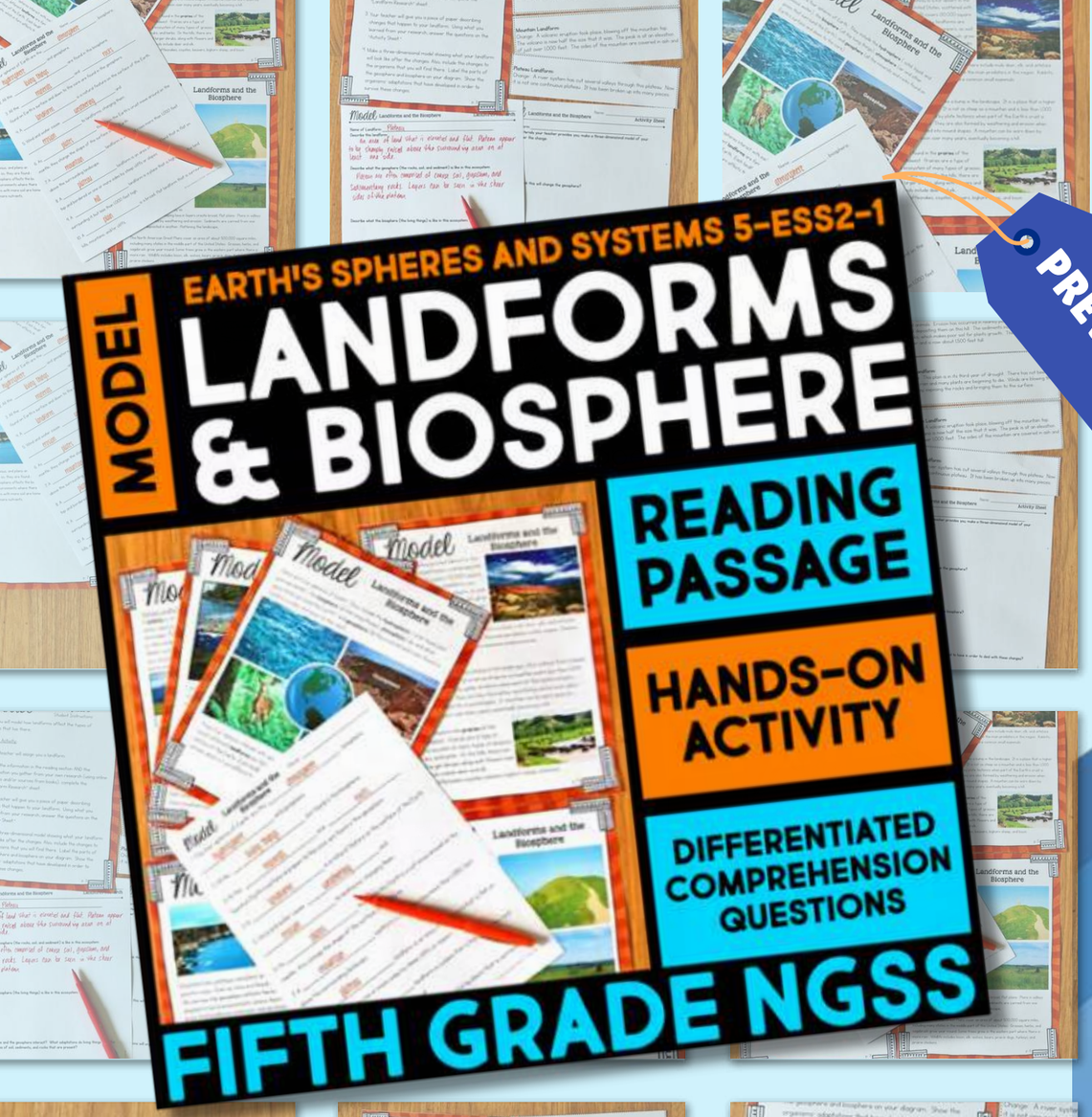


Explore Landforms Through Hands-On Modeling!

5TH GRADE

MODEL LANDFORMS & BIOSPHERE

EARTH'S SPHERES

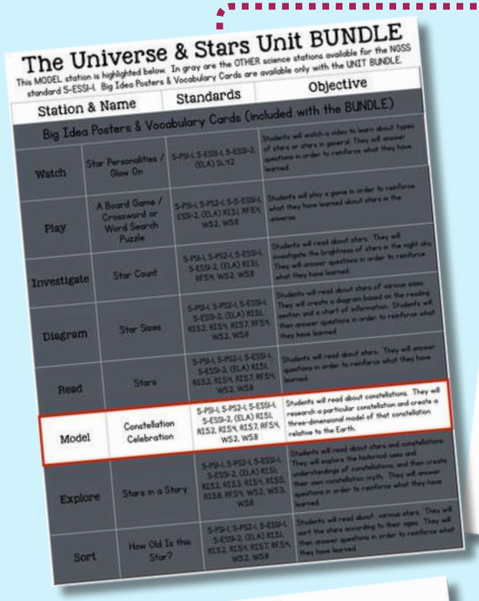
KEEP SCROLLING TO SEE WHAT'S INSIDE!



ACTIVITY OVERVIEW



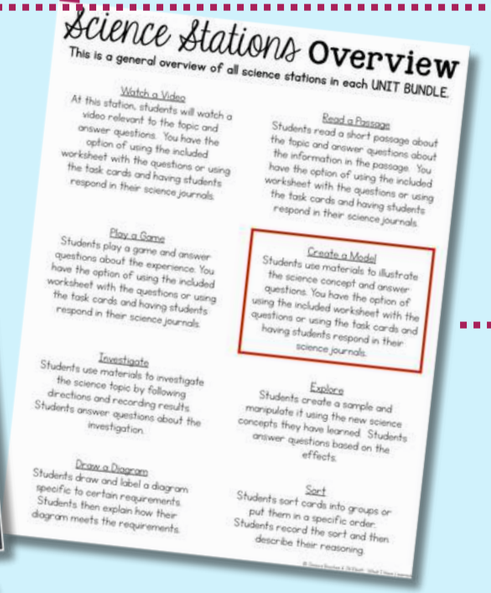
- Your students will read a passage.
- Then your students will create a model.
- Lastly, they will answer differentiated questions.



The Universe & Stars Unit BUNDLE

This MODEL station is highlighted below. In gray are the OTHER science stations available for the NGSS standard 5-ESS1-1. 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	Star Personalities / Glow On	5-PSI-1, 5-ESS1-1, 5-ESS1-2 (ELA) SL.4.2	Students will watch a video to learn about types of stars or stars in general. They will answer questions in order to reinforce what they have learned.
Play	A Board Game / Crossword or Word Search Puzzle	5-PSI-1, 5-PS2-1, 5-5-ESS1-1, ESS1-2, (ELA) RI.5.1, RF.5.4, W5.2, W5.8	Students will play a game in order to reinforce what they have learned about stars or the universe.
Investigate	Star Count	5-PSI-1, 5-PS2-1, 5-ESS1-1, 5-ESS1-2, (ELA) RI.5.1, RF.5.4, W5.2, W5.8	Students will read about stars. They will investigate the brightness of stars in the night sky. They will answer questions in order to reinforce what they have learned.
Diagram	Star Sizes	5-PSI-1, 5-PS2-1, 5-ESS1-1, 5-ESS1-2, (ELA) RI.5.1, RI.5.2, RI.5.9, RI.5.7, RF.5.4, W5.2, W5.8	Students will read about stars of various sizes. They will create a diagram based on the reading. They will write a short of information. Students will then answer questions in order to reinforce what they have learned.
Read	Stars	5-PSI-1, 5-PS2-1, 5-ESS1-1, 5-ESS1-2, (ELA) RI.5.1, RI.5.2, RI.5.4, RI.5.7, RF.5.4, W5.2, W5.8	Students will read about stars. They will answer questions in order to reinforce what they have learned.
Model	Constellation Celebration	5-PSI-1, 5-PS2-1, 5-ESS1-1, 5-ESS1-2, (ELA) RI.5.1, RI.5.2, RI.5.4, RI.5.7, RF.5.4, W5.2, W5.8	Students will read about constellations. They will research a particular constellation and create a three-dimensional model of that constellation relative to the Earth.
Explore	Stars in a Story	5-PSI-1, 5-PS2-1, 5-ESS1-1, 5-ESS1-2, (ELA) RI.5.1, RI.5.2, RI.5.3, RI.5.4, RI.5.8, RF.5.4, W5.2, W5.3, W5.8	Students will read about stars and constellations. They will explore the historical uses and understandings of constellations, and then create their own constellation myth. They will answer questions in order to reinforce what they have learned.
Sort	How Old Is this Star?	5-PSI-1, 5-PS2-1, 5-ESS1-1, 5-ESS1-2, (ELA) RI.5.1, RI.5.2, RI.5.4, RI.5.7, RF.5.4, W5.2, W5.8	Students will read about various stars. They will sort the stars according to their ages. 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 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.

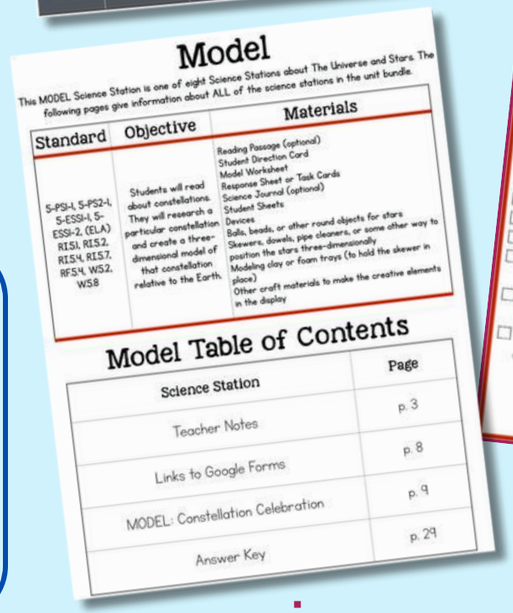
Create a Model
Students use materials to illustrate the science concept and answer questions. You have the option of using the included worksheet with the questions or using the task cards and having students respond in their science journals.

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.



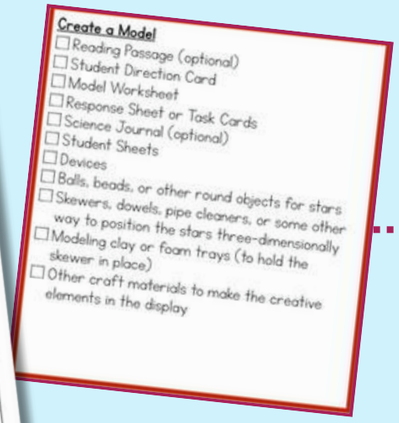
Model

This MODEL Science Station is one of eight Science Stations about The Universe and Stars. The following pages give information about ALL of the science stations in the unit bundle.

Standard	Objective	Materials
5-PSI-1, 5-PS2-1, 5-ESS1-1, 5-ESS1-2, (ELA) RI.5.1, RI.5.2, RI.5.4, RI.5.7, RF.5.4, W5.2, W5.8	Students will read about constellations. They will research a particular constellation and create a three-dimensional model of that constellation relative to the Earth.	Reading Passage (optional) Student Direction Card Model Worksheet Response Sheet or Task Cards Science Journal (optional) Student Sheets Devices Balls, beads, or other round objects for stars Skewers, dowels, pipe cleaners, or some other way to position the stars three-dimensionally Modeling clay or foam trays (to hold the skewer in place) Other craft materials to make the creative elements in the display

Model Table of Contents

Science Station	Page
Teacher Notes	p. 3
Links to Google Forms	p. 8
MODEL: Constellation Celebration	p. 9
Answer Key	p. 29



Create a Model

- ☐ Reading Passage (optional)
- ☐ Student Direction Card
- ☐ Model Worksheet
- ☐ Response Sheet or Task Cards
- ☐ Science Journal (optional)
- ☐ Student Sheets
- ☐ Devices
- ☐ Balls, beads, or other round objects for stars
- ☐ Skewers, dowels, pipe cleaners, or some other way to position the stars three-dimensionally
- ☐ Modeling clay or foam trays (to hold the skewer in place)
- ☐ Other craft materials to make the creative elements in the display

Table of Contents

Science Station Overview

Materials Checklist

Table of Contents / Teacher's Notes

WHAT'S INCLUDED
MODEL SCIENCE STATION

- Teacher Notes
- **Student Text** in two formats
- Student **Instructions**
- **Activity Sheets** for observation
- Differentiated **Questions**
- Answer Key
- Google Form™
- Google Slides™

ADD TO CART



MODEL: READING PASSAGE

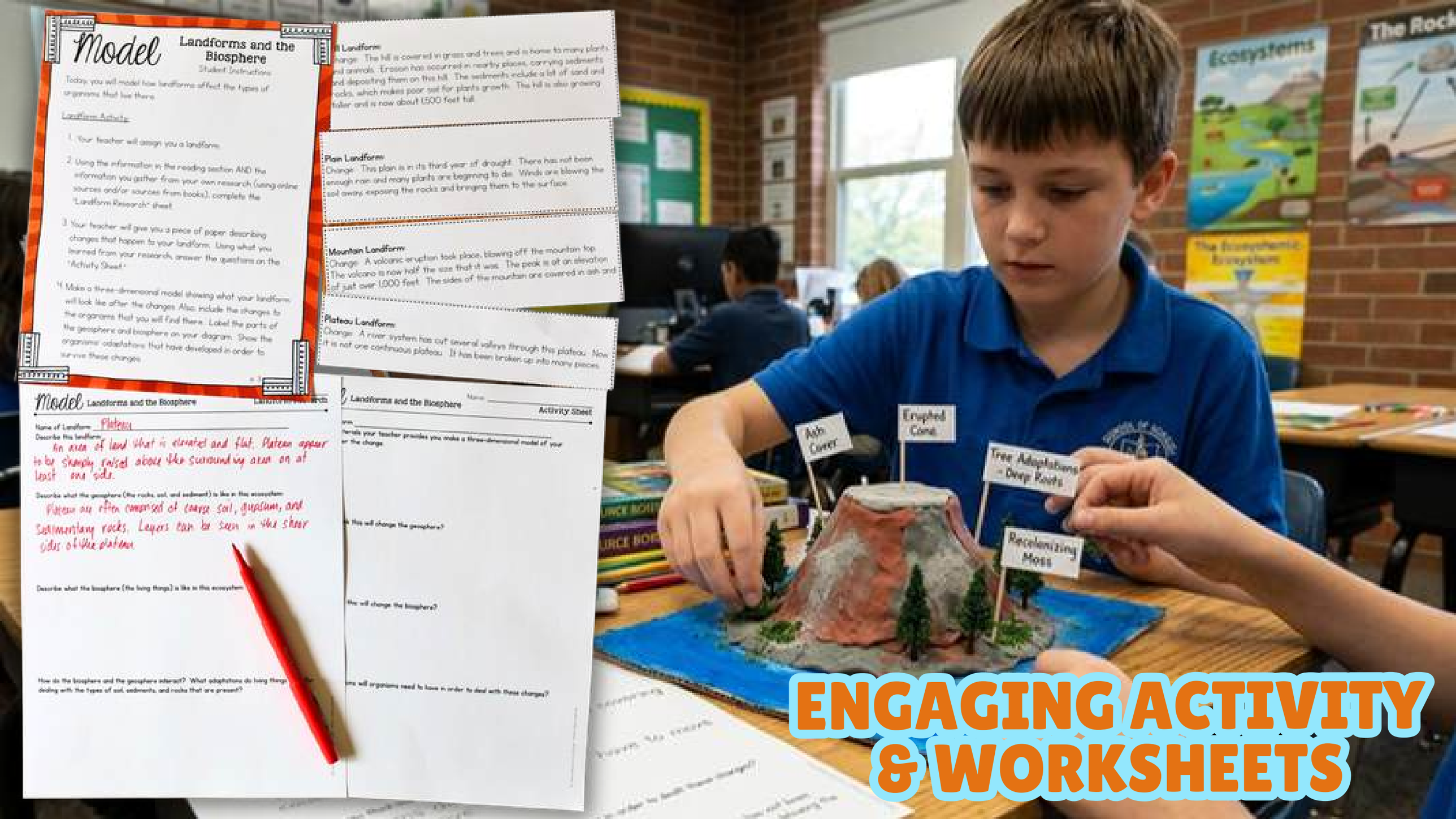


7 PAGES

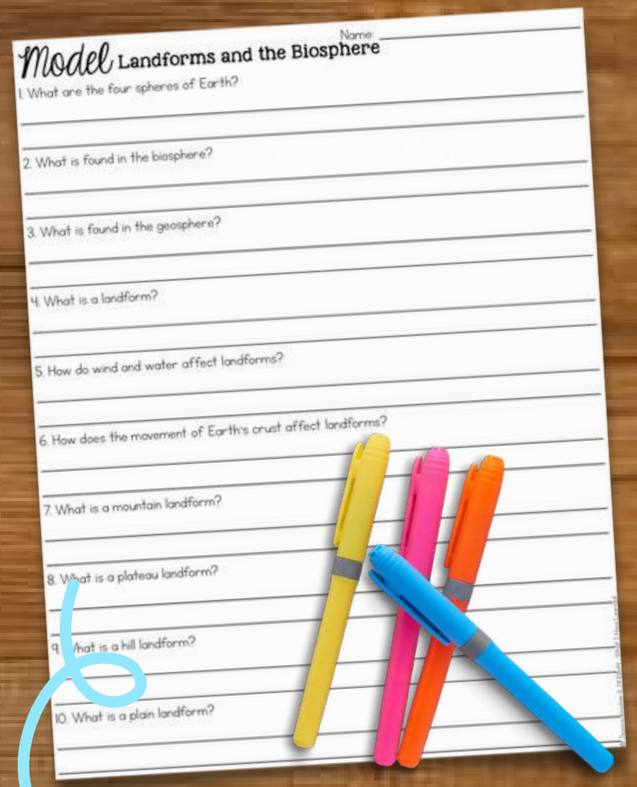
READING PASSAGE IN TWO FORMATS



4 PAGES


Model
Landforms and the Biosphere
Student Instructions
Today you will model how landforms affect the types of organisms that live there.
Landform Activity
1. Your teacher will assign you a landform.
2. Using the information in the reading section AND the information you gather from your own research (using online sources and/or sources from books), complete the "Landform Research" sheet.
3. Your teacher will give you a piece of paper describing changes that happen to your landform. Using what you learned from your research, answer the questions on the "Activity Sheet."
4. Make a three-dimensional model showing what your landform will look like after the changes. Also include the changes to the organisms that you will find there. Label the parts of the geosphere and biosphere on your diagram. Show the organisms' adaptations that have developed in order to survive these changes.
Landform
Change: The hill is covered in grass and trees and is home to many plants and animals. Erosion has occurred in nearby places, carrying sediments and depositing them on this hill. The sediments include a lot of sand and rocks, which makes poor soil for plants growth. The hill is also growing taller and is now about 1,500 feet tall.
Plain Landform
Change: This plain is in its third year of drought. There has not been enough rain and many plants are beginning to die. Winds are blowing the soil away, exposing the rocks and bringing them to the surface.
Mountain Landform
Change: A volcanic eruption took place, blowing off the mountain top. The volcano is now half the size that it was. The peak is at an elevation of just over 1,000 feet. The sides of the mountain are covered in ash and
Plateau Landform
Change: A river system has cut several valleys through this plateau. Now it is not one continuous plateau. It has been broken up into many pieces.
Model Landforms and the Biosphere
Name of Landform: Plateau
Describe this landform: An area of land that is elevated and flat. Plateau appear to be steeply raised above the surrounding area on at least one side.
Describe what the geosphere (the rocks, soil, and sediment) is like in this ecosystem: Plateau are often comprised of coarse soil, gypsum, and Sedimentary rocks. Layers can be seen in the sheer sides of the plateau.
Describe what the biosphere (the living things) is like in this ecosystem:
How do the biosphere and the geosphere interact? What adaptations do living things develop with the types of soil, sediments, and rocks that are present?
Landforms and the Biosphere
Name:
Activity Sheet
Ash Cover
Erupted Cone
Tree Adaptations - Deep Roots
Recolonizing Moss
Ecosystems
The Rock
The Ecosystem: Ecosystem
ENGAGING ACTIVITY & WORKSHEETS

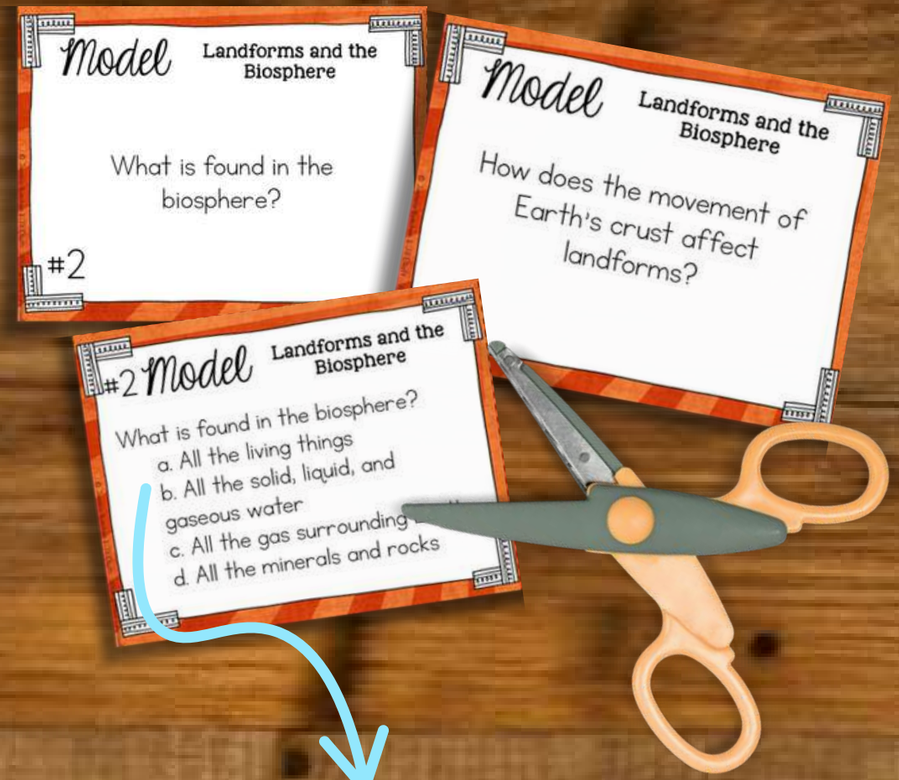
DIFFERENTIATED QUESTIONS



SHORT ANSWER



FILL-IN-THE BLANK



TASK CARDS: SHORT ANSWER & MULTIPLE CHOICE

Model

Landforms and the Biosphere



dforms form in two major ways. The first way is by natural f
rface of the Earth. Wind, water, and other forces act on roc
part into **sediments**. This is called **weathering**. Wind, water,
carry away these sediments in a process called **erosion**.

Plate tectonics is another natural force that shapes the
theory of plate tectonics states that the surface of t
These plates are floating on a molten layer called t
toward, away from, and past each other, they sh

untain Landform

tallest landforms are **mountains**. Cove
are formed when tectonic plates m
ther, they push the land up at l
ountains are formed by volc

Model

Landforms and the Biosphere

There are four spheres of Earth. They include the **hydrosphere** (solid, liquid, and gaseous water), the **biosphere** (all the living things), **atmosphere** (air and other gases that surround the Earth), and **geosphere** (all the minerals and rocks found on Earth's surface and down to the core).



These four spheres interact with each other to shape the Earth we live on. As a result, different **landforms** are formed. A landform is a natural feature on the surface of the Earth. Each landform experiences unique conditions that affect climate, which in turn affects the kinds of organisms that live there.

p. 1

Model Constellation Celebration Name: _____

1. What is a constellation?
A constellation is a pattern of stars in the sky.
2. How were constellations part of ancient Greek culture?
Ancient Greeks told stories about gods and heroes using the patterns of the constellations in the night sky.
3. What did sailors use star maps for?
Sailors used star maps to help navigate their ships through the oceans.
4. How do modern scientists use star maps?
Modern scientists use star maps to find the specific region in space that they are studying.
5. What
A star
massive sphere of plasma, made mostly of heli
6. Why
Stars ar
rs so bright and hot?
bright and hot because they are constantly ex
7. What is
A nuclear
ear fusion reaction?
n reaction happens when two atoms collid
forming a
atom and releasing a huge amount of en
8. What is th
ydrogen is
for the nuclear fusion reactions in a star?
for the nuclear fusion reactions in a
9. What is a su
A supernova
ova?
e most powerful
10. What is a gal
A galaxy is a
of stars, du
11. Why do some star
Some stars in the night sky loo
look brighter t

Model

Landforms and the Biosphere

What are the four spheres of Earth?

#1

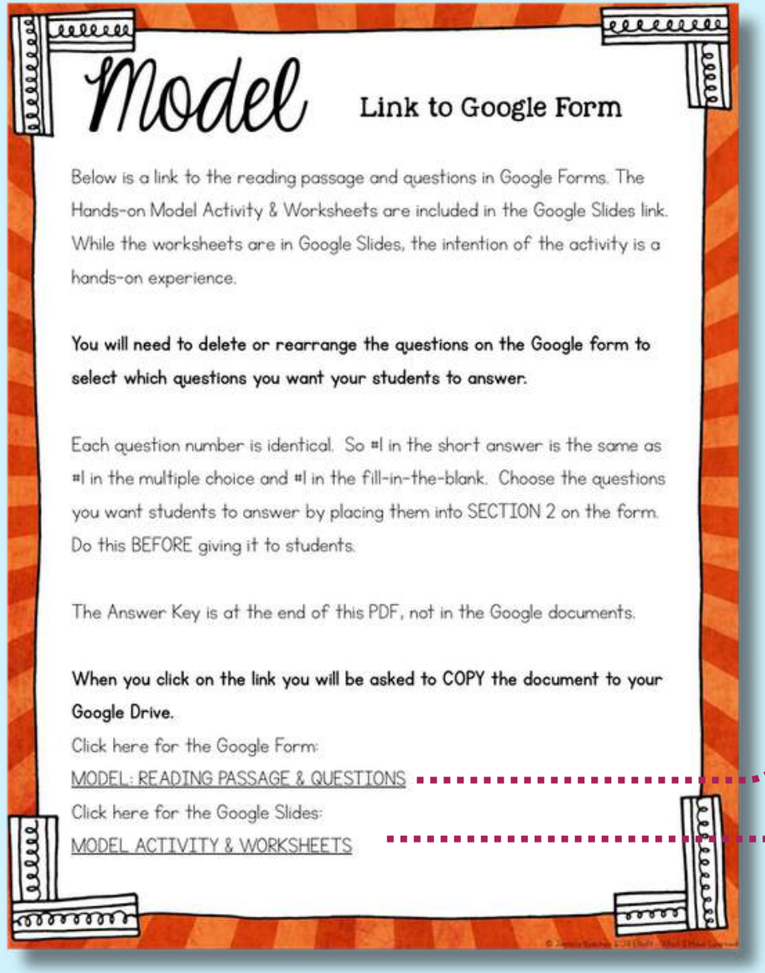
#5 Model

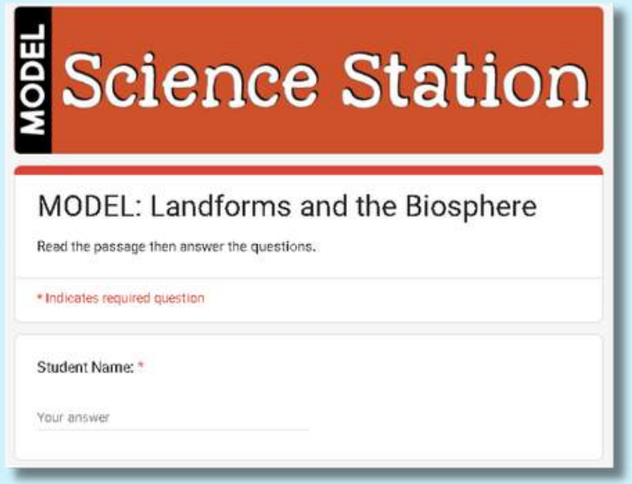
Landforms and the Biosphere

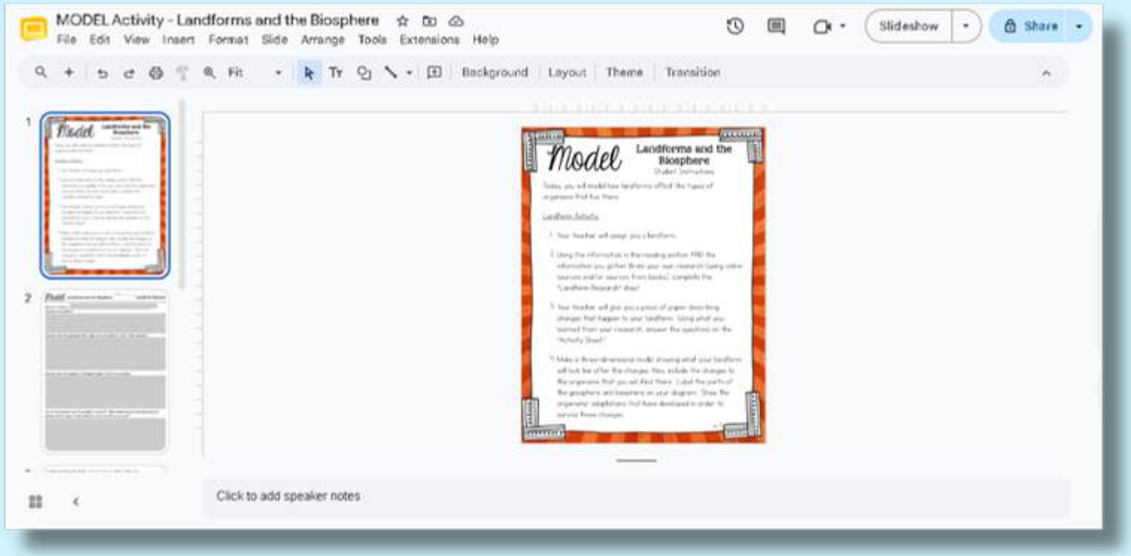
How do wind and water affect landforms?

a. As the plates of Earth's crusts move on the mantle, landforms are made.
b. They cause plants and animals to grow, which creates new landforms.
c. Weathering and erosion happ
landforms, changing them.
d. Extremely hot temperatures
landforms to fall apart.

DIGITAL VERSIONS





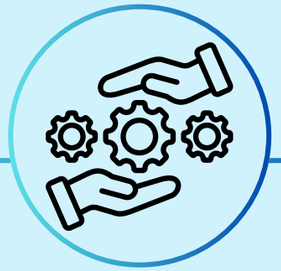


DIGITAL VERSIONS

- ✔ Google Sheet with Activity & Directions
- ✔ Google Form with Reading & Questions

Answer keys provided

YOU WILL LOVE THIS BECAUSE



Hands-On and Engaging Learning

Students stay actively engaged through hands-on modeling, research tasks, and creative exploration, making Earth's spheres concepts easier to understand.



Differentiated for All Learners

Multiple question formats allow teachers to easily adjust the activity for different ability levels and learning styles.



Teacher-Friendly Design

Includes notes, answer keys, and ready-to-use activities that reduce prep time while ensuring standards-based, engaging science instruction.

TEACHERS LOVE IT!

My students loved working with this lesson, easy to use with lots of engagement!

Karen S.

Thank you my kids loved using this it and it made planning easy

Hello Caffeine





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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