

4: LESSON PLAN - Santorini

LEARNING AIMS	<p>Students will:</p> <ul style="list-style-type: none"> ● Engage in cooperative play (W1-5) ● Reflect on their own logical and spatial reasoning ● Gain a basic understanding of game mechanics, rules, fundamental gameplay, scoring, strategies, cooperative principles, increase mental math skills, number sense skills ● Logical Reasoning: Investigating game mechanics and winning strategies by noticing and determining the rules through observation (W1) ● Spatial Reasoning: Locating placements for workers and possible moves in order to know where to move and build (W1) ● Logical reasoning: Analyzing their moves/builds and the board to become strategic (W2) ● Spatial reasoning: Coordinating building and moving up by pathfinding to improve opportunity to win (W2) ● Logical reasoning: Modifying strategies based on the introduction of god cards (W3) ● Spatial reasoning: Locating workers and builds based on the introduction of god cards (W3) ● Logical Reasoning: Convincing others of effective strategies (W4) ● Spatial Reasoning: Dimension shifting to exploring different perspectives of the game board (W4)
MATERIALS	<ul style="list-style-type: none"> ● Enough copies of <i>Santorini</i> for your class ● Each student has a pencil ● Condensed rules sheet - How to Play Santorini ● Teacher will hand out god cards for student to pick among ● Have the god card sheets available with examples/non-examples
SPECIAL CONSIDERATIONS	<ul style="list-style-type: none"> ● One round of Santorini game play takes approximately 20 minutes. ● Organize groups according to student needs. Encourage discussion and understanding of the game.
LESSON ACTIVITIES	<ol style="list-style-type: none"> 1. Today we will be continuing to use the god/goddess cards in your games. We will be looking to see how you are convincing – both in your explanations and in your moves – while you adapt your strategies to the powers your opponents are using. Remember, you can choose whether to use your god/goddess power every turn, but you don't have to! Use your god power strategically! Let's look at convincing in Student A's thinking last week: <i>Starter Image</i> (see below.) [last prompt transitions to dimension shifting] <p>For one round today, you are challenged to dimension shift and apply your god power skills to a game that is already several turns in. See Reflection Sheet (see below). You will start with a photo – this is in 2D. Then you will have to create the board and play 5 turns – this is in 3D.</p>

	<p>Then you will draw out the board (be creative and clear!) – this is back to 2D. Why do you think it’s an important skill to be able to do dimension shifting?</p> <p>Students can either start with the Reflection Sheet question or play at some point during the class.</p> <ol style="list-style-type: none"> 2. Students will play with god cards. They can use different ones in different rounds if they like. 3. Hand out the reflection sheet so students know what questions to think about. Encourage them to choose one round of the game and answer the questions (could get through 2 rounds in one class). 4. Teacher circulates and prompts student discussion of strategies. Encourage students to ask each other the questions listed on the “How to Play” sheet. <ol style="list-style-type: none"> a. Why did you choose to move your worker there? How did you decide what piece to place? b. Could you have tried a different move? 5. At the end of the game time, encourage students to complete the reflection sheet (10 mins at the end of class.)
<p>QUESTIONS/ REFLECTIONS</p>	<p>Questions for students/prompts: Here’s a quick overview of the six focus god cards:</p> <ul style="list-style-type: none"> ● Artemis: you can move a worker an extra time (but not back to its original spot). ● Demeter: you can build an extra piece (but not two pieces on the same spot). ● Apollo: your move can be to swap places with an opponent in a legal move (has to be adjacent to your worker). ● Atlas: you can build a dome on any level. ● Minotaur: you can move a worker into a spot with an opponent's worker, and push the opponent's worker one spot in the same direction. ● Hephaestus: you can build an extra block on top of your first block (but not a dome). <p>Focus for Week 4:</p> <ul style="list-style-type: none"> ● Were you able to find and exploit a weakness in your opponent's god/goddess? ● Did you notice any super powerful or less powerful god/goddess cards? If so, who? ● Do you prefer powers which allow you to move or build? Why?

- Which God or Goddess did you use today?
- Do you think the God/Goddess cards make the game better or worse? Why?
- Do you think the God/Goddess cards make the game easier or harder? Why?
- How often did you use your God/Goddess power in play today?
- Was it difficult to predict your opponent's moves when you also had to think about how they could use their power?
- Were you able to get a surprise win by using your God/Goddess power?
- Did using the powers make the game quicker or slower? Why do you think that might be?
- What is your favourite strategy you have used to win Santorini?
- Have you figured out a strategy that lets you win without getting to lvl 3 of a tower?
- Does your strategy rely more on one worker, or use them both equally?
- How many of your strategies are offensive, how many are defensive?
- What tools do you have in Santorini to help you use a strategy?
- When you are thinking of a strategy, which do you pay attention to more: Game board, my own or my opponents workers, buildings?
- Does your strategy help you get a 'quick win' or is it for more of a medium or long game?
- Does your strategy help you predict how long a game will last?
- Are you using workers together (coordinated) or separate?
- Is that an offensive or defensive move with your workers?
- Is that an offensive or defensive build with you building piece?
- How many levels are you aiming for?
- How are you arranging the towers?
- Where are the board are you trying to build the most?
- Are you spreading out towers or are you building them together?
- Why did you choose those starting positions for your workers?
- Where could you move each of your workers? [adjacent spot]
- How did you decide where to move that worker?
- Which pieces can you use to build? Where can you build? [adjacent to worker just moved]
- How did you decide what to build?
- What do you think your opponents will do next?
- What are you going to do to win?
- How did you win? OR How did your opponent win?
- Does this game remind you of any other board games you have played before?

	<ul style="list-style-type: none">● Have you found any tricks yet?● What do you want to try next time?● What is the best way you have found to win so far?● Does having two workers compared to only having one make the game easier or harder?
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**Student A's god was Atlas who can dome
Anywhere for a build.**

Look at her move and explanation:



This might seem a bit of a bad move, but I think
grey should hop off and place a dome there. Unfortunately,
no matter how hard you try, you cannot place a 3rd level
without the blue doming it.

How is A's explanation convincing?

**Often there are many reasons to convince. Can you think of other reasons
why this is a good move for grey?**

How is analyzing a board in a photo different than analyzing for your next move when you're playing with the actual Santorini board?

Reflection Sheet: Santorini

Your Name: _____ Team Members: _____

1) Dimension Shifting: From Photo to Board to Drawing

Set up your board to match the one in the photo below. It is grey's turn next.

a) Which god/goddess cards are being used?

Me: _____ My opponent: _____

b) Who do you think has the advantage right now? Why?



c) **Play** the game in the picture with each player getting **FIVE** more turns each. Use the grid or the space below to draw out the board after you each take 5 turns.



d) Who has the advantage now? Why?

e) Explain how your power helps you make the move. Also, draw on the picture!

2) Convincing us of god/goddess powers

- a) You've had a chance to try several god cards. Rank the two god/goddess power you think are the **best**:

1. _____ 2. _____

- b) Explain **how to use** the best power (words/drawings) to help you win.

- c) **Why** is the power you chose better than any of the others? Give an example, draw, and explain: