

Teacher's Guide

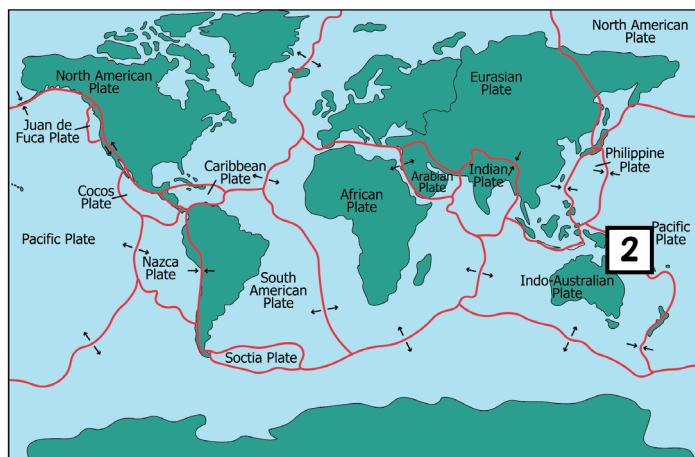
Plate Tectonics Activity - Landforms and Geologic Events

Students will:

- “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”.
- read scenario cards and match them with a location on a plate tectonic map.

Directions:

- 1) Students should read the “Plate Tectonics Background Information”. This will help them determine where the scenario cards can be placed.
- 2) There are 8 scenario cards. Students will cut out the number that matches the scenario card on the plate tectonic map and place it where they think it belongs. They can also just write the number on the map.
- 3) On the CER answer sheets, students must defend why they placed the scenario card in that location and back it up with evidence and reasoning.

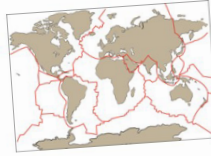


2	Scenario 2 can be placed on the boundary between the Pacific Plate and the Indo-Australian plate.	This occurs at a convergent boundary (two arrows pointing towards each other). This also involves the Pacific Plate.	Volcanoes often occur at convergent boundaries. This is also the location of the Ring of Fire. This matches with Scenario 2.
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Plate Tectonics Background Information

Plate Tectonics is theory that the Earth's outer layer is made of plates that move around. Earth's lithosphere is like a cracked eggshell. The pieces are called lithospheric plates: tectonic plates.

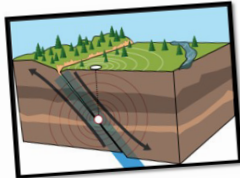
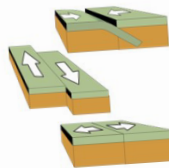
There are about 7 major plates (kind of aligned with the continents) and several minor plates.



Plates move, and then continents and ocean floor move. They are part of the plates. Major worldwide patterns occur because of plate movement. This includes arrangement of continents, earthquakes, volcanic eruptions, mountain building, and more.

Plates meet at boundaries. The different types of boundaries include:

- convergent: collide together
- transform: slide past each other
- divergent: move apart



Earthquakes often occur along transform boundaries. One notable example is the San Andreas Fault in California, where the Pacific Plate and North American Plate interact. They build pressure over time, eventually leading to sudden movements.

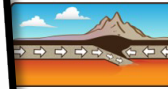
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Mid-Atlantic Ridge.

ological event caused by
nic eruptions. These are
gent boundaries. One
between another
these occur in the Ring of
Plate subducts under



deep ocean
Pacific Ocean.



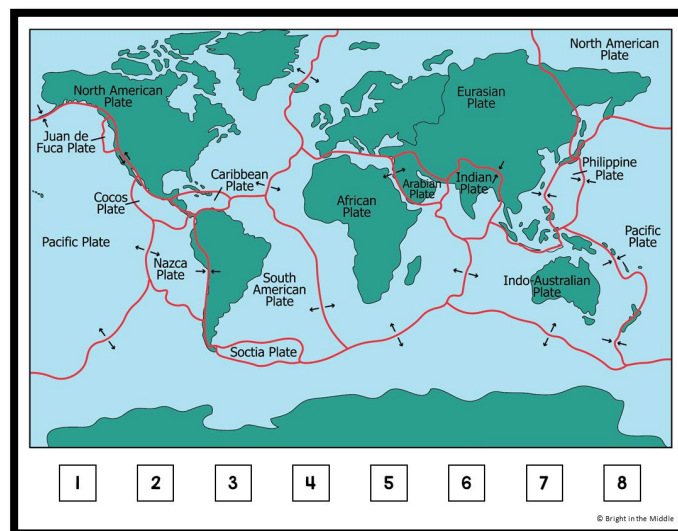
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**Background information provides
information to help students
solve the scenario cards.**

There are 8 scenario cards.



Students place the number of the scenario card on the plate tectonics map where it may belong.



**Students must
defend their card
placements with
evidence and
reasoning.**

Plate Tectonics Activity		Name	Date.....
Scenario #	Claim	Evidence	Reasoning

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**ANSWER
KEYS ARE
INCLUDED!**