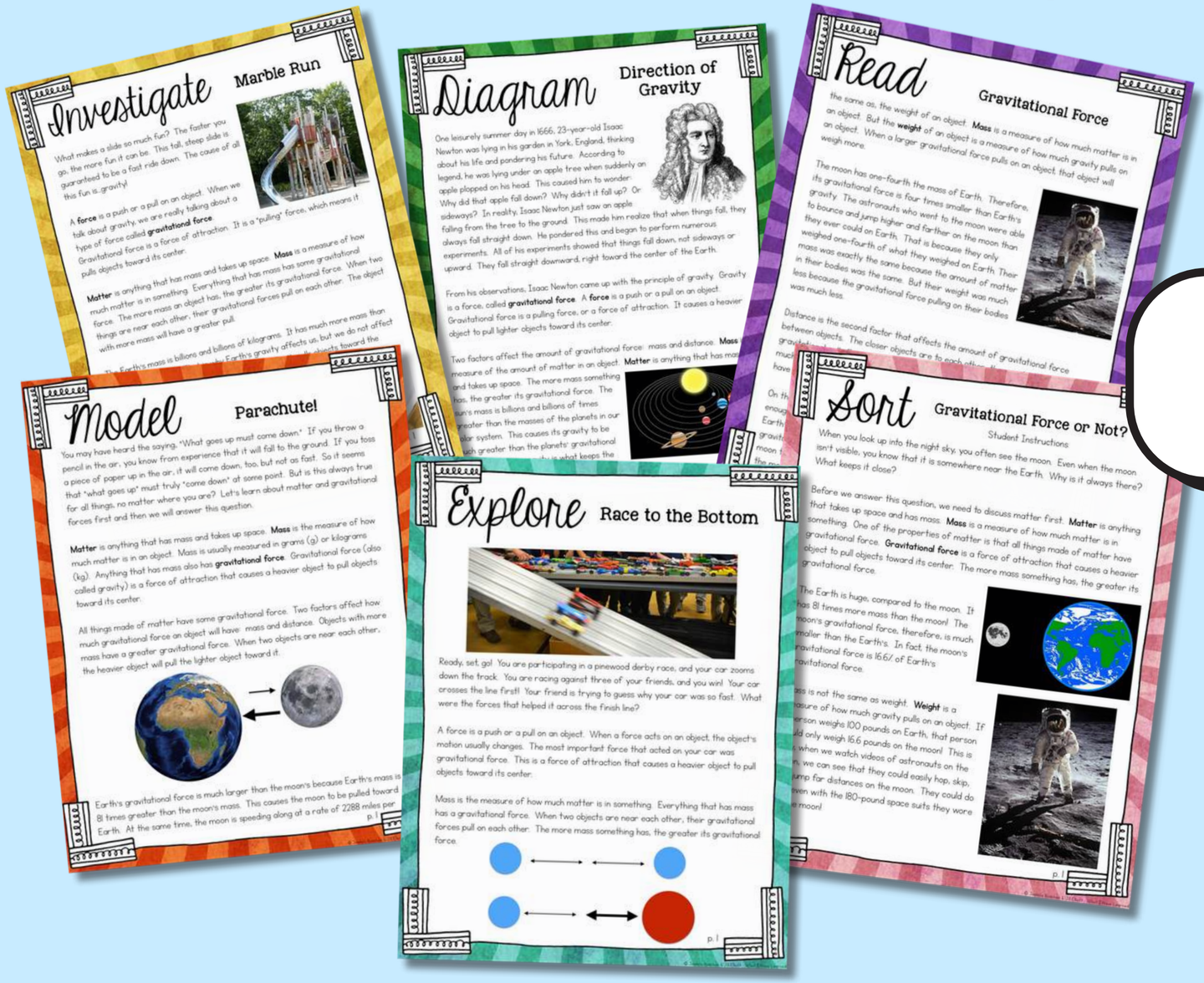






- 8 Science Stations aligned with the NGSS for 5th grade
- 6 Reading passages
- Hands-on activities
- Differentiated comprehension questions
- Digital Videos & Video Games
- Digital Google Slides & Forms

6 READING PASSAGE

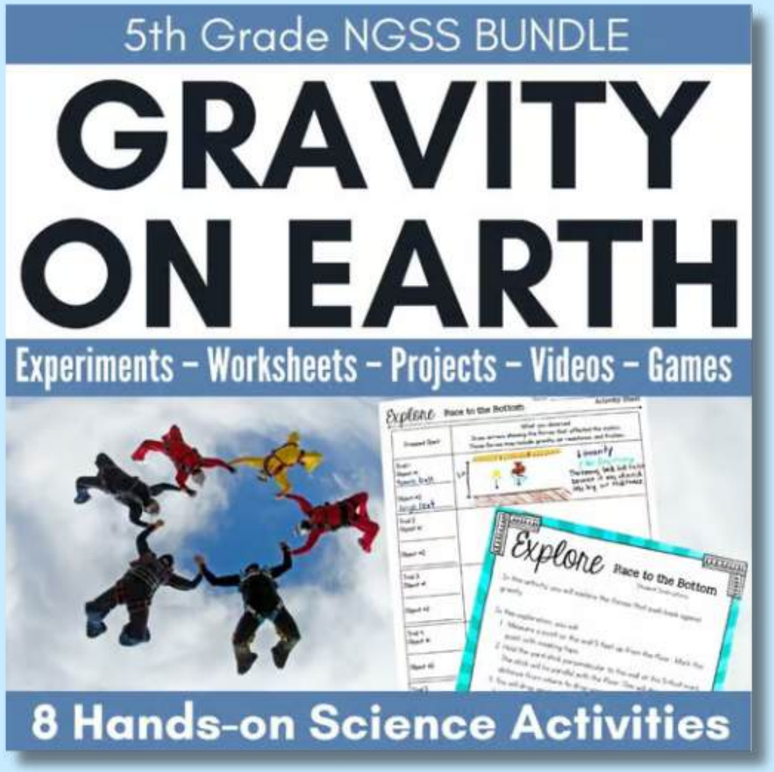


6 Reading Passages that provide all scientific background knowledge for each station

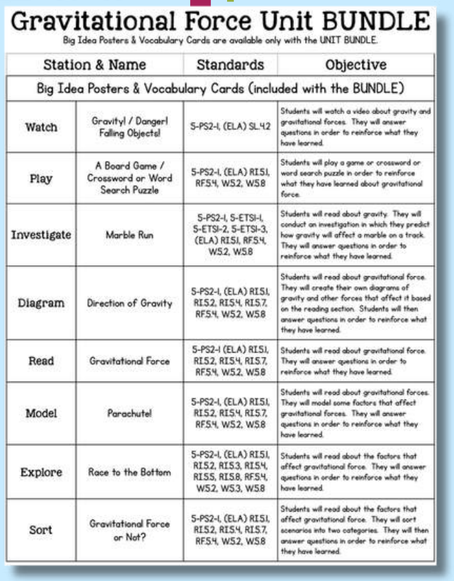
Available in two formats + Digital

Includes pictures and visuals

PAGE OVERVIEW



ADD TO CART



Gravitational Force Unit BUNDLE

Big Idea Posters & Vocabulary Cards are available only with the UNIT BUNDLE.

Station & Name		Standards	Objective
Big Idea Posters & Vocabulary Cards (included with the BUNDLE)			
Watch	Gravity! / Danger! Falling Objects!	5-PS2-1, (ELA) SL.4.2	Students will watch a video about gravity and gravitational forces. They will answer questions in order to reinforce what they have learned.
Play	A Board Game / Crossword or Word Search Puzzle	5-PS2-1, (ELA) RI.5.1, RF.5.4, W.5.2, W.5.8	Students will play a game or crossword or word search puzzle in order to reinforce what they have learned about gravitational force.
Investigate	Marble Run	5-PS2-1, 5-ETS1-1, 5-ETS1-2, 5-ETS1-3, (ELA) RI.5.1, RF.5.4, W.5.2, W.5.8	Students will read about gravity. They will conduct an investigation in which they predict how gravity will affect a marble on a track. They will answer questions in order to reinforce what they have learned.
Diagram	Direction of Gravity	5-PS2-1, (ELA) RI.5.1, RI.5.2, RI.5.4, RI.5.7, RF.5.4, W.5.2, W.5.8	Students will read about gravitational force. They will create their own diagrams of gravity and other forces that affect it based on the reading section. Students will then answer questions in order to reinforce what they have learned.
Read	Gravitational Force	5-PS2-1 (ELA) RI.5.1, RI.5.2, RI.5.4, RI.5.7, RF.5.4, W.5.2, W.5.8	Students will read about gravitational force. They will answer questions in order to reinforce what they have learned.
Model	Parachute!	5-PS2-1, (ELA) RI.5.1, RI.5.2, RI.5.4, RI.5.7, RF.5.4, W.5.2, W.5.8	Students will read about gravitational forces. They will model some factors that affect gravitational forces. They will answer questions in order to reinforce what they have learned.
Explore	Race to the Bottom	5-PS2-1, (ELA) RI.5.1, RI.5.2, RI.5.3, RI.5.4, RI.5.5, RI.5.8, RF.5.4, W.5.2, W.5.3, W.5.8	Students will read about the factors that affect gravitational force. They will answer questions in order to reinforce what they have learned.
Sort	Gravitational Force or Not?	5-PS2-1, (ELA) RI.5.1, RI.5.2, RI.5.4, RI.5.7, RF.5.4, W.5.2, W.5.8	Students will read about the factors that affect gravitational force. They will sort scenarios into two categories. They will then answer questions in order to reinforce what they have learned.



Science Stations Overview

This is a general overview of all science stations in each UNIT BUNDLE.

Watch a Video
At this station, students will watch a video relevant to the topic and answer questions. You have the option of using the included worksheet with the questions or using the task cards and having students respond in their science journals.

Read a Passage
Students read a short passage about the topic and answer questions about the information in the passage. You have the option of using the included worksheet with the questions or using the task cards and having students respond in their science journals.

Play a Video Game
Students play a game and answer questions about the experience. You have the option of using the included worksheet with the questions or using the task cards and having students respond in their science journals.

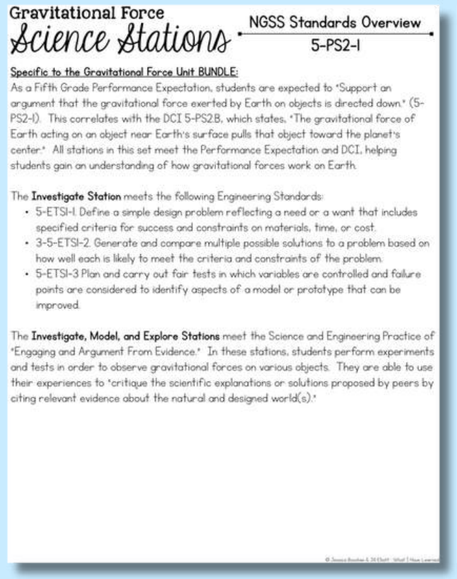
Create a Model
Students use materials to illustrate the science concept and answer questions. You have the option of using the included worksheet with the questions or using the task cards and having students respond in their science journals.

Investigate
Students use materials to investigate the science topic by following directions and recording results. Students answer questions about the investigation.

Explore
Students create a sample and manipulate it using the new science concepts they have learned. Students answer questions based on the effects.

Draw a Diagram
Students draw and label a diagram specific to certain requirements. Students then explain how their diagram meets the requirements.

Sort
Students sort cards into groups or put them in a specific order. Students record the sort and then describe their reasoning.



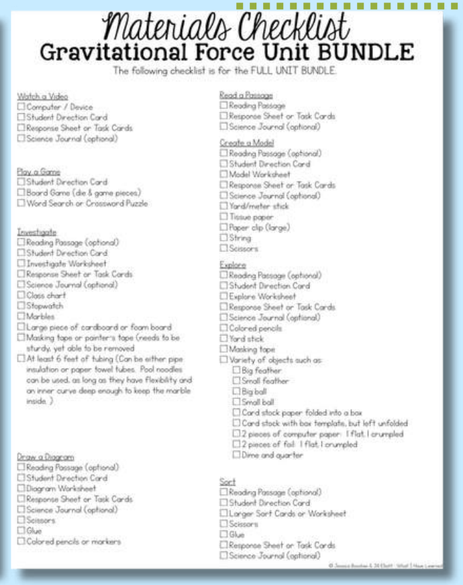
Gravitational Force Science Stations

NGSS Standards Overview
5-PS2-1

Specific to the Gravitational Force Unit BUNDLE:
As a Fifth Grade Performance Expectation, students are expected to "Support an argument that the gravitational force exerted by Earth on objects is directed down." (5-PS2-1). This correlates with the DCI 5-PS2.B, which states, "The gravitational force of Earth acting on an object near Earth's surface pulls that object toward the planet's center." All stations in this set meet the Performance Expectation and DCI, helping students gain an understanding of how gravitational forces work on Earth.

The **Investigate Station** meets the following Engineering Standards:
- 5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
- 3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
- 5-ETS1-3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

The **Investigate, Model, and Explore Stations** meet the Science and Engineering Practice of "Engaging and Argument From Evidence." In these stations, students perform experiments and tests in order to observe gravitational forces on various objects. They are able to use their experiences to "critique the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s)."



Materials Checklist
Gravitational Force Unit BUNDLE

The following checklist is for the FULL UNIT BUNDLE.

Watch a Video
- ☐ Computer / Device
- ☐ Student Direction Card
- ☐ Response Sheet or Task Cards
- ☐ Science Journal (optional)

Play a Game
- ☐ Student Direction Card
- ☐ Board Game (die & game pieces)
- ☐ Word Search or Crossword Puzzle

Investigate
- ☐ Reading Passage (optional)
- ☐ Student Direction Card
- ☐ Investigate Worksheet
- ☐ Response Sheet or Task Cards
- ☐ Science Journal (optional)
- ☐ Class chart
- ☐ Stopwatch
- ☐ Marbles
- ☐ Large piece of cardboard or foam board
- ☐ Masking tape or painter's tape (needs to be sturdy, yet able to be removed
- ☐ At least 6 feet of tubing (Can be either pipe insulation or paper towel tubes. Pool noodles can be used, as long as they have flexibility and an inner curve deep enough to keep the marble inside.)

Draw a Diagram
- ☐ Reading Passage (optional)
- ☐ Student Direction Card
- ☐ Diagram Worksheet
- ☐ Response Sheet or Task Cards
- ☐ Science Journal (optional)
- ☐ Scissors
- ☐ Glue
- ☐ Colored pencils or markers

Read a Passage
- ☐ Reading Passage
- ☐ Response Sheet or Task Cards
- ☐ Science Journal (optional)

Create a Model
- ☐ Reading Passage (optional)
- ☐ Student Direction Card
- ☐ Model Worksheet
- ☐ Response Sheet or Task Cards
- ☐ Science Journal (optional)
- ☐ Yard/meter stick
- ☐ Tissue paper
- ☐ Paper clip (large)
- ☐ String
- ☐ Scissors

Explore
- ☐ Reading Passage (optional)
- ☐ Student Direction Card
- ☐ Explore Worksheet
- ☐ Response Sheet or Task Cards
- ☐ Science Journal (optional)
- ☐ Colored pencils
- ☐ Yard stick
- ☐ Masking tape
- ☐ Variety of objects such as:
  - ☐ Big feather
  - ☐ Small feather
  - ☐ Big ball
  - ☐ Small ball
  - ☐ Card stock paper folded into a box
  - ☐ Card stock with box template, but left unfolded
  - ☐ 2 pieces of computer paper: 1 Flat, 1 crumpled
  - ☐ 2 pieces of foil: 1 Flat, 1 crumpled
  - ☐ Dime and quarter

Sort
- ☐ Reading Passage (optional)
- ☐ Student Direction Card
- ☐ Larger Sort Cards or Worksheet
- ☐ Scissors
- ☐ Glue
- ☐ Response Sheet or Task Cards
- ☐ Science Journal (optional)

Table of Contents

Science Station Overview

Materials Checklist

Science Stations

BIG IDEA POSTERS

Three forces that affect an object's motion are



friction, air resistance, and gravity

Gravitational force

is a pulling force of attraction.



Friction and air resistance





are pushing forces that oppose gravitational force.

BIG IDEA POSTERS THAT EXPLAIN THE KEY CONCEPTS.



force

a push or a pull on an object



·avitational force

a force of attraction that causes a heavier object to pull objects toward its center



air resistance

a pushing force that happens as an object moves and air molecules push back against it



matter

anyth
that
up space and has mass

VOCABULARY CARDS WITH PICTURE

air resistance

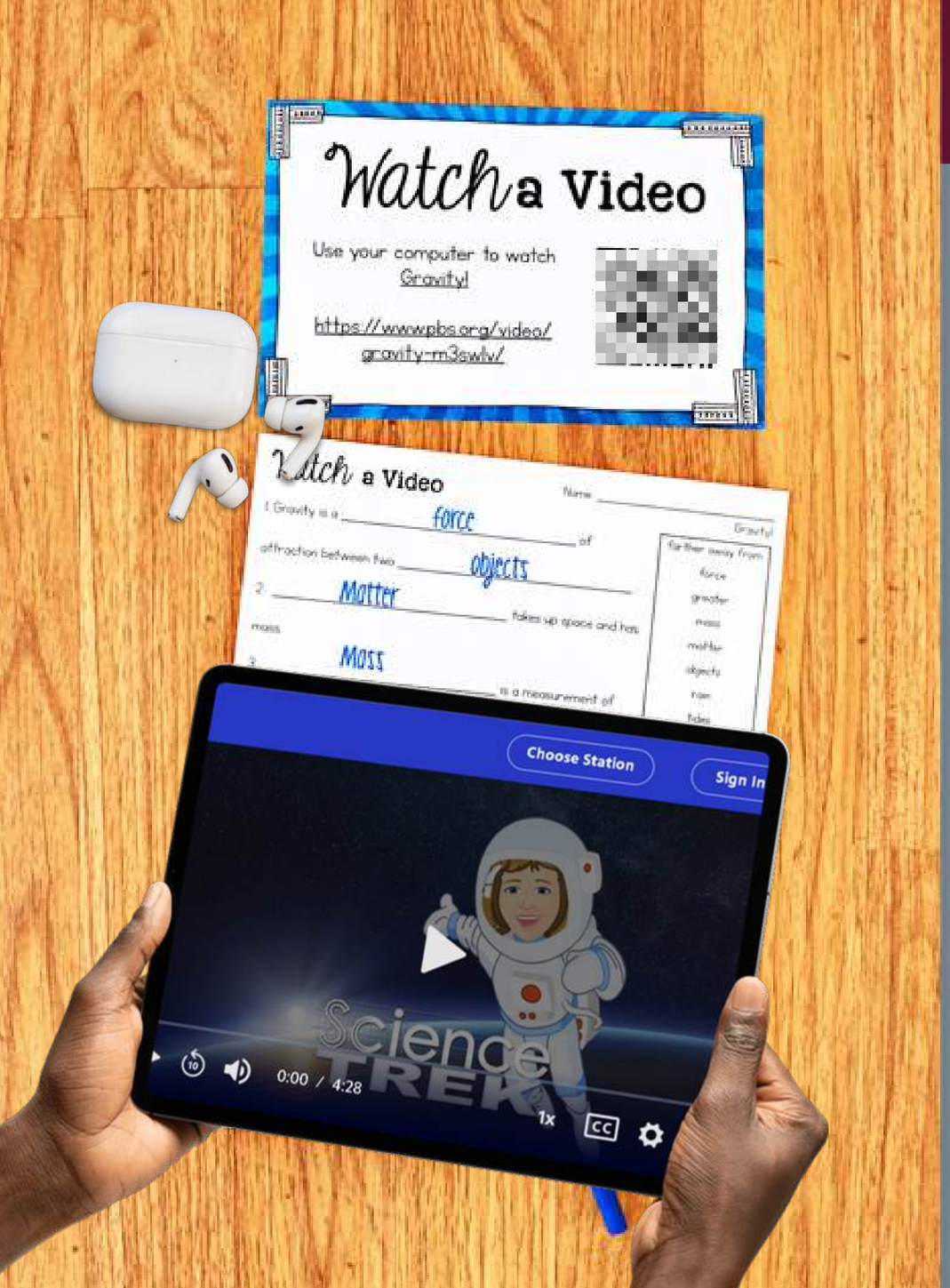
a pushing force that happens as an object moves and air molecules push back against it

friction

A pushing force that occurs when two objects touch. Friction slows down things that are moving.

VOCABULARY CARDS WITHOUT PICTURE

WATCH STATION



STUDENTS WATCH ONE OF TWO GRAVITY VIDEOS AND ANSWER COMPREHENSION QUESTIONS

> "This video was helpful to demonstrate to students the effect of gravity on the earth."
> - terriann N.

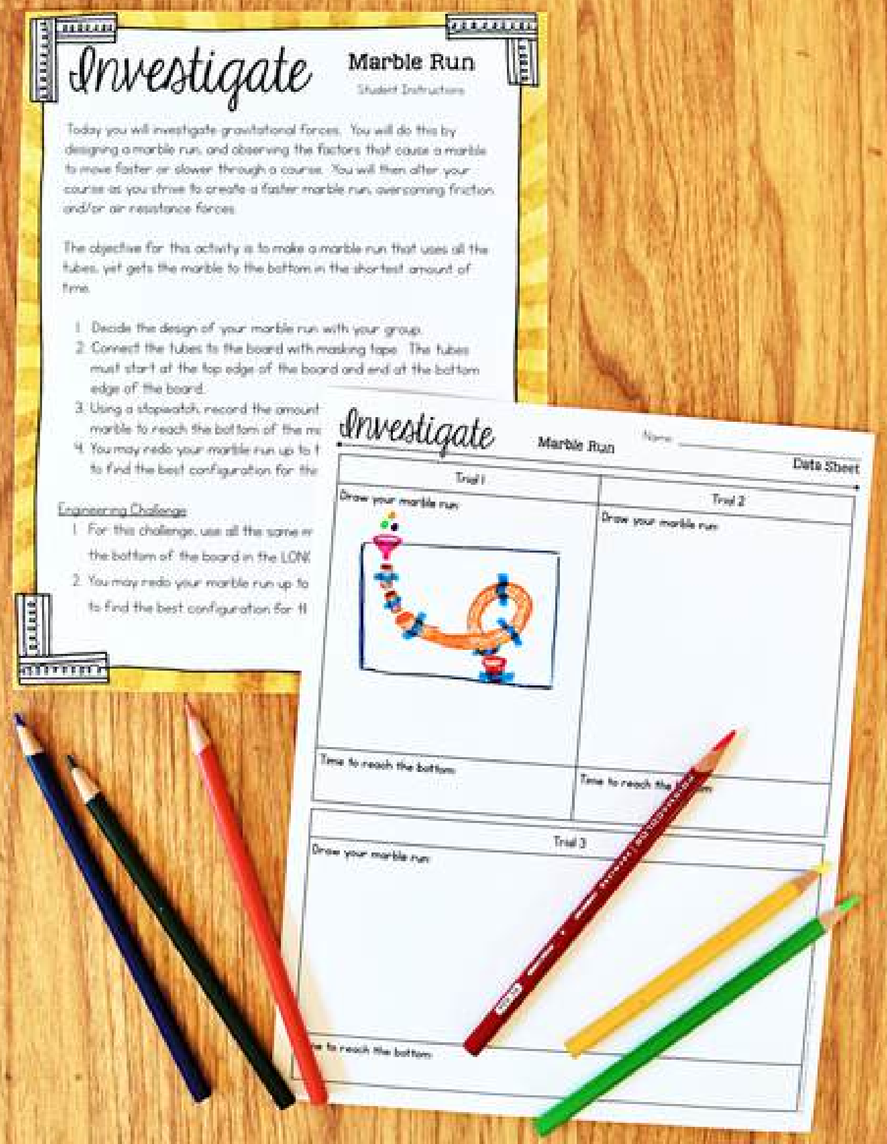
PLAY STATION

BOARD GAME, CROSSWORD, OR WORD SEARCH TO REINFORCE GRAVITY VOCABULARY AND CONCEPTS.

> The kids really enjoyed the game aspect of learning.
> - Stacie B.



INVESTIGATE STATION



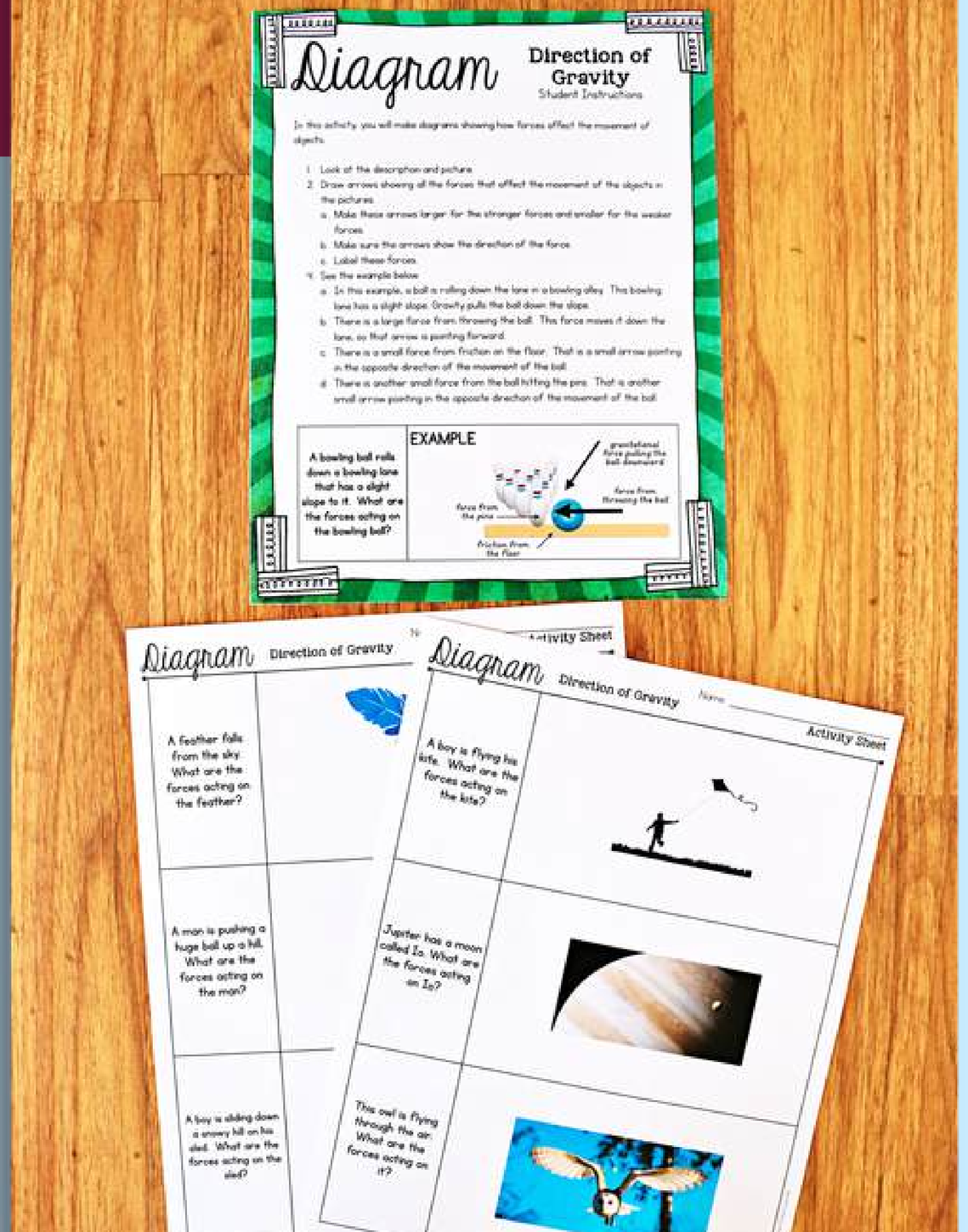
STUDENTS BUILD AND TEST A MARBLE RUN TO EXPLORE HOW GRAVITY, FRICTION, AND MOTION AFFECT SPEED.

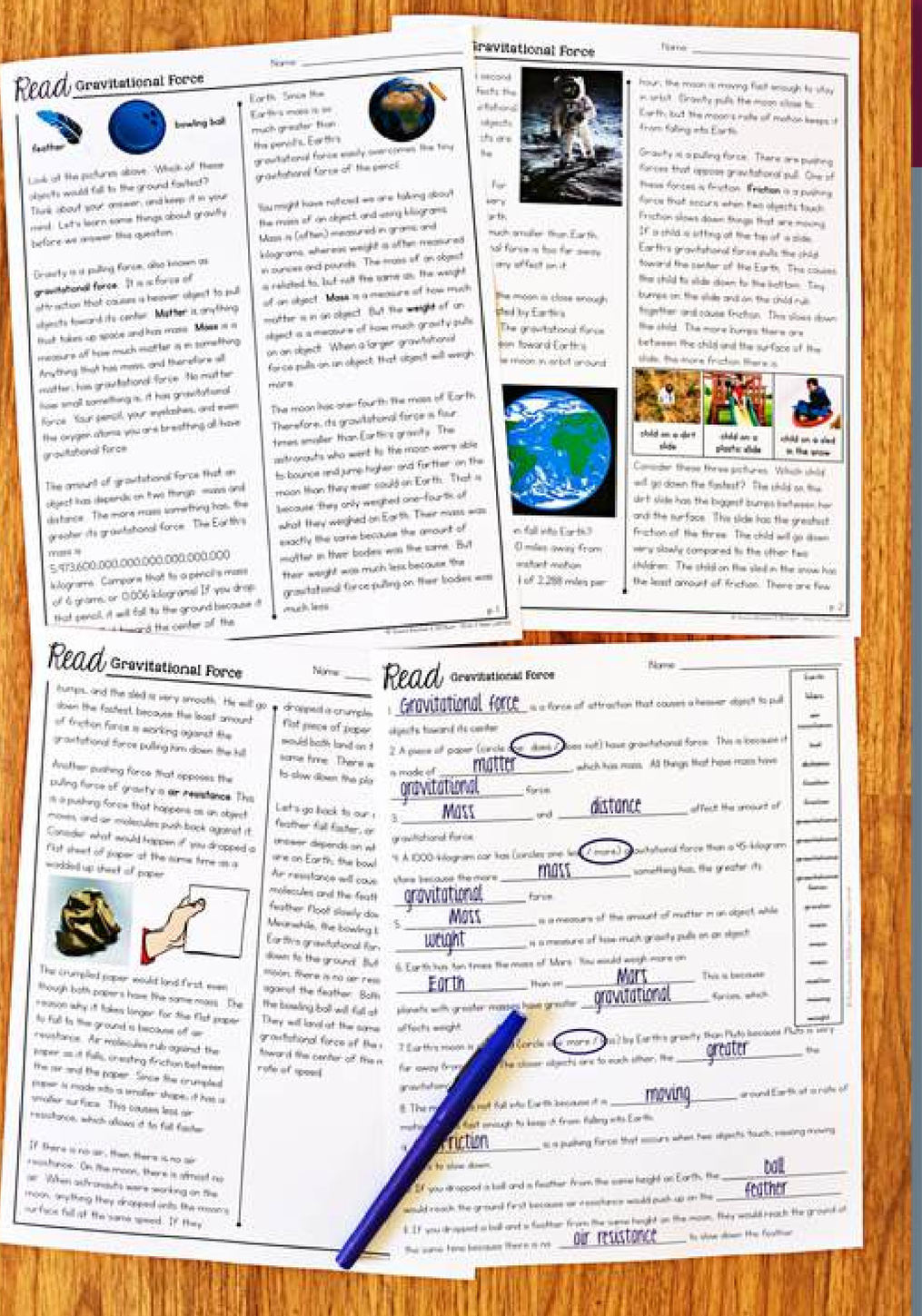
> These worksheets were great supplemental activities to use during the unit.
> - Mrs Katie Learning

DIAGRAM STATION

STUDENTS DRAW AND LABEL FORCE DIAGRAMS TO SHOW HOW GRAVITY ACTS ON OBJECTS.

> This resource was extremely useful to use when reviewing concepts in my 5th grade classroom.
> - Regina S.





READ STATION

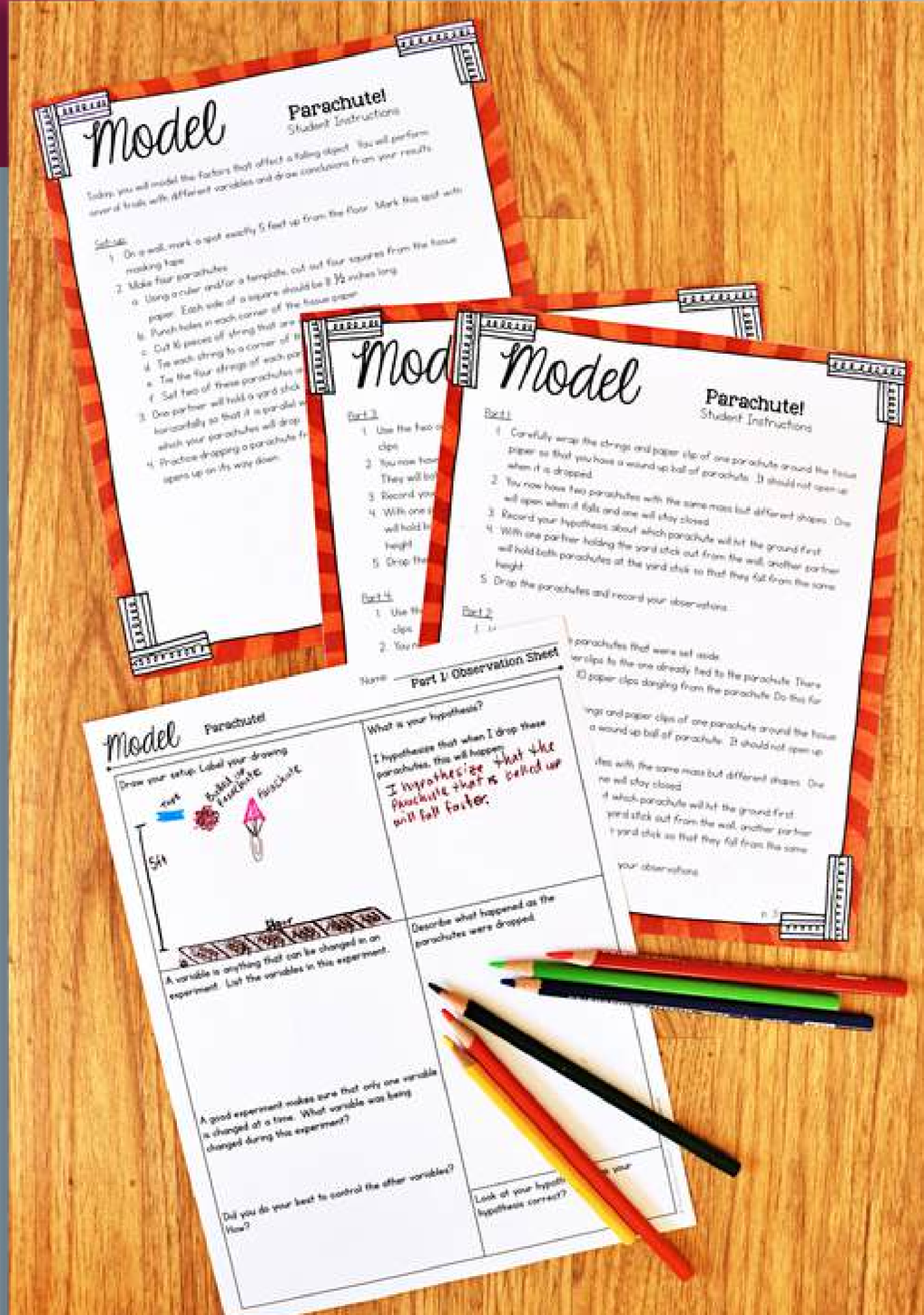
INFORMATIONAL READING PASSAGE WITH COMPREHENSION QUESTIONS.

> "Wonderful passage and discussion for students. Made for a good lesson."
> - Keri T.

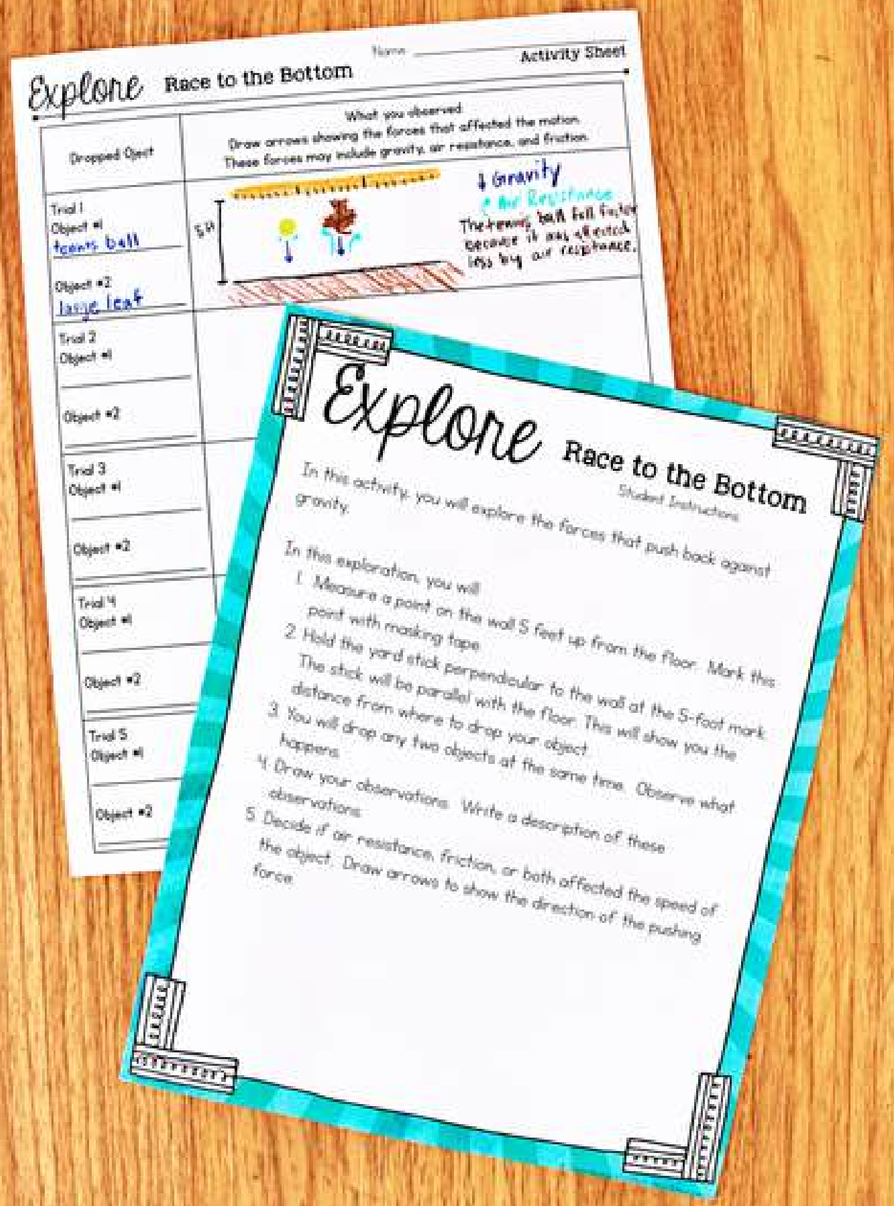
MODEL STATION

STUDENTS DESIGN AND TEST PARACHUTES TO EXPLORE AIR RESISTANCE AND GRAVITY.

> This was an engaging and fun activity. My students liked it.
> - Cherie H.



EXPLORE STATION



STUDENTS COMPARE FALLING OBJECTS TO ANALYZE HOW MASS AND AIR RESISTANCE AFFECT MOTION.

> “Beautiful and engaging resources! Very detailed and full of fun activities. Loved it!”
> - Stacy B.

SORT STATION

SORTING ACTIVITY WHERE STUDENTS CLASSIFY REAL-WORLD SCENARIOS BASED ON GRAVITATIONAL FORCE.

> I used this for my Earth Science Kiddos. I made this into part of a larger lab.
> - Amber M.



WATCH • PLAY • INVESTIGATE • DIAGRAM • READ • MODEL • EXPLORE • SORT

GRAVITY ON EARTH ACTIVITIES

SUGGESTED USES

Learning Stations

Use all eight stations or just a few as learning stations that students complete at their own pace.

Science Centers

Set up a rotation where students visit each center to complete the activities.

Whole Class

Use the activities in a whole class format.

Small Group

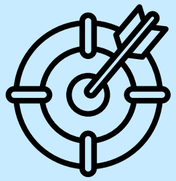
Use the activities with a small group who need extra help.

YOU WILL LOVE THIS BECAUSE



Complete Unit in One Download

Provides everything needed to teach Gravity on Earth without searching for separate labs, readings, and review materials.



Direct NGSS Alignment

All activities support NGSS standard 5-PS2-1, helping students observe and measure properties to identify and classify materials.



Saves Teachers Valuable Time

With ready-to-use materials, digital options, and answer keys included, teachers can quickly implement engaging science instruction.

TEACHERS LOVE IT!

"My students loved this resource. It was engaging and really helped them reflect on what they have learned."

Jennifer M.



"I enjoyed using the contents of this bundle! Students enjoyed as well! The bundle was laid out nicely. The sections were easy to teach with confidence! Thanks so much for such a well put together and thorough bundle. "

ANDREA J.



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to get more resources!

My passion is making learning accessible to all students.
I love scaffolding learning, breaking down the concepts and building them up so that students can see the connections.
I love figuring out the small components that build up to the big ideas and helping students see it all.



teach MATH | teach SCIENCE | teach READING | teach WRITING

What I have LEARNED