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.

<table>
<tr><th>Lesson Information and Activities</th><th>SI Strand(s)</th></tr>
<tr><td>

Lesson Title: Math Fishbowl

Content Area: Math, ESL, Adaptable **Grade Level(s): 7**

Unit Description: The fishbowl protocol encourages students to utilize academic language to describe mathematical processes and reasoning. This activity encourages students to solve a mathematical problem and work cooperatively with team members to discuss solutions. In this lesson, students discuss their solutions and variables, both given and not given.

Length of lesson: Two 45- minute class periods **Number of ELs:** _____

Proficiency Levels	Intermediate	Advanced				
ELs (numbers and/or names)						

Program Model: _____

Other relevant student information: _____

</td><td>**Define**</td></tr>
<tr><td>

Standards and Objectives

	Language Objectives	English language proficiency standards
1	Students will be able to identify and describe the relationships among variables.	**WIDA Standard 1:** English language learners **communicate** for **Social** and **Instructional** purposes within the school setting CA ELD Standard 7.2.1.12: Selecting language resources: a. Use a growing set of academic words (e.g., cycle, alternative, indicate, process), domain-specific words (e.g., scene, soliloquy, sonnet, friction, monarchy, fraction), synonyms, and antonyms to create precision and shades of meaning while speaking and writing.

</td><td>**Define**</td></tr>
</table>

Lesson Information and Activities			SI Strand(s)
2	Students will be able to describe and defend a solution.	**WIDA Standard 3:** English language learners **communicate** information, ideas and concepts necessary for academic success in the content area of **Mathematics** CA ELD Standard 7.2.1.3: Negotiate with or persuade others in conversations (e.g., to provide counterarguments) using learned phrases (I agree with X, but . . .), and open responses.	
	Content Objectives	**Content Standards**	
1	Students will be able to organize an argument and defend it using analysis of data and opposing claims.	**CCSS.ELA-LITERACY.W.9-10.1.A** Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among claim(s), counterclaims, reasons, and evidence.	
2	Students will be able to solve a multi- step mathematical problem and take into consideration multiple variables, both given and not given.	**CCSS.MATH.CONTENT.7.EE.B.3** Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.	

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 the math problem to identify key information and information not given, but important	Listening Students will listen to their classmates' arguments and reasons to evaluate any weakness or credibility to their claims
Productiv	Writing Students will organize an argument and support it using evidence gained through data analysis	Speaking Students will explain their argument and integrating key vocabulary

Modify

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

General academic language	Language specific to the content area
Claim, Argument, Analyze, Analysis, Data, Solution, Figured out, , Keep Track, , Consider,	Problem, Solve, Profit, Average, Variables, Cost of Living

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

Prior to this lesson, the teacher should explicitly teach the vocabulary words. The vocabulary graphic organizers provided with this lesson will help students to learn the vocabulary words. Provide students with opportunities to practice using the vocabulary words using an interactive word wall and graphic organizers to explore relationships among words.

Cultivate

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

Students can discuss their favorite foods and their origin using their native languages.

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?)
Math Problem Handout		7th Gr.	Make connections to job seeking, buying a vehicle, budgeting money, etc…

Supplementary Materials and Realia

Lesson Information and Activities	SI Strand(s)
Estimated Time: Two 45- minute class periods **Language Domains**: X Reading X Writing X Listening X Speaking **Grouping**: X Independent Work ☐ Pair X Small Group ☐ Whole class Reason for grouping: ☐ First language ☐English proficiency ☐ Reading level ☐ Content understanding ☐ Interest ☐ Other: Heterogeneous grouping works best. Mix students of varying English proficiency and levels of content understanding **Preview**: Connections to past learning and the larger unit sequence 1. Tell students that they will read a math problem and participate in a fishbowl discussion activity about the math problem. The goal of the fishbowl discussion is to listen to others' perspectives and learn from each other. 2. Tell students that you will practice the fishbowl activity with a general topic first, and then the class will apply it to a math problem. 3. Divide the class into two groups. Arrange chairs into two circles in the middle of the classroom (one circle inside the other). Students in group 1 will sit in the inside circle (fishbowl) and students in group 2 will sit in the outside circle (observers). 4. Display and explain students the rules for the fishbowl activity. Point out the sentence frames for agreeing, disagreeing, and clarifying. 5. Before placing students in the fishbowl, give them time to think about and respond to the question: What is your ideal job? Which factors are most important to consider about a job? 6. Give all students time to think and write some notes about what they would like to say. 7. Arrange students into the fishbowl. Group 1 (fishbowl) will sit inside and discuss the topic. The teacher should facilitate the discussion and use of the sentence stems. Group 2 (observers) will sit outside and listen. Observers may wish to jot notes while they listen and observe. 8. Switch roles. Students who were observing will now be inside the fishbowl. Students who were in the fishbowl will now observe. Pose the same question. Encourage students to use the sentence stems and facilitate the discussion. **Presentation**: Primary activity steps associated with lesson implementation include: Differentiation, scaffolding, modifications, strategies employed, interaction activities, materials integrated that function to shelter language and content for the EL students 9. Tell students that they will read a real-life scenario, analyze the variables, create a solution, and defend it. They will engage in another fishbowl discussion about the mathematical problem.	**Modify** **Apply**

Lesson Information and Activities	SI Strand(s)
10. Explain how the reasoning and evidence we use to solve mathematical problems also applies to everyday situations. Learning how to analyze a problem is important in math as well as science, English, and everyday life. 11. Project the math problem on the board. Read the math problem to the class as they read along silently. 12. Read the math problem again, this time annotating the math problem. Circle and define words and phrases. Draw a picture, and highlight important words. Explain that *pupusas* are a traditional food from El Salvador. They are made of corn tortillas, cheese, beans, and seasoned pork or chicken. 13. Numbered Heads: Divide students into groups of three (3). Within each group, assign each student a number 1-3. Tell students that you will give them a task to discuss and then you will call out a number. The person in each group with that number must respond for their group. 14. In groups, ask students to discuss and list the variables they should consider for this problem (ex: cost of the truck rental, etc…). Are there variables to consider that are not discussed in the math problem? (ex: cost of gas) 15. After groups have had time to discuss and write a list, call a number (1-3). One student in each group will respond. Students should listen as each group responds and add to the list. 16. Working in their groups, students should solve the problem and discuss the following prompt: **My aunt and uncle want to know how much they should charge per *pupusa* to make the most profit and how much profit they can expect from this business. Outline how you solved the problem, variables to consider, both given and not given, and defend your answer with data from the problem. How can they maximize their profit and which steps would you recommend to them to maximize their profit?** 17. Tell students that they must try incorporate the following vocabulary words in their explanation: Average, Claim, Argue, Analyze, Data, Solution, Problem, Solve, Figured out, Profit, Variables, Consider. **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. Review the rules for the fishbowl and the sentence stems. 2. Arrange students into the fishbowl activity. Chose 1-2 groups of students, depending on class size, or choose students from one group and students from another group, to be inside the fishbowl. 3. Ask students inside the fishbowl to respond to the prompt and discuss their solutions. The teacher should facilitate the discussion and encourage the use of sentence stems. 4. Switch roles. Students who were outside will now move into the fishbowl. Facilitate the discussion. 5. When the discussion has come to an end, summarize the fishbowl activity. These are possible debriefing questions to pose to the class: How did it feel to be an observer? Which skills did you need to use as an observer? Which skills did you need to use as a fishbowl participant? How did it feel to be a fishbowl participant? 6. Exit ticket: Ask students to write a response to rate their participation in the fishbowl. Reflect on what they did well and what they would change, either about their solution to the problem, or regarding the fishbowl activity.	
How are parents, families, and the community invited into or associated with the content, delivery, or extension of this lesson?	**Cultivate**

Lesson Information and Activities	SI Strand(s)
Discuss with parents or family members: What are the variables you consider when applying for a job? What are the things you need to think about? (Ex: daycare expenses, time away from family, cost of living)	

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**

