

Lesson Plan Template

Grade: 9 th Grade		Subject: Algebra	
Materials: Jeopardy squares or projector, paper, pencil		Technology Needed: Projector	
Instructional Strategies: <input type="checkbox"/> Direct instruction <input type="checkbox"/> Peer teaching/collaboration/cooperative learning <input type="checkbox"/> Guided practice <input type="checkbox"/> Socratic Seminar <input type="checkbox"/> Visuals/Graphic organizers <input checked="" type="checkbox"/> Learning Centers <input type="checkbox"/> PBL <input type="checkbox"/> Lecture <input type="checkbox"/> Discussion/Debate <input type="checkbox"/> Technology integration <input type="checkbox"/> Modeling <input type="checkbox"/> Other (list)		Guided Practices and Concrete Application: <input type="checkbox"/> Large group activity <input type="checkbox"/> Hands-on <input type="checkbox"/> Independent activity <input type="checkbox"/> Technology integration <input checked="" type="checkbox"/> Pairing/collaboration <input type="checkbox"/> Imitation/Repeat/Mimic <input type="checkbox"/> Simulations/Scenarios <input type="checkbox"/> Other (list) Explain: We will play Jeopardy as a review game to help prepare for the test.	
Standard(s) All standards covered in the unit		Differentiation <p>Below Proficiency: These students should benefit from being in a group with some people who are achieving more highly because these students will be able to walk them through how to solve each problem.</p> <p>Above Proficiency: These students will be expected to help bring others in their group into a better understanding of the material being reviewed.</p> <p>Approaching/Emerging Proficiency: I will try to create groups as evenly as possible so that each student may be challenged by other students to do well. These students will be able to collaborate to solve the problems, and this will hopefully give them a better understanding of the material.</p> <p>Modalities/Learning Preferences: review game, working in groups to solve problems, visual diagrams for some problems, real-world applications</p>	
Objective(s) The objective in this lesson will be to review for the upcoming exam. Bloom's Taxonomy Cognitive Level: Applying, Analyzing, Evaluating			
Classroom Management- (grouping(s), movement/transitions, etc.) <ul style="list-style-type: none"> Students are expected to transition quickly and quietly into their groups Students are expected to listen to the teacher's instructions Students are expected to respect their teammates and other teams Students are all expected to participate in the game 		Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules, and expectations, etc.) <ul style="list-style-type: none"> Students are expected to remain engaged during the game Students are expected to work cooperatively with their group Groups are expected to work independently Students are expected to respect other students and the teacher 	
Minutes	Procedures		
5 min	Set-up/Prep: To set up, I will tape pieces of paper on the board for our Jeopardy game. I will create 5 categories: Classifying Polynomials with Addition/Subtraction, Division, Multiplication, Factoring Polynomials, Real-life Applications.		
5 min	Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.) I will begin class by asking if students have any questions before we begin the review. This will be an opportunity for them to ask about anything they had trouble on while they were studying at home. If there are questions, I will try to use examples to go over them, and I will also try to use the review game to help these students with their questions later.		
5-7 min	Explain: (concepts, procedures, vocabulary, etc.) I will briefly outline the rules for the Jeopardy game. Students will be broken up into groups of four. Then, throughout the game, we will rotate which group gets to pick the question so that no group picks twice in a row. Then, I will explain that students will all be given the same amount of time to answer each question. Then, if one team has an answer, they may give it. If no team has an answer at this point, the first team to find an answer may submit this answer. Finally, if multiple teams have an answer when time is up, the team with less points will be allowed to answer first.		
40 min	Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)		

Lesson Plan Template

	<p>In this section, I will just outline a few of the questions from each category.</p> <p>Classifying polynomials and adding/subtracting (classify by degree):</p> <ol style="list-style-type: none"> 1) $x^2 + 3x^2$ 2) $x^3 + 3x^4 + 5x^4$ <p>Dividing polynomials:</p> <ol style="list-style-type: none"> 1) $(x^3 + 3x^2 + 4x + 12)/(x + 3)$ 2) $(x^4 + 4x^3 + 2x^2 + 5x + 6)/(x + 1)$ <p>Multiplying polynomials:</p> <ol style="list-style-type: none"> 1) $(x + 3)(2x + 4)$ 2) $(x + 6)(x^2 + 4x)$ <p>Factoring polynomials:</p> <ol style="list-style-type: none"> 1) $x^2 + 8x + 15$ 2) $x^2 + 4x + 5x + 20$ <p>Real-life applications:</p> <ol style="list-style-type: none"> 1) "If one roller-coaster has a height modeled by the polynomial $x^2 + 3x + 5$ and another roller-coaster has a height modeled by the polynomial $x^3 - 2x^2 + 3x + 9$, what is the difference in their two heights at a given point?" 2) "If someone is trying to lay a tile floor, and they are using 1x1 ft tiles to do so, what are the dimensions of the floor if it has an area of $x^2 + 6x + 9$?" <p>Solutions:</p> <ol style="list-style-type: none"> 1) Both are degree 2, $4x^2$ 2) First terms is degree 3, second terms are degree 4, $x^3 + 8x^4$ <ol style="list-style-type: none"> 1) $x^2 + 4$ 2) $x^3 + 3x^2 - x + 6$ <ol style="list-style-type: none"> 1) $2x^2 + 10x + 12$ 2) $x^3 + 10x^2 + 24x$ <ol style="list-style-type: none"> 1) $(x + 5)(x + 3)$ 2) $(x + 4)(x + 5)$ <ol style="list-style-type: none"> 1) The difference will be either $(x^2 + 3x + 5) - (x^3 - 2x^2 + 3x + 9) = -x^3 + 3x^2 - 4$ or $(x^3 - 2x^2 + 3x + 9) - (x^2 + 3x + 5) = x^3 - 3x^2 + 4$. 2) The dimensions of the floor should be $(x + 3)$ and $(x + 3)$.
5 min	<p>Review (wrap up and transition to next activity):</p> <p>To conclude the game, I will congratulate the winners and ask if anyone has any final questions. If so, I will take a few minutes at the end of class to cover them. Otherwise, I will let students go for the day and tell them to keep studying for the test the next day.</p>
<p>Formative Assessment: (linked to objectives)</p> <p>Progress monitoring throughout lesson- clarifying questions, check-in strategies, etc.</p> <p>My main assessment here will simply be making sure that each group continues to participate by trying to answer each question.</p> <p>Consideration for Back-up Plan:</p> <p>If necessary, I will pass around a list of problems for students to work on. It will be possible for them to study alone or in groups if they would prefer.</p>	<p>Summative Assessment (linked back to objectives)</p> <p>End of lesson:</p> <p>None.</p> <p>If applicable- overall unit, chapter, concept, etc.:</p> <p>Students will need to be able to apply all concepts covered in this review session.</p>
<p>Reflection (What went well? What did the students learn? How do you know? What changes would you make?):</p>	

Lesson Plan Template