



PLATE TECTONICS RACE!

North Carolina Geological Survey
www.deq.nc.gov/geoscience-education



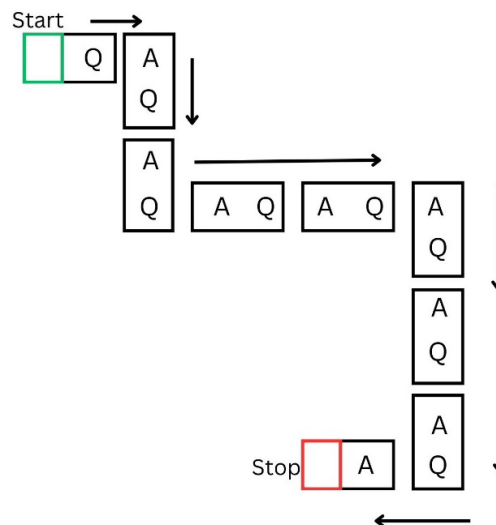
- Overview:** Plate tectonics is a scientific theory that explains how the earth's lithosphere (solid, outer layer) is divided into large and small plates that move and interact with each other at boundaries. Plates move apart at divergent boundaries, move together at convergent boundaries, and slide past each other at transform boundaries. Plate movement cause earthquakes and volcanoes, especially in the Pacific Ring of Fire.
- Target Grade Level(s):** 4th grade – 6th grade
- 2023 Science Standards:** ESS.6.2.2: Construct an explanation to illustrate how the movement of lithospheric plates can create geologic landforms and cause major geologic events such as earthquakes and volcanic eruptions.
- Objectives:** This hands-on activity is meant to reinforce the concepts of plate tectonics, including plate boundary types, key landforms and events produced by plate movement, and different layers of Earth. The activity can be used as a review, as a group activity, and/or a fun way to wrap up your lessons on understanding the lithosphere and how interactions of constructive and destructive forces have resulted in changes in the surface of the earth over time.
- Estimated Time:** 20 minutes
- Teacher Prep:**
1. Teachers should print and cut out the individual game cards. If you plan to use this activity every year, it would be a good idea to laminate them for re-use.
 2. All the cards (21 total) equals one set. A set runs from the 'start' card to the 'stop' card.
 3. Teachers can print one answer sheet (which can act as a study guide) for each student or each group of students
 4. Each student or each group of students should have one set of cards and answer sheets when the activity begins.
- Instructions:** On the next page

Instructions:

1. Each group (or each individual student) should scramble the cards and lay them out on a desk or the floor so that all cards are visible.
2. Find the card with the green START image. This is the starting card for the race.
3. Read the question or clue on the START card and look for another card that has the correct answer.
4. When the card with the correct answer is found, place it next to the question to start to form a chain. The cards don't need to be placed in a straight line – they can be wound to form a pattern as shown below.
5. Students can fill out the answer sheet as they play the game.
6. Continue the question-and-answer chain until they reach the STOP card.

It's a race to the finish! Groups can compete to see who completes the game the quickest – correctly!

They can make a straight card chain or wind them like dominoes as shown here.



Happy Racing!

Plate Tectonics Race – Answer Sheet

QUESTIONS / CLUES	ANSWERS
Name of the plate boundary where 2 plates move towards each other	
Underground molten/melted rocks	
Which part of Earth's core is liquid – inner or outer?	
The name of the plate boundary where 2 plates slide past each other	
This layer of Earth is found underneath the crust	
The plate where tectonic plates meet is called a plate ____	
The scientist who proposed the idea of Continental Drift	
Magma that reaches Earth's surface is called ____	
True or False? Earth's hottest layer is the crust	
This heat distributing process happens in the mantle and cause plates to move	
A large underwater earthquake from plate movement can cause a ____	
True or False? A divergent plate boundary is when 2 plates separate from each other	
The Atlantic Ocean has a divergent plate boundary called the ____	
This was the most recent supercontinent	
This Theory states that Earth's plates move on top of the mantle	
Sudden plate movement at a fault can cause ground shaking called an ____	
This landform emits lava	
Most volcanoes on Earth are found in the ____	
Earth's layer where humans live is called the ____	
This is the name of the plate where North Carolina resides	

QUESTIONS / CLUES	ANSWERS
Name of the plate boundary where 2 plates move towards each other	Convergent
Underground molten/melted rocks	Magma
Which part of Earth's core is liquid – inner or outer?	Outer Core
The name of the plate boundary where 2 plates slide past each other	Transform
This layer of Earth is found underneath the crust	Mantle
The plate where tectonic plates meet is called a plate ____	Boundary
The scientist who proposed the idea of Continental Drift	Alfred Wegener
Magma that reaches Earth's surface is called ____	Lava
True or False? Earth's hottest layer is the crust	False
This heat distributing process happens in the mantle and cause plates to move	Convection
A large underwater earthquake from plate movement can cause a ____	Tsunami
True or False? A divergent plate boundary is when 2 plates separate from each other	True
The Atlantic Ocean has a divergent plate boundary called the ____	Mid Atlantic Ridge
This was the most recent supercontinent	Pangea
This Theory states that Earth's plates move on top of the mantle	Plate Tectonics
Sudden plate movement at a fault can cause ground shaking called an ____	Earthquake
This landform emits lava	Volcano
Most volcanoes on Earth are found in the ____	Ring of Fire
Earth's layer where humans live is called the ____	Crust
This is the name of the plate where North Carolina resides	North American



Name of the plate boundary where 2 plates move towards each other

CONVERGENT

Underground molten/melted rocks

MAGMA

Which part of Earth's core is liquid - inner or outer?

OUTER CORE

The name of a plate boundary where 2 plates slide past each other horizontally

TRANSFORM

This layer of Earth is found underneath the crust

MANTLE

The place where tectonic plates meet is called a plate _____

BOUNDARY

The scientist who proposed the idea of Continental Drift

**ALFRED
WEGNER**

Magma that reaches Earth's surface is called _____

LAVA

True or False?
Earth's hottest
layer is the crust.

FALSE

This heat
distributing
process happens
in the mantle
and causes
plates to move

CONVECTION

A large
underwater
earthquake
from plate
movement can
cause a ____.

TSUNAMI

True or False?
A divergent
plate boundary
is when 2 plates
separate from
each other

TRUE

The Atlantic Ocean has a divergent plate boundary called the _____

MID ATLANTIC RIDGE

This was the most recent supercontinent

PANGEA

This Theory states that Earth's plates move on top of the mantle

PLATE TECTONICS

Sudden plate movement at a fault can cause ground shaking called an _____.

EARTHQUAKE

This landform
emits lava

VOLCANO

Most volcanoes
on Earth are
found in the ____

RING OF FIRE

Earth's layer
where humans
live is called the

CRUST

This is the name
of the plate
where North
Carolina resides

**NORTH
AMERICAN**

