

SEI Lesson Tool

Name: _____ Date: _____ Grade Level 7

Teaching Context									
Curriculum or Content Area: Science	# <u>24</u> students in my class, of which <u>3</u> are ELLs								
My ELLs' linguistic and cultural background(s): S.A.: (Guatemala) Fluent and literate in Spanish. J.M.: (Guatemala) Fluent and literate in Spanish. Y.D.: (Haiti) Fluent Haitian Creole Speaker. Limited literate in French.									
My ELLs' level(s) of English Proficiency: <div style="float: right; text-align: right;"> WIDA ACCESS Spring 2013¹ <i>See WIDA "Can Do" descriptors² to help connect proficiency level with ACCESS scores</i> </div>									
Student(s):									
	Reading	Writing	Speaking	Listening	Literacy <small>(Reading 30%, Writing 50%)</small>	Oral Language <small>(Listening 50%, Speaking 50%)</small>	Comprehension <small>(Listening 30%, Reading 70%)</small>	Overall <small>(Listening 25%, Speaking 15%, Reading 35%, Writing 25%)</small>	
S.A.	3.8	3.9	1.8	4.0	3.9	2.7	3.9	3.5	
J.M.	5.3	3.9	6.0	6.0	4.2	6.0	5.9	5.2	
Y.D.	3.6	4.2	4.9	5.3	3.9	5.1	4.3	4.3	
Other support services that my ELLs receive: S.A.: Daily ESL J.M.: Academic Support Center 3X/6 Days									

This was handed out at my RETELL class in Waltham Public Schools, Spring 2014. (Massachusetts)

¹ For more information about WIDA ACCESS Scores and levels, see <http://www.wida.us/assessment/ACCESS/> "Interpretive Guide for Score Reports" ² http://www.wida.us/standards/CAN_DO/

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Y.D.: ESL Support 3X/6 Days	
Lesson Standards and Objectives	
<p>Common Core State Standards (discipline, standard number, and description):</p> <p>Next Generation Science Standards: PS2.A: Forces and Motion</p> <p>The motion of an object is determined by the sum of the forces acting on it; if the total force on the object is not zero, its motion will change.</p>	
<p>Content Objective(s):</p> <p>SWBAT show the relationship between forces and motion while using the following terms: <i>net force, balanced forces, unbalanced forces</i></p>	<p>Language Objective(s): <i>Language Objectives should be directly linked to the language skills students will need to be successful in achieving the content objective.</i></p> <p>SWBAT describe cause and effect relationships</p> <p>Language Objectives Differentiation for Proficiency Levels:</p> <p><i>(Students at WIDA levels 3, 4, 5 – For the purposes of this assignment, WIDA level 3 was lowered to level 2 to provide a wider spectrum of differentiation)</i></p> <p>WIDA 2) SWBAT use “Yes, it will” and “No, it won’t” to describe the relationships between force and motion</p> <p>WIDA 4) SWBAT use “It’ll change because _____” to explain force and motion</p> <p>WIDA 5) SWBAT create cause/effect relationship statements starting with “Due to the fact that...”</p> <p>Note: This lesson has students listen, speak, read, and write using the targeted English language objectives and a mini-lesson on their form is provided. ALL students, including ELLs, are expected to interact with the grade-level content terms <i>net force, balanced forces, unbalanced forces</i> as</p>

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	part of the CONTENT objective.	
<p>Mentor Text or Source:</p> <p>Web-based interactive modules:</p> <p><i>All About Forces:</i></p> <p>http://www-g.eng.cam.ac.uk/mmg/teaching/peterstidwill/interact/resources/parkworldplot/flash/concepts/allaboutforces.htm</p> <p><i>Balanced and Unbalanced Forces:</i></p> <p>http://www-g.eng.cam.ac.uk/mmg/teaching/peterstidwill/interact/resources/parkworldplot/flash/concepts/balancedandun.htm</p> <p>Additional textbook reference: <i>Prentice Hall Science Explorer: Motion, Forces, and Energy</i></p>		
<p>Targeted Tiered Vocabulary¹ from Mentor Text or Source</p> <p><i>Tier 2 & Tier 3 words should be integrated into student product/assessment.</i></p>		
<p style="text-align: center;">Tier 1 words</p> <p><i>Basic words most children know in their primary language: may include connectors or compounds</i></p> <p>push pull up down rope boat jump</p>	<p style="text-align: center;">Tier 2 words</p> <p><i>Essential to comprehension: i.e., process & transition, specificity, sophistication polysemy, transitional terms, idioms, clusters, cognates...</i></p> <p>force engine direction float attract repel stretch weigh lift (as in elevator) balanced/unbalanced</p>	<p style="text-align: center;">Tier 3 words</p> <p><i>Low frequency, content specific, typically glossed in the back of the text book</i></p> <p>gravity friction compress forcemeter resistive magnetic air resistance net force newton (unit of force) balanced/unbalanced force</p>

¹ For more information on Tiered vocabulary, see Beck & McKeon (1985), Calderon (2007).

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Student Prerequisite Skills or Background Knowledge:

What content or language knowledge or skills do my ELLs need to successfully complete the content and language objectives? What background knowledge or skills might my ELLs already have in their primary language but may need help in transferring to English?

Content Background Knowledge:

This is the second setion of the Physics unit, which means students have already learned about motion including key vocabulary such as *speed* and *acceleration*. They have probably heard the word *force* before in other contexts, which is why the lesson begins with activities intended to help them make personal connections and activate prior knowledge.

Language Skills:

Though the language focus of this lesson is on "cause and effect" language, students will also need to be able to use language that allows them to compare and contrast (balanced vs. unbalanced forces). They have practiced this skill many times as part of the genetics unit: *genotype vs. phenotype, mitosis vs. meiosis, sexual vs. asexual reproduction, etc.*

In prior lessons, students have been introduced to the language used to describe cause and effect relationships, but to a lesser degree. Since my ELL students are older and began their education in the primary language, they are probably familiar with cause & effect relationships in their L1. With strategic support, I anticipate that they will easily transfer this knowledge to English.

Assessment of content learning and language development:

Have I included Tier 2 & Tier 3 words in my assessment of my student's discourse: written or oral?

Assessment will be both informal and formal:

- Monitor conversation during partner and small group activities.
- Note what students share during whole class discussions.
- Check notebooks as students are working to see how they are answering text-dependent questions and if they are using tiered vocabulary.

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- Students will complete an exit ticket at the end of the period that I will collect and use to inform the next day's lesson. Do the students answer the questions correctly? Do they use appropriate language to express cause and effect?

Content and Concept Language Integration

How have I integrated all possible domains into my teaching and learning strategies and activities?

	Discourse Integration: <i>Which domain(s) does my strategy/activity target?</i>				Sheltered Instruction Strategies <i>How does this strategy connect my content and language objectives? How does this strategy facilitate my students' ability to access the content? How does this strategy facilitate my students' ability to comprehend the essential knowledge, or produce oral or written discourse connected to the content? How does this strategy provide comprehensible input for my students?</i>
Lesson Sequence:	Speaking 	Writing 	Listening 	Reading 	
<p>5 min: Do Now</p> <p>Display a photo and show a short video clip of an athlete completing a pole vault. Read aloud from the board: <i>Describe the motion. What forces are at work?</i> Students quick write and then popcorn share.</p>					<p>Visual scaffolding (photo and video of a pole vaulter) is used as a prompt to engage students. Do-Now Quick Write and Popcorn Share are used to discuss motion and forces.</p> <p>This strategy is used as a warm-up to get students thinking about both forces (the "new" content) and motion (the "old" content). Even if students are familiar with the sport of pole vaulting, the photo and video will <u>provide them with</u> <u>experience</u> that they can respond to in their quick write. They will build on these ideas later in the lesson when they are asked to demonstrate their understanding of the forces of motion. Writing. Demonstrating forces and motion in a real world multimedia example make the content comprehensible because it is done visually.</p>