Plate Tectonics: Science Discussion Scaffolds

8th Grade Earth Science | Intermediate English Learners

PART 1: SENTENCE STARTERS — Use these when you discuss each process

EARTHQUAKES (when tectonic plates suddenly slip or grind)

1	When two plates slide against each other, the ground shakes because _____.
2	I think earthquakes happen at plate boundaries because _____.
3	The energy released during an earthquake is called seismic energy, which means _____.

VOLCANOES (when melted rock pushes up through Earth's crust)

1	Volcanoes form when one plate goes under another plate. This process is called _____.
2	The melted rock inside the Earth is called magma, but when it comes out, we call it _____.
3	I noticed that most volcanoes are found near _____, and I think that is because _____.

MOUNTAINS (when plates collide and push rock upward)

1	When two continental plates collide, the rock folds and pushes upward because _____.
2	This process of mountain-building is called orogeny, which means _____.
3	One example of a mountain range formed by colliding plates is _____, and I know this because _____.

PART 2: VOCABULARY BRIDGES — From everyday words to science terms

Practice using the scientific term in a sentence after you learn it!

Simple Word		Science Term	What it means
earth's outside layer	→	**crust**	The solid rock layer on the outside of Earth
moving pieces of earth	→	**tectonic plates**	Large, slow-moving slabs of rock that make up the crust
plates going under	→	**subduction**	When one plate sinks beneath another plate
melted rock underground	→	**magma**	Hot, liquid rock found inside the Earth
melted rock above ground	→	**lava**	Magma that has erupted out of a volcano
shaking of the ground	→	**seismic activity**	Energy waves moving through the earth during an earthquake
the crack where plates meet	→	**fault line / boundary**	The place where two tectonic plates touch
mountain building	→	**orogeny**	The process of mountain formation from plate collisions

PART 3: TURN-TAKING PHRASES — Use these to join the discussion!

You don't have to start from scratch — build on what your partner says.

Say This Phrase...	When You Want To...
"I agree with [name] because..."	Agree and add your reasoning
"[Name] said _____, and I want to add that..."	Build on a partner's idea
"That is a good point. Another example is..."	Support with more evidence
"I understand your idea, but I think... because..."	Respectfully disagree or add a different view
"Can you explain more about what you mean by...?"	Ask a clarifying question
"What you said reminds me of... because..."	Connect to your own knowledge

PART 4: THINK-PAIR-SHARE SEQUENCE

Big Question: Why do earthquakes, volcanoes, and mountains often appear in the same places on Earth?

THINK 2 min alone	**Write or think about these questions:** • What do tectonic plates have to do with each of the three geological events? • What happens at a plate boundary? • Can you think of one real-world example (like a specific mountain, volcano, or earthquake zone)? **Sentence starter:** "I think all three events happen at plate boundaries because..."
PAIR 3 min with partner	**Share your thinking. Try these conversation moves:** Partner A starts: "I think these three events are related because..." Partner B responds: "I agree / I want to add... / I also noticed that..." Ask your partner: "What evidence from the map or diagram supports your idea?" **Goal: Be ready to share ONE strong idea from your conversation.**
SHARE with the class	**Ready-to-use phrases for sharing out:** "My partner and I both think that..." "We found an example of this. [Name] mentioned _____, and I added that..." "One thing we are still wondering about is..." **Remember:** Use at least one science term (plate boundary, subduction, seismic activity, orogeny)!

It is okay to use your home language to think, then put your ideas into English. Your ideas matter!