

2ND
GRADE

Explore the History of the Earth

PREVIEW

HISTORY OF THE EARTH SLOW & FAST CHANGES

8 STATIONS

POSTERS

LABS

PASSAGES

DIFFERENTIATED

VIDEOS & GAMES

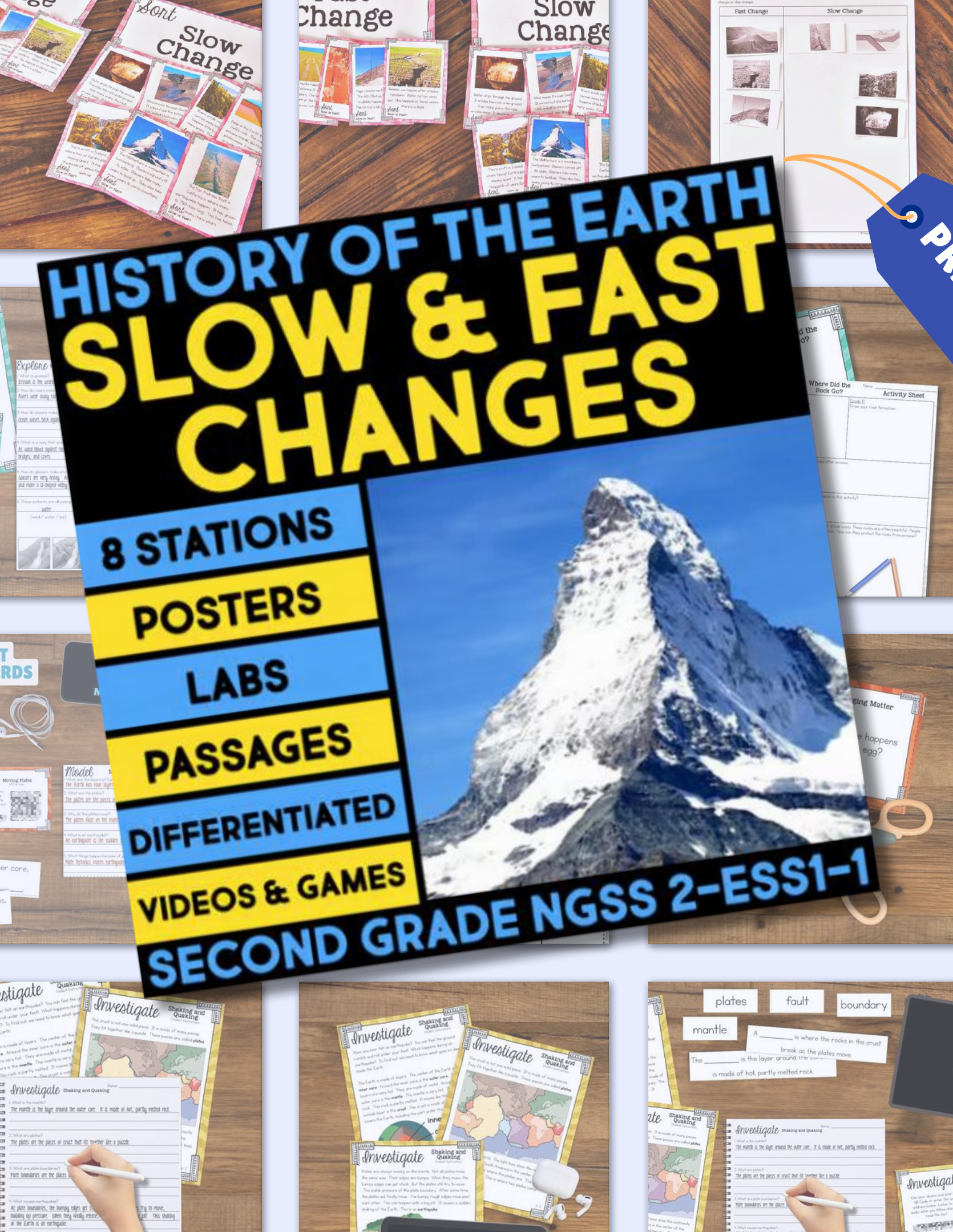


SECOND GRADE NGSS 2-ESS1-1

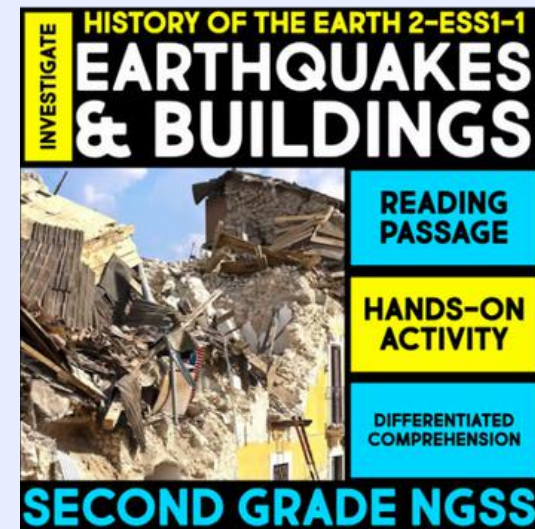
SLOW AND FAST CHANGES



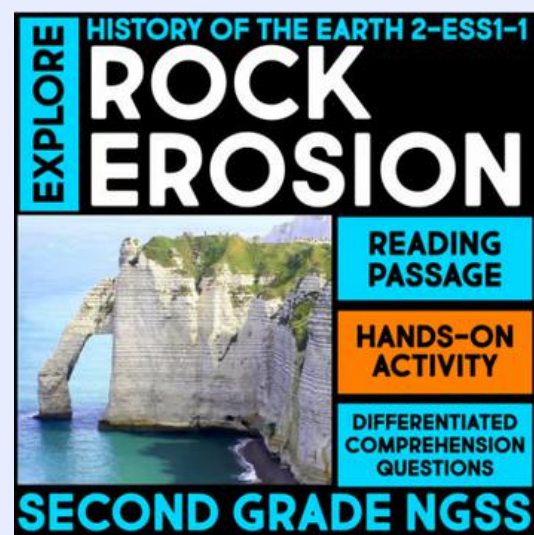
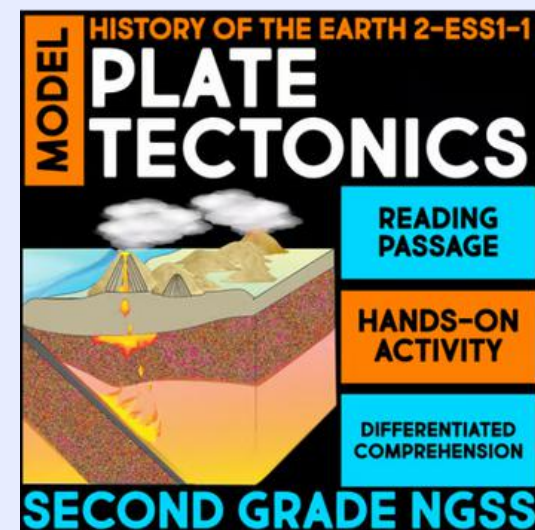
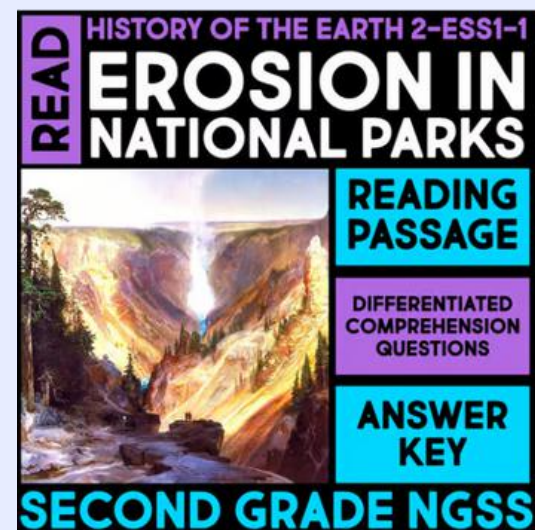
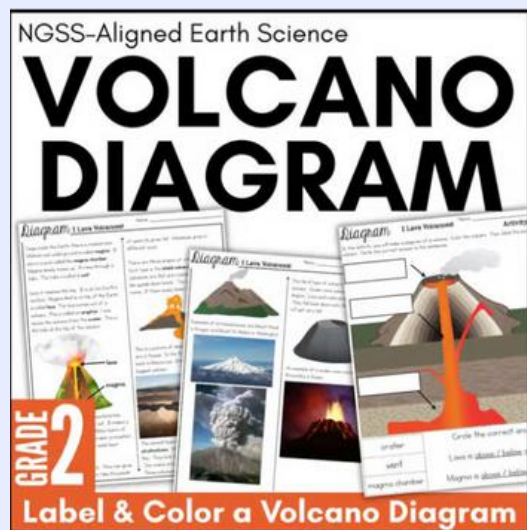
KEEP SCROLLING TO SEE
WHAT'S INSIDE!



WHAT'S INCLUDED IN THE BUNDLE?



- ✓ 8 Science Stations aligned with the NGSS for 2nd 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

HISTORY OF THE EARTH

SLOW & FAST CHANGES

8 STATIONS

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VIDEOS & GAMES



SECOND GRADE NGSS 2-ESS1-1

Science Station	Standard	Objective	Materials	Page
Big Idea Posters & Vocabulary Cards				10
Watch All About Volcanoes / Earthquakes	2-ESS1C, (ELA) SL.2.2	Students watch a video in order to learn about volcanoes, or to learn about earthquakes. They answer questions in order to reinforce what they have learned.	Computer / Device Student Sheets Science Journal	48
Play Shape It Up / Volcanoes	2-ESS1C, (ELA) SL.2.2	Students play a game in order to learn about forces of nature that shape the Earth's surface, or to learn about volcanoes. They answer questions in order to reinforce what they have learned.	Computer Student Sheets Science Journal	81
Investigate Shaking and Quaking	2-ESS1C, ETS1A, (ELA) RI.2.1, RI.2.3, RI.2.4, RI.2.5, RI.2.7, RF.2.4	Students read about earthquakes. They build a building in order to investigate this. They answer questions in order to reinforce what they have learned.	See Materials List or Activity Directions Page	104
Diagram I Lava Volcanoes!	2-ESS1C, ETS1A, (ELA) RI.2.1, RI.2.3, RI.2.4, RI.2.5, RI.2.7, RF.2.4	Students read about volcanoes. They color and label a diagram of a volcano and answer questions in order to reinforce what they have learned.	Student Sheets Colored Pencils Scissors Glue	134
Read Changes in the Parks	2-ESS1C, (ELA) RI.2.1, RI.2.3, RI.2.4, RI.2.5, RI.2.7, RF.2.4	Students read about forces of erosion in the US National Parks. They answer questions in order to reinforce what they have learned.	Student Sheets Science Journal	166
Model Moving Plates	2-ESS1C, ETS1A, (ELA) RI.2.1, RI.2.3, RI.2.4, RI.2.5, RI.2.7, RF.2.4	Students read about plate tectonics and put together a model of Earth's plates. They answer questions in order to reinforce what they have learned.	Student sheets Scissors Glue	205
Explore Where Did the Rock Go?	2-ESS1C, ETS1A, (ELA) RI.2.1, RI.2.3, RI.2.4, RI.2.5, RI.2.7, RF.2.4	Students read about and explore erosion. They answer questions in order to reinforce what they have learned.	See Materials List or Activity Directions Page	235
Sort Slow or Fast?	2-ESS1C, (ELA) RI.2.1, RI.2.3, RI.2.4, RI.2.5, RI.2.7, RF.2.4	Students read about slow and fast changes to the Earth's surface. They sort pictures into categories of slow and fast changes. They then answer questions in order to reinforce what they have learned.	Student Sheets Scissors Glue	291
Answer Key				325

History of Earth

Science Stations

Next Generations Science Standards are written to be "Three Dimensional." The following section explains how this set of science stations addresses the three dimensions of Performance Expectation, Disciplinary Core Idea, and Science and Engineering Practices/Crosscutting Concepts.

In Second Grade, students are expected to demonstrate understanding in the following area:

- 2-ESS1-H. Use information from several sources to provide evidence that Earth events can occur quickly or slowly.

This correlates with the DCI 2-ESS1C, which states:

- Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe.

All stations in this set meet the DCI, helping students gain an understanding of how forces of erosion and plate tectonics change the Earth in both fast and slow ways.

The Investigate, Diagram, Model, and Explore stations correlate with the Engineering Design DCI ETS1A, which states:

- A situation that people want to change or create can be approached as a problem to be solved through engineering. (K-2-ETS1-1)
- Asking questions, making observations, and gathering information are helpful in thinking about problems. (K-2-ETS1-1)
- Before beginning to design a solution, it is important to clearly understand the problem. (K-2-ETS1-1)

The Investigate, Diagram, Model, and Explore stations meet the Science and Engineering Practices:

Asking Questions and Defining Problems:

- Asking questions and defining problems in K-2 builds on prior experiences and progresses to simple descriptive questions.
- Ask questions based on observations to find more information about the natural and/or designed world(s). (K-2-ETS1-1)
- Define a simple problem that can be solved through the development of a new or improved object or tool. (K-2-ETS1-1)

Developing and Using Models: Modeling in K-2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, or storyboard) that represent concrete events or design solutions.

- Develop a simple model based on evidence to represent a proposed object or tool. (K-2-ETS1-2)

Analyzing and Interpreting Data: Analyzing data in K-2 builds on prior experiences and progresses to collecting, recording, and sharing observations.

- Analyze data from tests of an object or tool to determine if it works as intended. (K-2-ETS1-3)

Teacher Notes

Science Stations Overview

Watch a Video

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

Play a Video Game

Students play an online video game and answer questions about the experience. You have the option of the included worksheet with the questions or use task cards and have 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.

Draw a Diagram

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

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 the included worksheet with the questions or use task cards and have 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 the included worksheet with the questions or use task cards and have students respond in their science journals.

Explore

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

Sort

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

Materials Checklist

History of Earth

Use the following checklist to make sure you have all the materials for your stations.

Watch a Video

- ☐ Computer / Device
- ☐ Directions Card
- ☐ Worksheet
- ☐ Task Cards
- ☐ Science Journal

Read a Passage

- ☐ Reading Passage
- ☐ Student Response Sheet
- ☐ Task Cards
- ☐ Science Journal

Create a Model

- ☐ Directions Cards
- ☐ Student Sheet
- ☐ Task Cards
- ☐ Science Journal
- ☐ Glue

Explore

- ☐ Directions Card
- ☐ Worksheet
- ☐ Response Sheet
- ☐ Task Cards
- ☐ Science Journal
- ☐ Eye droppers
- ☐ Water
- ☐ 1/2 Sugar cubes
- ☐ Plate or tray (to catch the sugar water)

Sort

- ☐ Directions Card
- ☐ Sort Cards
- ☐ Scissors
- ☐ Glue
- ☐ Response Sheet
- ☐ Task Cards
- ☐ Science Journal

Investigate

- ☐ Student Instructions
- ☐ Response Sheet
- ☐ Task Cards
- ☐ Science Journal
- ☐ Heavy brown paper (cardstock, construction paper)
- ☐ Wooden building blocks
- ☐ Ruler

Draw a Diagram

- ☐ Student Instructions
- ☐ Response Sheet
- ☐ Task Cards
- ☐ Science Journal
- ☐ Colored Pencils

Table of Contents

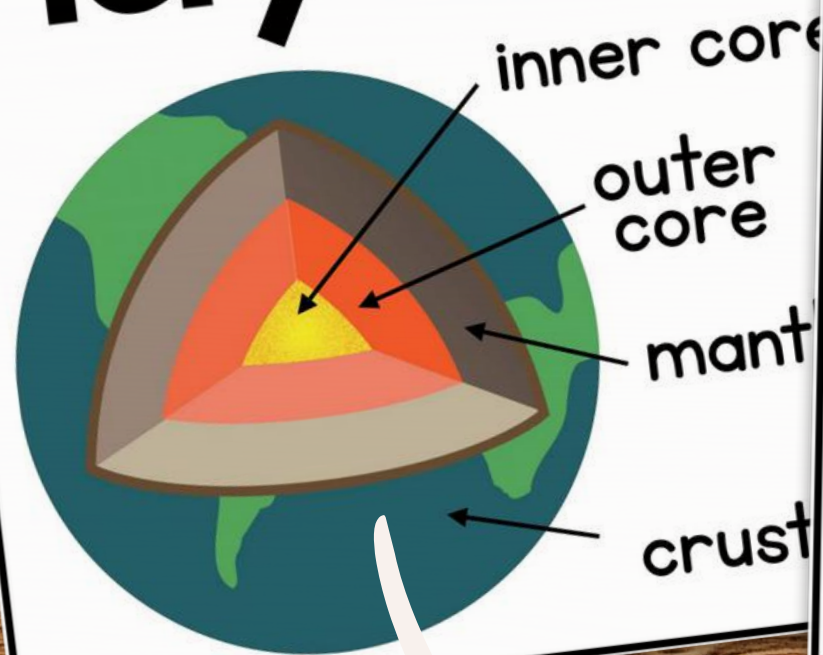
Science Station Overview

Materials Checklist

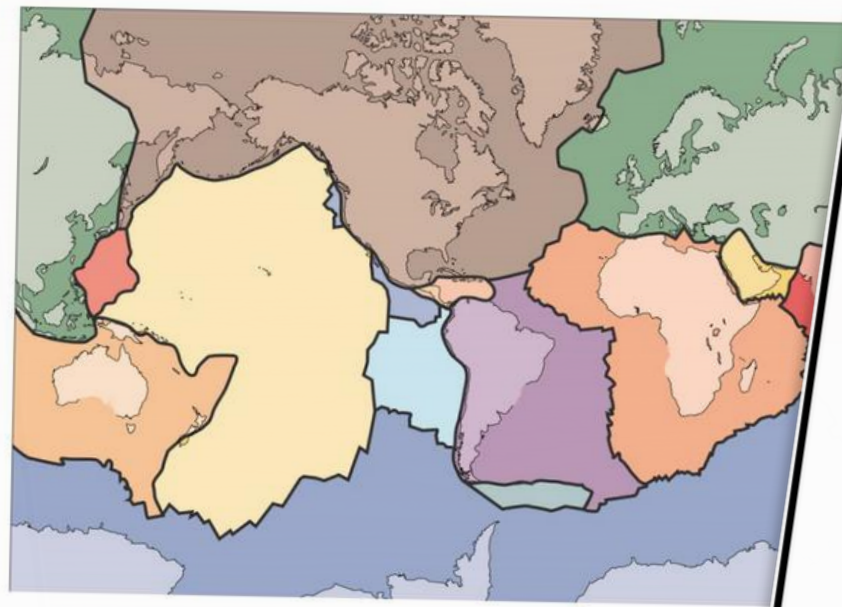
Science Stations

BIG IDEA POSTERS

The Earth
is made of
layers.

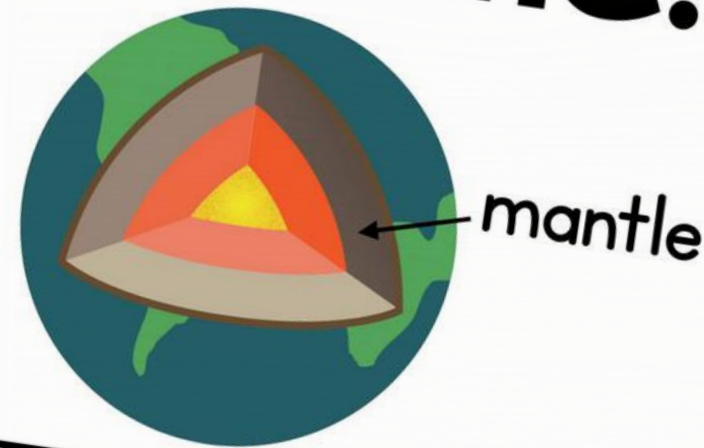


The **crust**

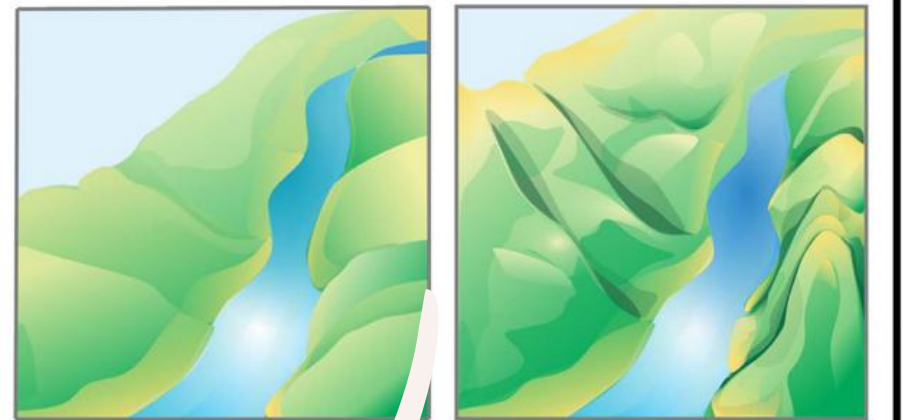


is broke
into **plates**

The Earth's
plates float
on the
mantle.



The Earth
is **always
changing.**



**BIG IDEA POSTERS THAT
EXPLAIN THE KEY CONCEPTS.**

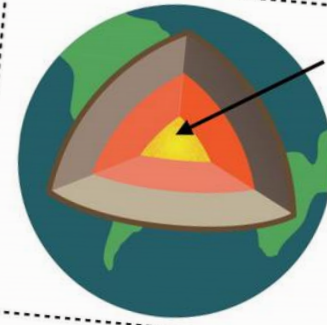
inner core

inner layer of the Earth

**cinder cone
volcano**

volcano with a cone
that does not get very
tall

**VOCABULARY CARDS
WITHOUT PICTURE**



inner core

inner layer
of the Earth



magma

melted rock
under the
Earth's
surface



fault

where the
rocks break
along the
plane
boundary



erosion

the moving
away of the
soil or rocks
by water,
wind, and ice

**VOCABULARY
CARDSWITH PICTURE**

WATCH STATION

STUDENTS WATCH A VIDEO IN ORDER TO LEARN ABOUT VOLCANOES, OR TO LEARN ABOUT EARTHQUAKES. THEY ANSWER QUESTIONS IN ORDER TO REINFORCE WHAT THEY HAVE LEARNED.

This was a great resource to supplement instruction.
- Laura S.

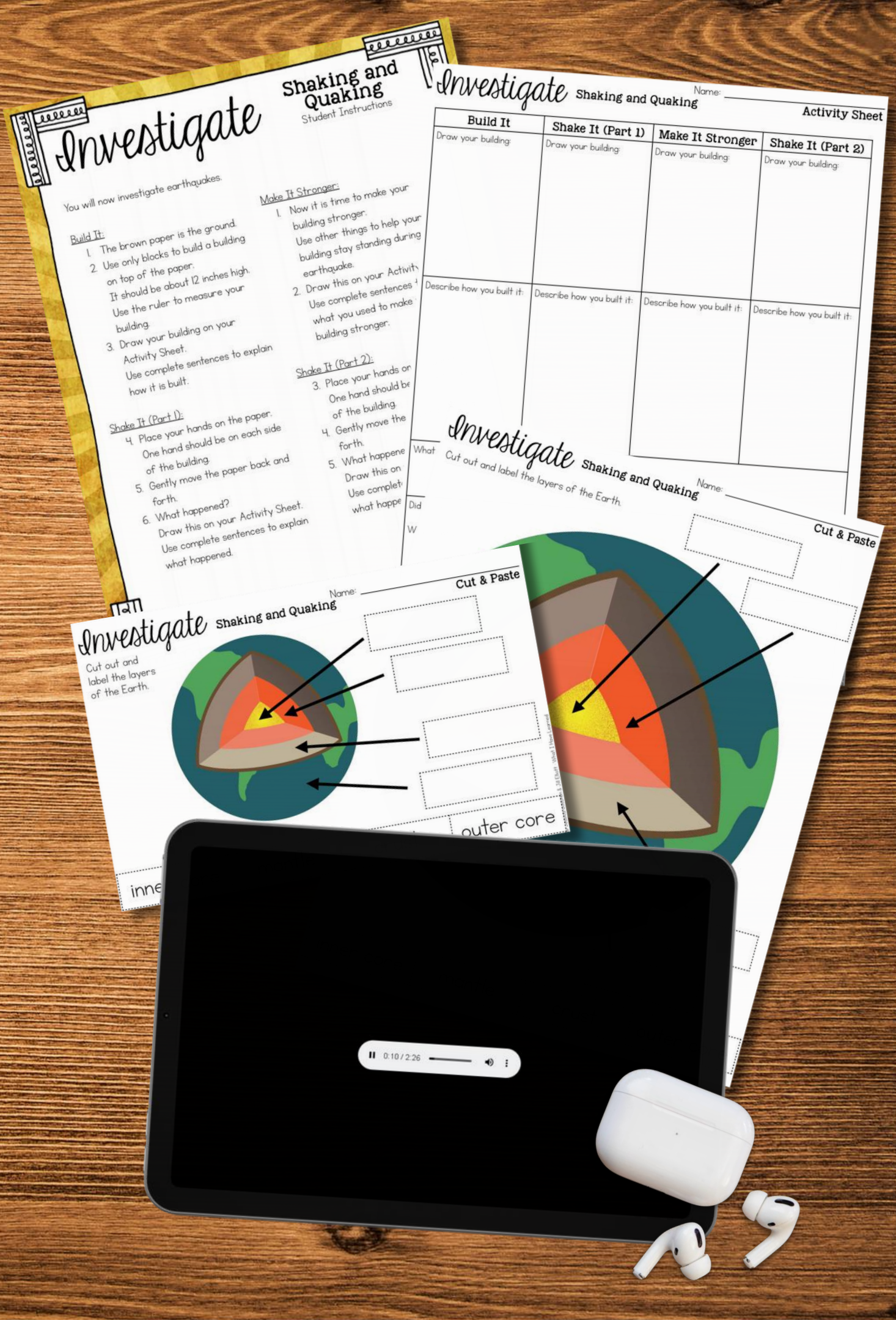


PLAY STATION

STUDENTS PLAY A VIDEO GAME, A BOARD GAME, A CROSSWORD PUZZLE, OR WORD SEARCH AND LEARN ABOUT HOW THE EARTH CHANGES. STUDENTS ANSWER QUESTIONS TO REINFORCE NEW LEARNING.

“ Super hands on,
engaging lessons
for exploration of
concepts!
- Julie S. ”





INVESTIGATE STATION

STUDENTS READ ABOUT EARTHQUAKES. THEY BUILD A BUILDING IN ORDER TO INVESTIGATE THIS. THEY ANSWER QUESTIONS IN ORDER TO REINFORCE WHAT THEY HAVE LEARNED.

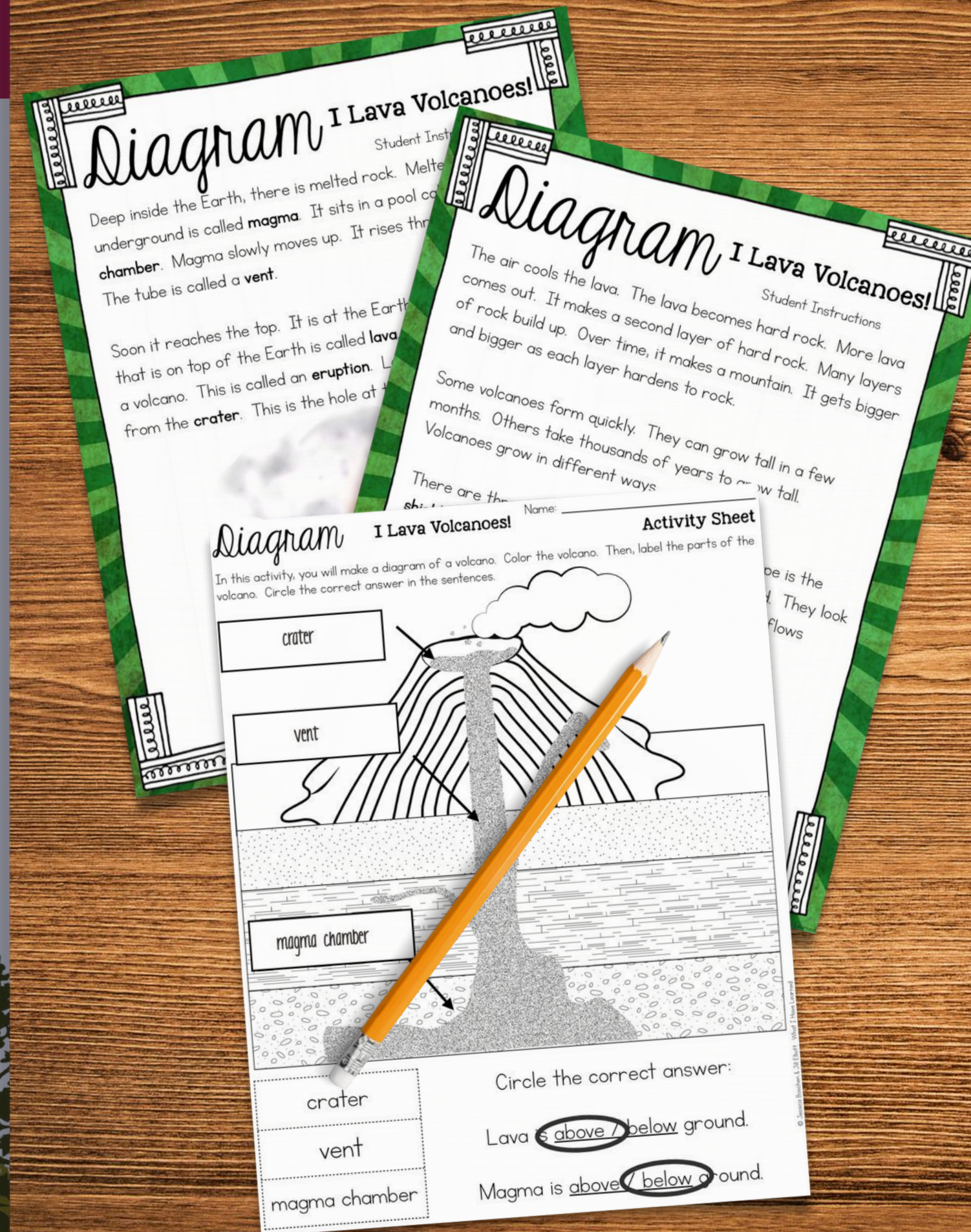
A great
supplement to our
science book!
- Kristine W.



DIAGRAM STATION

**STUDENTS READ ABOUT VOLCANOES.
STUDENTS COLOR AND LABEL A
DIAGRAM OF A VOLCANO AND ANSWER
QUESTIONS IN ORDER TO REINFORCE
WHAT THEY HAVE LEARNED.**

“This is an excellent
and highly
engaging resource!”
- Renee B.



READ STATION

STUDENTS READ ABOUT FORCES OF EROSION IN THE U.S. NATIONAL PARKS. THEY ANSWER QUESTIONS IN ORDER TO REINFORCE WHAT THEY HAVE LEARNED.

“ I loved using this resource with my students!
- Shannon J. ”



MODEL STATION

STUDENTS READ ABOUT PLATE TECTONICS AND PUT TOGETHER A MODEL OF EARTH'S PLATES. THEY ANSWER QUESTIONS IN ORDER TO REINFORCE WHAT THEY HAVE LEARNED.

“My students enjoyed the packet.”
- Depompo M.



EXPLORE STATION

STUDENTS READ ABOUT AND EXPLORE EROSION. THEY ANSWER QUESTIONS IN ORDER TO REINFORCE WHAT THEY HAVE LEARNED.

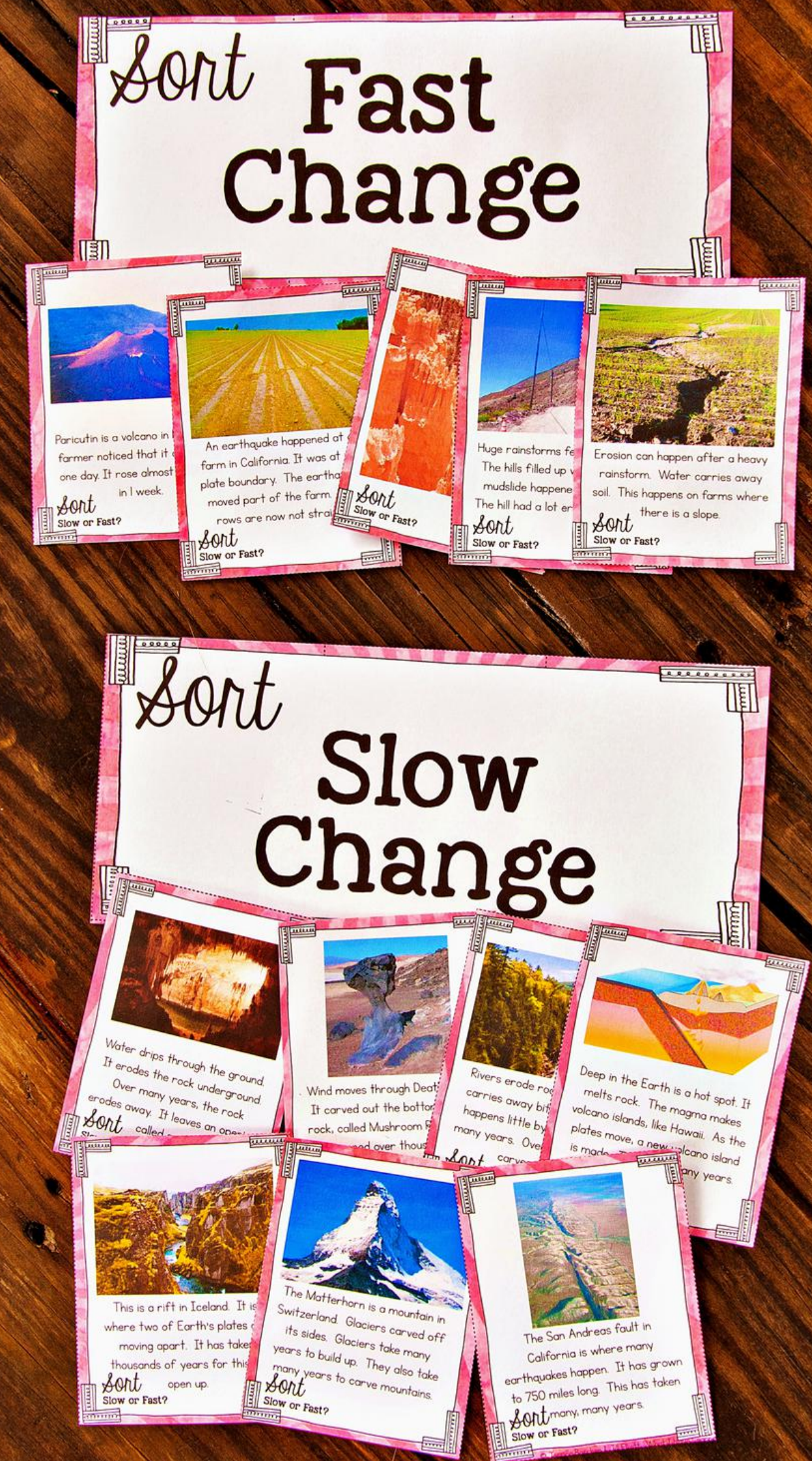
“Great resource for integrated units.
- Schritta D.”



SORT STATION

STUDENTS READ ABOUT SLOW AND FAST CHANGES TO THE EARTH'S SURFACE. THEY SORT PICTURES INTO CATEGORIES OF SLOW AND FAST CHANGES. THEY THEN ANSWER QUESTIONS IN ORDER TO REINFORCE WHAT THEY HAVE LEARNED.

“ This was a great way for my students to determine if the changes to our earth were fast or slow. ”
- Leila H.



SLOW AND FAST CHANGES 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.



DIGITAL VERSIONS

All activities have the same basic components:

- ★ Student Directions
- ★ Short Answer Worksheet
- ★ Fill-in-the-Blank Worksheet
- ★ Cut & Paste Worksheet
- ★ Short Answer Task Cards
- ★ Multiple Choice Task Cards

Some activities have more reading to build background knowledge and additional worksheets or activity sheets to help organize the new information.

- ✓ Google Forms and/or
- ✓ Google Slides for every station
- ✓ Videos
- ✓ Video Games
- ✓ Digital Crossword Puzzles & Word Searches

Answer keys provided

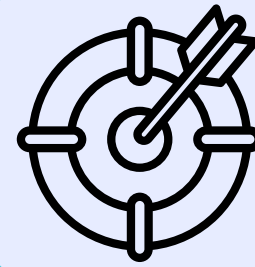
**NOT ALL VERSIONS OF THE PAGES ARE
DISPLAYED ON THE FOLLOWING PAGES,
BUT ALL ARE IN EACH RESOURCE**

YOU WILL LOVE THIS BECAUSE



Covers Big Science Ideas in Kid-Friendly Ways

Students design, build, and test—connecting NGSS concepts to real-world STEM problem solving.



Aligned to NGSS Standards

Supports 2-ESS1-1, ETS1.A-C, and builds vocabulary, critical thinking, and model-based reasoning.



Differentiation Done for You

Leveled text, audio support, and multiple response types mean every student can succeed.

TEACHERS LOVE IT!



"Wow! What a comprehensive unit! There are so many things to choose from. The passages and labs kept my students busy for a couple of weeks. They love anything hands-on in science and this was perfect."

Angela B.



This is a fantastic product. There are so many engaging activities. Some of the activities required a bit prep/materials. If I still taught Science I would buy the entire year's bundle!

Ashley Gusa



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.



What I have **LEARNED**