

Unit: Problem Solving (w/ Probability & Statistics)

<p>Standard/Performance Expectation(s) : Determine probabilities for mutually exclusive, dependent, and independent events for small sample spaces.(8.3.F) & Solve single- and multi-step problems using counting techniques and Venn diagrams and verify the solutions (8.3.G)</p>	
<p>Building Block Objective/Learning Target :</p> <ul style="list-style-type: none"> • I am able to persevere in problems. • I can apply past strategies to new situations. • I can use Venn diagrams to answer probability questions. 	<p>Common Misconceptions:</p> <p>The most critical aspect and place for error in Venn diagram problems is understanding what each area means.</p>
<p>Communication Technique:</p> <p>The instructor will introduce the learning target to the students. A student or two will put the learning target in their own words for the class.</p>	<p>Students also don't realize that the area outside the circles is a valid area to place objects.</p>
<p>Elicitation Activity*: Students will be working in groups to handle a Venn diagram problem with little scaffolding.</p>	
<p>Topic introduction/lesson Activities:</p> <ol style="list-style-type: none"> 0) Students work on warm up as they enter the classroom. (5 MIN) 1) After a brief learning target discussion, students move into small groups (if not already so seated) and hands out assignment to each student. (7 MIN) NOTE: The third learning target is a give away to best method for solving the problem and is best shared after the first student share-out. 2) Students work in small groups on assignment. (10 MIN) 3) While S. are working T. monitors group progress and makes notes of groups s/he would like to see present. If there are no groups on the right track, the teacher may use this time to scaffold the class. Alternatively, S. groups may exchange group members (e.g. next birthdate goes to the next clockwise table) 4) Student groups share out their work so far. T. selects groups with strong or unusual strategies and groups with misconceptions to bring to the class's attention. (10 MIN) 5) S. groups work on next problem in same small groups while teach monitors strategies. (5 MIN). 6) Student groups share out second problem. (7 MIN) 7) Students lead class in discussion checking up on learning target. What was that target again? How are we doing? Do we have any questions now? (5 MIN) 8) Students work individually on final problem (10 MIN). If there is time remaining, T. may collect assignment from students and lead discussion on individual assignment. 9) Lead brilliant discussion on learning target. Venn diagrams can be help in probability situations, etc. Can someone recap what we did? What we learned? Questions? 	

Formative Assessment lesson planning template

Talk Structures/Discourse Strategies:

Students will discuss problems in small groups, present solutions to the large group. Students will discuss learning target as a large group.

Formative Assessment lesson planning template

<p>Formative Task or question: Individual assignment will serve as a formative assessment.</p>	
<p>Formative Technique: Exit Slip Student Discourse Student reporting</p>	
<p>Adjustment Trigger <i>What level of student performance will necessitate an instructional adjustment?</i></p>	<p>If one or fewer groups are able to make progress on the first task, adjustment might be needed.</p>
<p>Instructional Adjustment (if needed): Adjustment possibilities include ...</p> <p>direct instruction (if no groups are on the right track)</p> <p>group exchange (students switch group members and exchange ideas for a few minutes (works best if a couple groups are on the right track)</p>	
<p>Lesson Closure*: Students recap learning target and discuss progress and questions they may have.</p>	

* Opportunity for formative assessment