Lesson Plan Template

Instructions: This lesson plan template provides a space for you to plan lessons around the Education Connections model of Sheltered Instruction (SI), which includes four strands—*define, modify, cultivate, apply*. (See page 4 of this document for more information on the four strands). Fill out the information about your lesson plan in the space provided in the left-hand column, *Lesson Information and Activities*. While you plan, list which strand(s) relates to this portion of your planning in the right-hand column, *SI Strand(s)*, along with any notes about how the strand can be implemented effectively in this lesson.

Lesson Information and Activities	SI Strand(s)

Lesson Title: Plate Tectonics

Content Area: Science **Grade Level(s):** 9-10

Unit Description:

Length of lesson: Two 90- minute class periods **Number of ELs:**

Proficiency Levels						
ELs (numbers and/or names)						

Program Model:

Other relevant student information:

Standards and Objectives

	Language Objectives	English language proficiency standards
1	Students will be able to orally discuss and collaborate to create a demonstration of their learning.	WIDA Standard 1: English language learners communicate for social, intercultural, and instructional purposes within the school setting.
2	Students will be able to orally describe plate boundaries and the results of moving plates.	WIDA Standard 4: English language learners communicate information, ideas, and concepts necessary for academic success in the area of science.
	Content Objectives	Content Standards
1	Students will be able to identify plate boundaries and demonstrate their learning of plate tectonics using key vocabulary terms.	CCSS.ELA-LITERACY.RST.9-10.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 9-10 texts and topics*.

Lesson Information and Activities			SI Strand(s)
2	Students will be able to describe the relationships among key vocabulary terms and concepts.	CCSS.ELA-LITERACY.RST.9-10.5 Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., *force, friction, reaction force, energy*).	

Lesson Information and Activities	SI Strand(s)

Incorporating all four language domains

Identify how the language demands of the tasks are related to each language domain.

	Written	Oral
Receptive	Reading Students will read an informational text.	Listening Students will listen as group members discuss their skit.
Productive	Writing Students will plan and write a demonstration of their learning. Students may choose to write a skit or demonstration, for example.	Speaking Students will discuss the meaning of the sections of their text, based on the worksheet prompts, and will also discuss and perform their skit with group members.

Key language for students (words and phrases, grammatical structures, sentence types, structure and amount of speech/text, organization of ideas, genre, etc.)

Active vs. Passive voice

General academic language	Language specific to the content area
Convergent, divergent, boundaries, transform, zones, submerged, crust, mantle, impending, eruption, fractures, trenches, magnitude, oceanic, relative, in relation to, inactive Prefixes: con- , di-, sub-, geo-	Plate tectonics, magma, mantle, lithosphere, seafloor spreading, crust, volcanic, rifting, triple junction, continental crust, rift zone, plate interactions, subduction zone, continental plates, subduction, subduction earthquake, lava, transform-fault boundary, fracture zones, plate-boundary zone, microplates, magnetic field, geodetic, space geodesy, volcanic

Key characteristics of teacher talk (ways to make the content comprehensible for all students, ways to model key language, etc.)

Use realia and visuals

How the lesson will incorporate bilingualism/students' native languages as resources

Group students according to first language. Encourage students to use first language during discussions to negotiate the meaning of new or unfamiliar words and phrases in the reading and check for understanding.

Materials and Texts

Name	Genre (e.g., narrative)	Level	Connection to Students (What will this mean to them? How can you make it even more meaningful?)
USGS: Understanding Plate Motions	Nonfiction	10	Ask students to point on a map where they are from or where their family or ancestors are from (most ELs were

Lesson Information and Activities	SI Strand(s)

			born in the U.S. so some of your students will choose the U.S.)

Supplementary Materials and Realia

Oreo cookies

Google Earth

Lesson Information and Activities	SI Strand(s)

Estimated Time: Two 90- minute class periods

Language Domains: X Reading ☐Writing X Listening X Speaking

Grouping:

☐ Independent Work X Pair X Small Group X Whole class

Reason for grouping:

X First language X English proficiency ☐ Reading level ☐ Content understanding ☐ Interest ☐ Other:

Preview: Connections to past learning or the larger unit sequence

1. Tell students that today, they will read about different types of plates that form the Earth's crust.
2. Tell students that they will learn how those plates move in order to create different geological features.
3. Ask students, "Have you ever wondered how volcanoes and earthquakes happen?" Tell students that today, they will learn how the Earth's crust moves and creates these geological features.
4. Ask students to recall the layers of the Earth. The graphic on this page should help.
5. Tell students that the lithosphere has been broken into pieces that we call plates. These plates are always moving and causing the Earth's crust to move. Therefore, the continents move, too. Today, you will be able to describe how the plates of the Earth move and how those movements create geological features.
6. Take an Oreo cookie out of the package and break just the top cookie layer. Tell students that this is like the lithosphere of the Earth. The different pieces (plates) move on top of the melted rock of the mantle. Demonstrate that "plates" move.
7. Tell students that now they will read and learn about the different ways that the plates move. At the end of the lesson, they will create a model to demonstrate what they learned.

Presentation: Primary activity steps associated with lesson implementation
Differentiation, scaffolding, modifications, strategies employed, interaction activities, materials integrated that function to shelter language and content for the EL students

1. Tell students to line up according to age.
2. Split the line in half. Tell the younger students to move to one side of the classroom. Tell the older students to move to the other side of the classroom.
3. Tell students that they will learn the meanings of 2 words that will help them understand the text that they will read.
4. Tell students that the word "converge" means "come together." Tell each group to move toward each other to demonstrate converging.
5. Tell both groups that as they move back to the edges of the classroom, that they are diverging, or moving away from each other.
6. Now that students are back to the edges of the classroom again, tell them to repeat after you and do the motions with you. Move your hands together and say "converge." Move your hands apart and say "diverge."

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7. On the board, write: prefix: con= with, together, prefix: di= against, opposite. Verge= the point where something happens. So, converge and diverge both tell us that something is moving. The prefixes tell us which way the movement is happening. 8. Tell students that they will read part of a text, learn about how plates move and the geologic features they create, and demonstrate the plate movements to the class. 9. Divide the class into 3 groups. Tell them that they will read together and discuss their reading. 10. Assign each group one of the following: Divergent Boundaries, Convergent Boundaries, Transform Boundaries. Everyone must read the introduction: Understanding Plate Motions. 11. Tell students that they will each complete a handout and work with their group members to create a skit or demonstration of their learning. **Assessment**: Activities for formative and summative assessment during and after primary lesson activities. How does assessment account for the language demands embedded in core content for ELs? 1. Students will perform a skit or demonstration of their learning. See handout with rubric.	
How are parents, families, and the community invited into or associated with the content, delivery, or extension of this lesson? Students may interview teachers or family members about their experiences with volcanoes, earthquakes, and/or faults (including photos, if available).	

Education Connections' Four Strands of Sheltered Instruction

Sheltered Instruction is an approach that makes academic content, as well as language development, more accessible for EL students. The Education Connections activities are based on ***Four Strands*** of Sheltered Instruction. They are: Define, Modify, Cultivate, Apply.

Define

- **Develop, define, refine, communicate, and assess *content objectives* for every lesson**
- **Develop, define, refine, communicate, and assess *language objectives* for every lesson**
- **Ensure objectives derive from, and are aligned with, English language proficiency (ELP), as well as content standards**

Modify

- **Differentiate instruction through lesson adaptation and instructional modifications**
- **Scaffold instruction in response to students' individualized language and content learning needs**
- **Identify the language demands and domains embedded in lessons and explicitly address language use and needs for both teaching and learning**

Cultivate

- **Explicitly identify and acknowledge the cultural competence, human capital, knowledge, experiences, and resources students bring to the classroom**
- **Invite parental and/or familial involvement in the school and classroom and make connections that extend beyond the core curriculum**
- **Support native language maintenance, additive bilingualism, and biliteracy development**

Apply

- **Directly promote language use through interaction with peers, teachers, as well as the core content**
- **Encourage and facilitate language use in both English, as well as students' home languages**
- **Develop and implement activities that require use of all four language domains**