

Geometric Sequence

Grade: 8		Subject: Geometric Sequence: Algebra I	
Materials: Laptop for PowerPoint and everyday essentials		Technology Needed: Projector/ PowerPoint	
Instructional Strategies: <input type="checkbox"/> Direct instruction <input type="checkbox"/> Guided practice <input type="checkbox"/> Socratic Seminar <input type="checkbox"/> Learning Centers <input type="checkbox"/> Lecture <input type="checkbox"/> Technology integration <input type="checkbox"/> Other (list) <input type="checkbox"/> Peer teaching/collaboration/cooperative learning <input type="checkbox"/> Visuals/Graphic organizers <input type="checkbox"/> PBL <input type="checkbox"/> Discussion/Debate <input type="checkbox"/> Modeling		Guided Practices and Concrete Application: <input type="checkbox"/> Large group activity <input type="checkbox"/> Independent activity <input type="checkbox"/> Pairing/collaboration <input type="checkbox"/> Simulations/Scenarios <input type="checkbox"/> Other (list) Explain:	
Standard(s) HS.F-BF.2* Write arithmetic and geometric sequences both recursively and with an explicit formula and convert between the two forms. Use sequences to model situations.		Differentiation Below Proficiency: These students will benefit from the peer tutoring taking place throughout the lesson. Also, with the fist to five check-in I will identify which students may need more help during work time. Above Proficiency: I will challenge these students to create a formula for their own geometric equation in the exit slip. Approaching/Emerging Proficiency: These students will be challenged by having to create their own geometric equation. Modalities/Learning Preferences: inter/intra personal, visual, auditory, and kinesthetic (having a student come to the board to present his/her answer)	
Objective(s) Students will be able to identify characteristics of arithmetic and geometric sequences. Students will be able to compare and contrast arithmetic and geometric sequences. Students will be able to graph geometric and arithmetic sequences. Students will be able to create their own geometric sequence.			
Bloom's Taxonomy Cognitive Level: understand, analyze, create			
Classroom Management- (grouping(s), movement/transitions, etc.) The bell ringer will get students sitting down and starting to think. I will use "if you can hear my voice snap once, twice, three times, to get students focused back on me" if needed. I will be sure to monitor students group work to make sure they have enough to do and if they are on task while being sure to utilize purposeful proximity.		Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.) Students will be expected to work well together and participate in the lecture.	
Minutes	Procedures		
5	Set-up/Prep: Get the PowerPoint up and projector ready.		
5	Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.) Bell ringer: this will get students recalling a concept they covered earlier in the year. This will also get them thinking about what a geometric sequence may be. The bell ringer is in the PowerPoint.		
20	Explain: (concepts, procedures, vocabulary, etc.) The PowerPoint contains all the needed vocab., example problems, etc.. Geometric Sequence Algebra 1 Lesson.pptx		
15	Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions) Here the students will work on the examples in the lecture, exit slip, and the homework assigned.		
3	Review (wrap up and transition to next activity): I will thank the students for their great work and for behaving well. Additionally, I will remind them to hand in their homework from yesterday before they leave and be sure to tell them to have a great day!		
Formative Assessment: (linked to objectives)		Summative Assessment (linked back to objectives) End of lesson: This will be the questions 1-10 from the book.	

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Progress monitoring throughout lesson- clarifying questions, check- in strategies, etc.

This will occur with my entrance and exit slips, as well as, the large group examples we will complete in class. I will use fist to five to check for understanding. Additionally, I used multiple questions throughout the question to clarify information and have them rephrase the information back to me.

Consideration for Back-up Plan: If students finish early, I will have them look at the geometric sequences they created in the exit slip and determine if each other's sequences are legitimate geometric sequences.

If applicable- overall unit, chapter, concept, etc.: This information relates directly with Ch. 8 and exponents.

Reflection (What went well? What did the students learn? How do you know? What changes would you make?):

The Bell Ringer worked well as it challenged them to guess and helped them to look for the most important information in the lecture. Also, the pair and share after the bell ringer seemed effective as well. I had to adjust the way I presented the general formulas and walk through them a bit more rigorously than I had originally planned. I was able to adjust this for the next to classes and it seemed to work well. Additionally, I noticed I needed to emphasize the steps to graph the sequences more than I had thought. One thing I would like to add is allowing the students to move during the lecture. For the two example problems at the end of the PowerPoint, I may have them get up and walk to one side of the room if they think it is geometric or arithmetic, or something along these lines to get students moving.