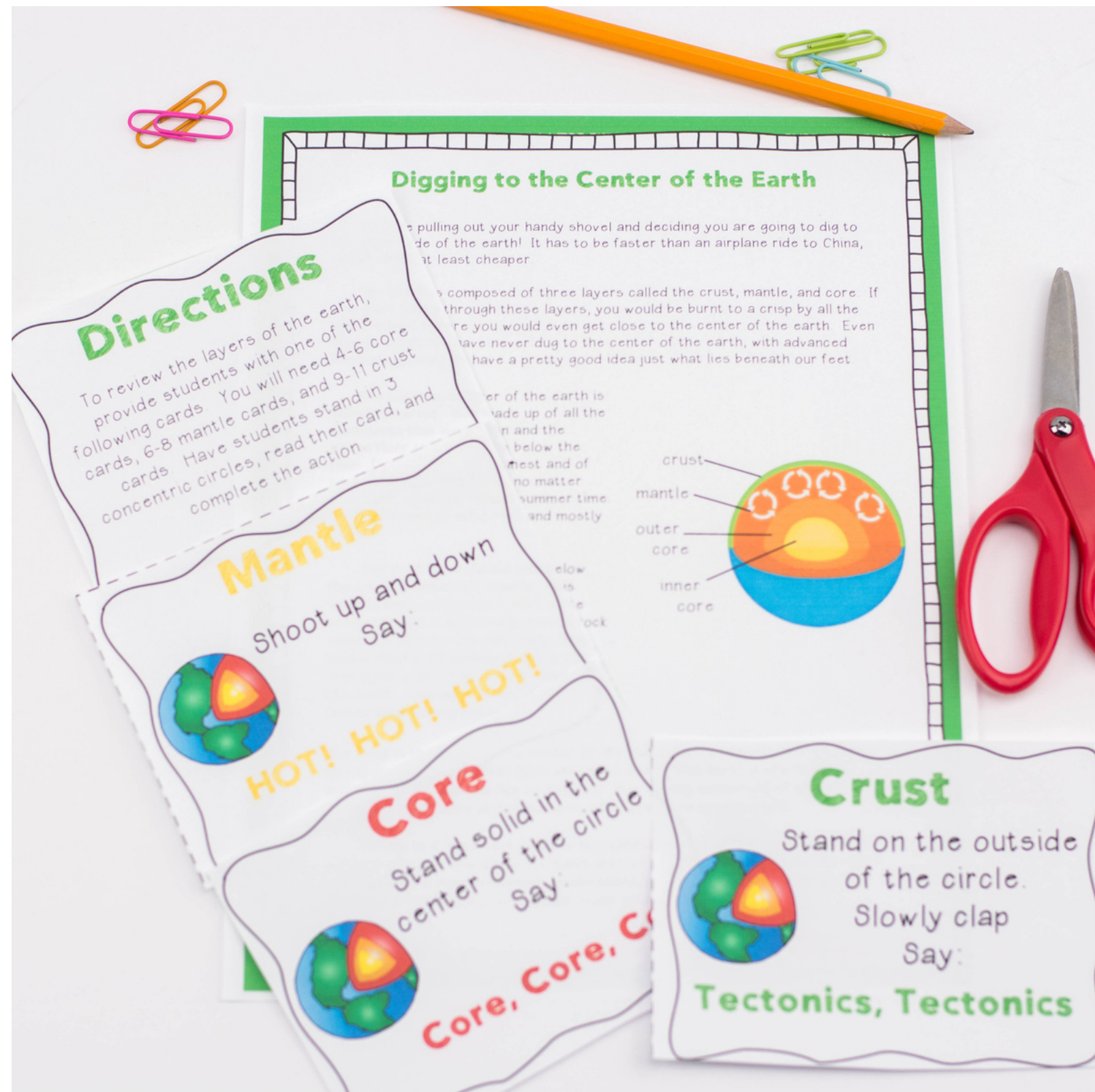


CONCEPTS COVERED



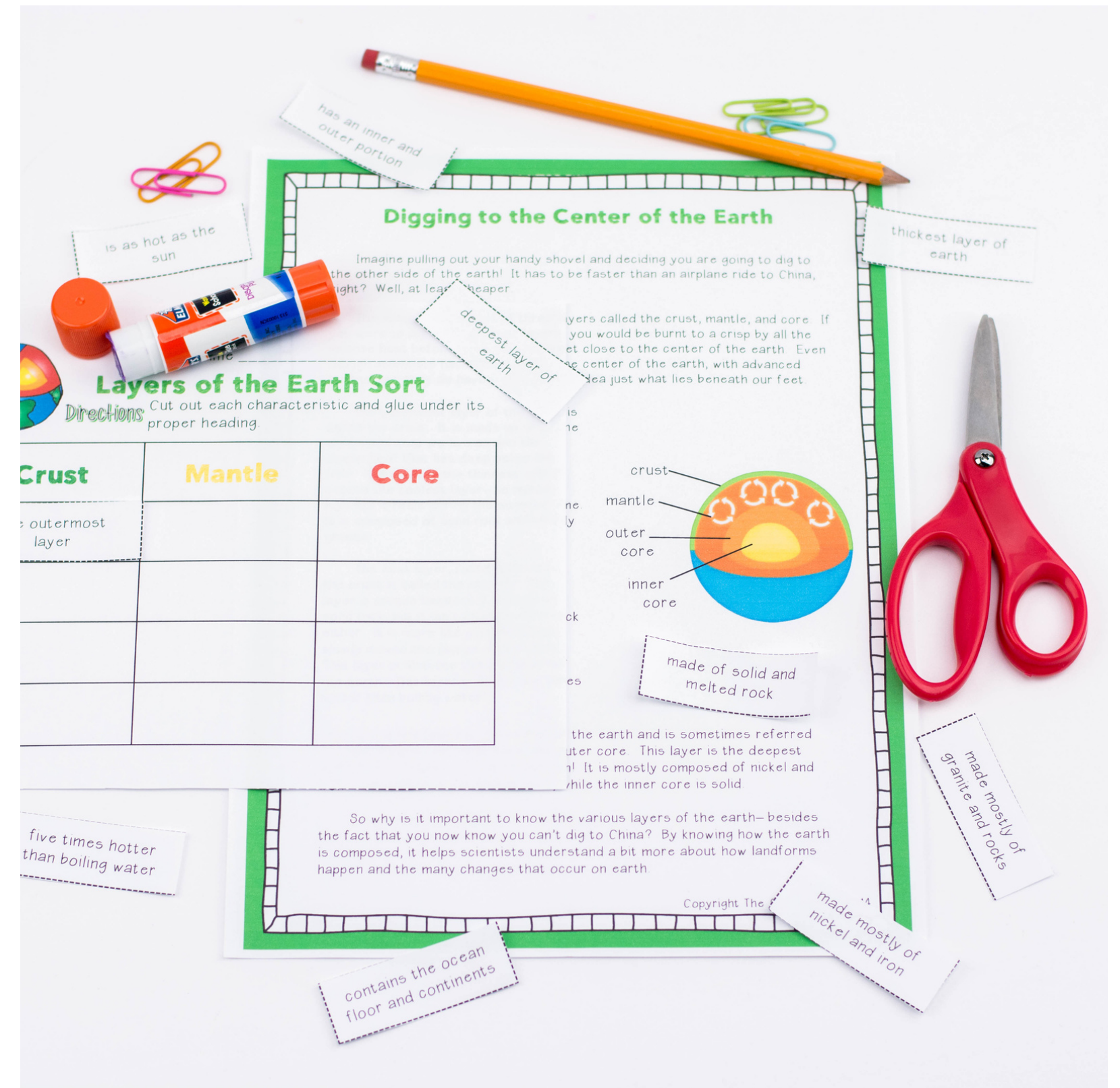
- THE THREE LAYERS OF THE EARTH – COMPOSITION AND PROPERTIES OF THE EARTH'S CORE, MANTLE, AND CRUST
- EARTHQUAKES – SEISMIC ACTIVITY, HOW EARTHQUAKES OCCUR, AND THEIR EFFECTS ON THE EARTH'S SURFACE
- VOLCANOES – VOLCANIC ERUPTIONS AND THE FORMATION OF VOLCANIC LANDFORMS
- WEATHERING AND EROSION – THE PROCESSES OF WEATHER AND EROSION AND THEIR ROLE IN SHAPING THE EARTH'S SURFACE
- DIFFERENTIATION BETWEEN CONSTRUCTIVE FORCES AND DESTRUCTIVE FORCES
- CAUSES OF LANDFORMS – IDENTIFYING THE VARIOUS FACTORS, SLOW AND FAST CHANGES, AND DESTRUCTIVE AND CONSTRUCTIVE FORCES THAT CONTRIBUTE TO THE FORMATION OF LANDFORMS
- FAST AND SLOW CHANGES – DIFFERENTIATING BETWEEN FAST AND SLOW CHANGES TO THE EARTH'S SURFACE
- CAUSE AND EFFECT RELATIONSHIPS BETWEEN NATURAL PHENOMENA AND THE RESULTING CHANGES TO THE EARTH'S SURFACE
- SCIENTIFIC PROCESS SKILLS THROUGH HANDS-ON INVESTIGATIONS, INCLUDING OBSERVATION, INFERENCE, DATA COLLECTION, AND ANALYSIS
- SCIENCE VOCABULARY RELATED TO EARTHQUAKES, VOLCANOES, EROSION, AND LANDFORMS

**GET STUDENTS EXCITED
ABOUT LEARNING**

WHY USE THIS?

Lots of Benefits

- THROUGH KINESTHETIC ACTIVITIES, SCIENCE LABS, AND EXPLORATION OF REAL-LIFE PHENOMENA LIKE EARTHQUAKES AND VOLCANOES, STUDENTS CAN BETTER VISUALIZE AND UNDERSTAND COMPLEX EARTH SCIENCE CONCEPTS IN THIS UNIT.
- IT PROVIDES COMPREHENSIVE SOLUTIONS TO ENGAGE STUDENTS, FACILITATE UNDERSTANDING, PROMOTE CRITICAL THINKING, AND STREAMLINE LESSON PLANNING.
- IT OFFERS A MIX OF COOPERATIVE LEARNING, ACTIVE LEARNING, ENRICHMENT, AND OTHER ACCOMMODATING OPPORTUNITIES SO THAT YOU CAN MEET YOUR STUDENTS' NEEDS.



**GET HIGH-QUALITY,
ENGAGING RESOURCES**

WHAT'S INCLUDED?



- ENGAGING, HIGH-QUALITY DETAILED LESSON PLANS
- HANDS-ON SCIENCE LABS AND INVESTIGATIONS
- KINESTHETIC ACTIVITIES
- SCIENCE CENTERS AND ROTATIONS
- FAST AND SLOW CHANGES WORKSHEETS, LAYERS OF THE EARTH WORKSHEETS, EARTH CHANGES WORKSHEETS, AND MORE!
- CAUSE AND EFFECT RELATIONSHIP PRACTICE
- LAYERS OF THE EARTH ROLE PLAY ACTIVITY
- ANSWER KEYS
- FLEXIBLE PRINTING OPTIONS - PRINTER FRIENDLY AND COLOR VERSIONS (FOR LAMINATION)

**TAKE YOUR WEEKENDS BACK
TO DO WHAT YOU LOVE**


PERFECT FOR:

- CENTERS
- SUPPLEMENTING YOUR CURRENT LESSONS
- WARM UP ACTIVITIES
- SMALL GROUPS
- TEACHER DEMONSTRATIONS
- WHOLE GROUP ACTIVITIES
- SUBSTITUTES
- REVIEW & PRACTICE
- WHOLE GROUP ACTIVITIES
- PARTNER WORK
- COOPERATIVE LEARNING
- INDIVIDUAL LEARNING
- HOMEWORK
- ENRICHMENT
- EARLY FINISHERS
- AND SO MUCH MORE!

**WITHOUT HAVING TO
SACRIFICE YOUR LESSON PLANS**

HOW IT WORKS

GET YOUR STUDENTS ACTIVELY INVOLVED WHEN YOU START THIS FAST AND SLOW CHANGES OF THE EARTH UNIT. STUDENTS WILL BEGIN BY EXPLORING THE LAYERS OF THE EARTH THEN THE FAST AND SLOW CHANGES, ALONG WITH THE CONSTRUCTIVE AND DECONSTRUCTIVE FORCES THAT ARE AT PLAY, ALL CAUSING CHANGES TO THE EARTH'S SURFACE AND CREATING EARTH'S LANDFORMS. AS STUDENTS WORK THROUGH THESE CONCEPTS, THEY WILL PAUSE TO GET A DEEPER LOOK AT VOLCANOES, EARTHQUAKES, AND OF COURSE, WEATHERING AND EROSION!




Layers of the Earth Sort

Directions: Cut out each characteristic and glue under its proper heading.

Crust	Mantle	Core

Catch Shifty Crust

Station One Directions




Look at the chart and maps provided.

They both provide information about all the places that Shifty Crust has visited lately. What patterns do you notice?

Answer the question in his case file.

Catch Shifty Crust

Station Two Directions



First read the article provided.

Very carefully bend the ruler. You do not want to break it, but rather want to see the way it vibrates when you apply a bit of pressure to it.

most layer of earth

is hot as the sun

is mostly of nickel and iron

contains the ocean and continents

thinnest layer of the earth

the outermost layer

slowly moves like putty

has an inner and outer portion

Copyright The Owl Teacher 2014

Copyright Tammy DeShaw, The Owl Teacher 2014

SAVE TIME PLANNING
WITH DETAILED ACTIVITIES

ADDITIONAL INFO

Catch Shifty Crust

Earthquake Discoveries Lab Teacher's Guide

Materials

*maps (provided)	*Clay
*chart (provided)	*File Folders
*2 medium aluminum pans	*student sheets
*plastic ruler	*2 grey bricks
*play sand	*soil

Directions

During this fun, interactive lab, students will be "detectives" exploring earthquakes through a fictional story.

I always rearrange my classroom during the week. One time I even moved the classroom. One time I even moved the desks. I then tell them that a suspect- Shifty Crust. I ask them to be detectives (I provide student sheets to glue on the inside and the cover of the folder).

Station 1- Provide students with one map of the world.

Station 2- Provide students with one chart (one for each student at the station) and one plastic ruler.


Station 3- Fill two medium size aluminum pans with soil. Then using a brick from the kitchen, press it up inside the pan. I have purchased windows on them to represent the building. The soil is thick to hold the building steady.

Station 4- Provide students with one rectangle ahead of time. It's important to keep it flat upon leaving the station for the next group.

Directions


To review the layers of the earth, provide students with one of the following cards. You will need 4-6 core cards, 6-8 mantle cards, and 9-11 crust cards. Have students stand in 3 concentric circles, read their card, and complete the action.

Crust




Stand on the outside of the circle.
Slowly clap
Say:
Tectonics, Tectonics

Core



Stand solid in the center of the circle
Say:
Core, Core, Core

Mantle



Shoot up and down
Say:
HOT! HOT! HOT!

HELP YOUR STUDENTS UNPACK THE LAYERS OF THE EARTH, THE FAST AND SLOW CHANGES, ALONG WITH THE CONSTRUCTIVE AND DECONSTRUCTIVE PROCESSES THAT SHAPE THE EARTH'S SURFACE AND CREATE THE EARTH'S LANDFORMS. ENGAGE WITH HIGH-QUALITY MATERIALS, KINESTHETIC ACTIVITIES, AND SCIENCE CENTERS AS YOU DIVE DEEP INTO VOLCANOES, EARTHQUAKES, AND WEATHERING AND EROSION.

BEST PRACTICES & RESEARCH BASED RESOURCES

LOVED BY TEACHERS



"This is an amazing packet. It is hands on and the best example I have found of changes to the earth. The kids LOVED the hard boiled egg experiment. If you are studying earthquakes, volcanoes and erosion this is a must!"

-Julia R



"Love these! I love how you have great experiments, passages and writing prompts for science. These resources make my job easier. We did a few experiments yesterday from this packet on weathering. My kids were so sad when science was over and we had to start another subject."

-Shannon C



"This resource has so much in it! The articles are easy read for my students with special needs. The station activities are wonderful. There is so much in this resource you will have a ton of items to choose from each year. "

-Jessica K

**ADD THIS RESOURCE TO
YOUR CART!**

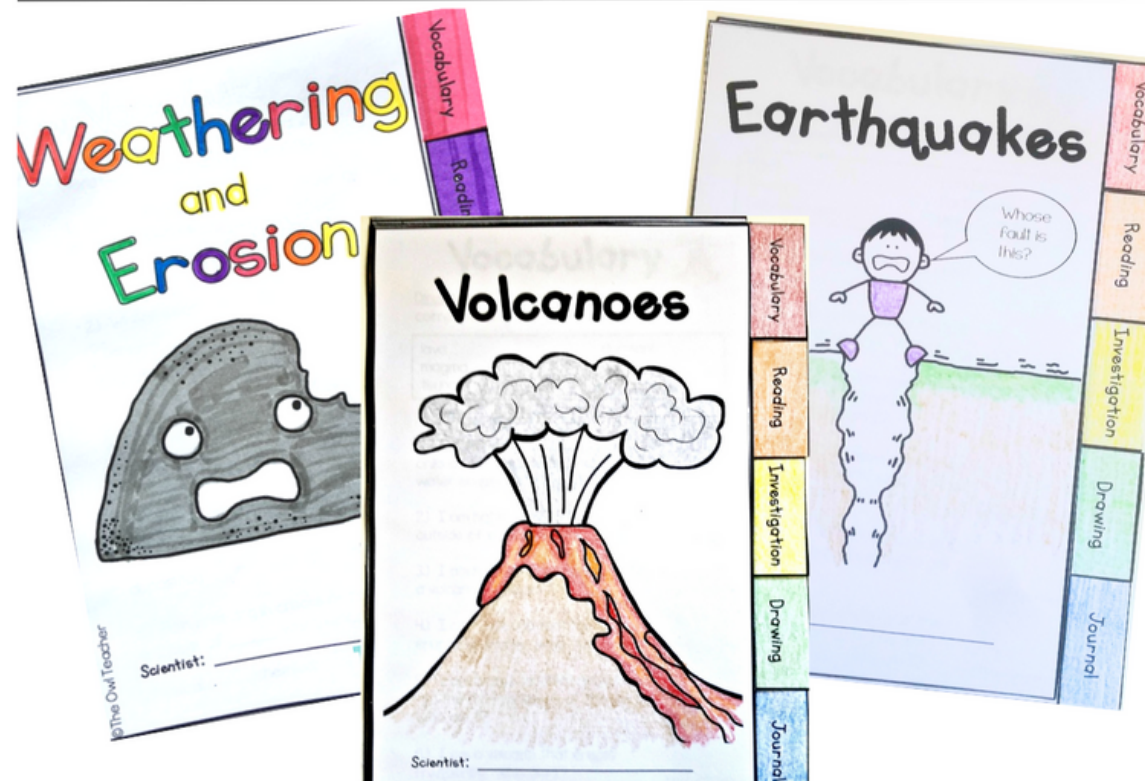
EXPLORE THESE RELATED ITEMS

CAUSE & EFFECT SCIENCE CARDS



EARTH SCIENCE IMAGES

EARTH CHANGES BUNDLE



INVESTIGATION BOOKLET ACTIVITY

EXPLORING EARTH CHANGES



SCIENCE ROLE PLAY CARDS

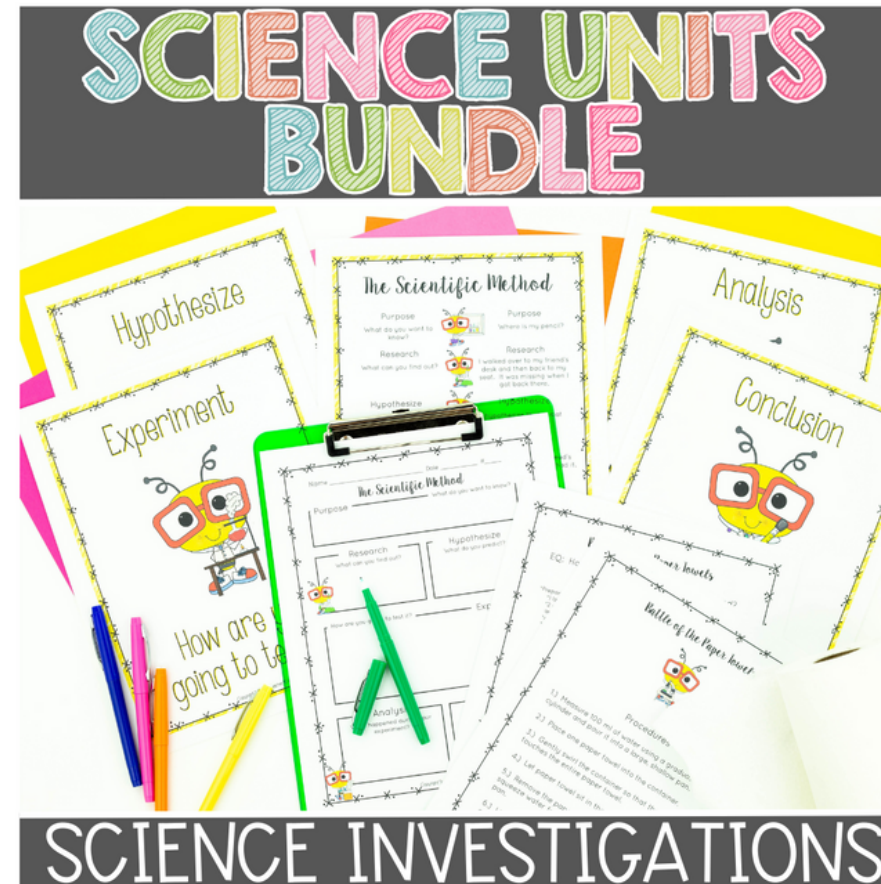
CLICK ON THE IMAGE TO CHECK THEM OUT!

**SAVE MORE BY
BUYING THE BUNDLE!**



- EARTH'S CHANGING SURFACE UNIT
- EARTH CHANGES TASK CARDS
- EARTH CHANGES CAUSATION CARDS

Save 20% off or more!



- EARTH'S CHANGING SURFACE UNIT
- ELECTRICITY LESSON PLAN UNIT
- FORCE AND MOTION UNIT
- PHYSICAL AND CHEMICAL CHANGES UNIT
- PLANTS UNIT
- ROCKS AND MINERALS UNIT
- SCIENTIFIC METHOD AND PROCESS SKILLS UNIT
- VERTEBRATES AND INVERTEBRATES ANIMAL CLASSIFICATION UNIT
- SCIENCE PICTURE OF THE DAY
- SCIENCE CAREERS READING PIECES AND TRADING CARDS UNITS

**CLICK ON THE IMAGE
TO CHECK IT OUT!**



Take **BACK** YOUR
WEEKENDS without
SACRIFICING
high-quality
RESOURCES!

**CLICK ADD TO YOUR CART
TO TAKE THOSE
WEEKENDS BACK!**

