

3: LESSON PLAN - Shifting Stones

<p>LEARNING AIMS</p>	<p>Students will:</p> <ul style="list-style-type: none"> ● Engage in cooperative play ● Reflect on their own logical and spatial reasoning ● Gain a basic understanding of game mechanics, rules, fundamental gameplay, scoring, strategies ● Logical reasoning: Investigating game play to get to know the rules and to decide what turn to take (W1) ● Spatial reasoning: Become aware of their orientation to the board and how that impacts how they score (complete/match) cards in their hand to the game board (W1) ● Logical reasoning: Analyze their cards against the board to decide what patterns to create on the board (W2) ● Spatial reasoning: Comparing patterns on cards and locating tiles on the board to use to create the same pattern on the board (W2) ● Logical reasoning: Analyzing the movement to have the most efficient turn (W3) ● Spatial reasoning: Moving (sliding, reflecting) tiles to score pattern cards strategically (W3)
<p>MATERIALS</p>	<ul style="list-style-type: none"> ● Enough copies of <i>Shifting Stones</i> for your class, 4 students/teams of 2 per game ● Pencil for scorekeeping and pencil crayons for reflection sheet ● Scoresheet (each group gets 1) ● Reflection sheet ● Starter image(s)
<p>SPECIAL CONSIDERATIONS</p>	<ul style="list-style-type: none"> ● Students could switch which positions they sit in relative to north (change orientation) and switch weekly who starts ● Ideas for cooperative game play: <ul style="list-style-type: none"> ○ Play as a team for highest team score ○ Pair up with a team member and discuss strategies and turns ○ Play with open cards → discard cards to swap and flip tiles and set up fellow team players
<p>LESSON ACTIVITIES</p>	<ol style="list-style-type: none"> 1. Last week we were focused on analyzing both the tiles in play and the pattern cards in your hand in order to locate which flips and swaps would score the highest points. Let's see some great thinking and challenge ourselves to analyze some of the ways people think through the moves in their turn: Starter Images [see below]. <p>This week, we are asking you to analyze your moves even further and really pay attention to which moves help you score the most points. Is it always better to flip or swap, or is there a good time for both? As you play this week, challenge yourself to pay attention to the moves you make. Do you tend to make more flips or swaps? Which is easier to see?</p>

	<p>Does the order matter? And what words and symbols can you use to explain the tile movements?</p> <ol style="list-style-type: none"> 2. Divide students into their groups to play. <ol style="list-style-type: none"> a. Explore pieces, read rules that come with the game b. Could have open play - all tiles/cards visible to all players 3. Teacher circulates and prompts. 4. Student discussion of strategies. Encourage students to ask each other the questions and to explain what they are doing on a turn. <ol style="list-style-type: none"> a. Why did you choose to do that? b. Could you have tried a different strategy? c. How many points did that move equate to? 5. Ask students to complete the reflection questions after class.
<p>QUESTIONS/ REFLECTIONS</p>	<p>Questions for students/prompts:</p> <ul style="list-style-type: none"> ● Did you find there was a large difference between the number of flips and swaps you made? ● Which type of move is easier to use when you plan out your turn in your head, flipping or swapping? ● When trying to fit your pattern cards to the tiles on the board, do you think of flipping or swapping first? ● Did you manage to pay attention to the order of the moves you took in your turn? What made it easy or difficult to do so? ● Did you and your partner create roles for each other in your team? If so, what were they and did they help/how? ● Is it possible to plan your next move before your opponent takes theirs, why or why not? ● What clues about your opponents' moves can you find by analyzing the cards they have already scored and the patterns they are making? ● Is it possible to predict your opponent's next move in shifting stones? Why or why not? ● If it is possible to predict your opponent's next move, is there a way to make sure you can maximize your own score whilst limiting theirs? <p>Other questions to consider:</p> <ul style="list-style-type: none"> ● Show a sample game board. What is your next move? Why did you do that? ● Which strategy did you use and why? ● Did you plan for future turns or just make turns as you could?

	<ul style="list-style-type: none">● Did you hold on to cards or discard them?● What did you find the hardest? What did you find easiest?● Which tile grids were easiest? Which tile grids were hardest to score?● Did you try to score the hardest tile grids?● What is a strategy you would like to try next time?● How did you play with your team members? Did you help them? Or ask for help?● Are you playing to win? Do you play competitively? Do you celebrate your friends' wins?● How might this connect with other learning or experiences? Have you played this game before? Have you played other games with your family? Which ones?● Do you enjoy playing games? Why or why not?● Do you think this is the ideal group size to play this game? Why or why not?● Are there any other age groups who you think would enjoy this game?● What did you find challenging?● If you could modify the game, what would you do? Example: Add or take away cards or tiles.● Did you see any strategies that your teammates used that you would like to try next time?● Draw your last move showing which tiles you swapped/turned and which cards you scored.
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Student C explains how she moved the tiles. Can you analyze her thinking?

Are you faster at seeing flips or swaps?

1) Analyzing Pattern Cards & the Board: Your Next Move

What is your next move? Please draw in!

Cross off the cards you would discard. Use arrows to swap or flip tiles. Circle the card(s) you scored.



Describe the steps in your turn. Why did you do that?

How many points did you score? _____

I already have a match, the number 1 card
and my next move would be discarding 2 cards
so I can flip the horses and then switch
it with the sun and get card 2.

Student D made great symbols! What do the symbols on the left mean?

If we take the words away, can you figure out Student D’s move? Is it the same or different as Student C’s?

1) Analyzing Pattern Cards & the Board: Your Next Move

What is your next move? Please draw in!

Cross off the cards you would discard. Use arrows to swap or flip tiles. Circle the card(s) you scored.

The image shows a game board for 'Shifting Stones'. At the top left is a 'Discard Pile' with a dashed border and a card with a red dragon. Below it are two hand-drawn symbols: a circle with a 'G' and an arrow pointing right. The main board is a 3x3 grid of pattern cards. The top row has a yellow card with a dragon, a blue card with a dragon, and a red card with a dragon. The middle row has a blue card with a dragon, a black card with a dragon, and a black card with a dragon. The bottom row has a blue card with a dragon, a black card with a dragon, and a black card with a dragon. To the right of the board is a 'Your Hand' section with four cards labeled Card 1, Card 2, Card 3, and Card 4. Card 1 has a red dragon and a '2' in the top left. Card 2 has a blue dragon and a '3' in the top left. Card 3 has a black dragon and a '1' in the top left. Card 4 has a black dragon and a '2' in the top left. A large arrow points from the hand to the board. At the top right is a 'TLR only' section with a grid of colored squares (yellow, red, blue, green, purple, black) and arrows indicating connections between them.

1) Analyzing Pattern Cards & the Board: Your Next Move

What is your next move? Please draw in!

Cross off the cards you would discard. Use arrows to swap or flip tiles. Circle the card(s) you scored.

Describe the steps in your turn. Why did you do that?

How many points did you score? 4

one card has already been done. (1 point)
Discard two by shuffling one card,
then flip it over.

**What other symbols or words could you use for flipping/swapping?
How could you show the order of flips/swaps? Does it matter?**

Create starting question that allows students analyze more than one way of achieving the same points in a turn. Same card scored, different pathways.

Reflection Sheet: Shifting Stones

Your Name: _____ Team Members: _____

1) Analyzing Tile Movement: During the Game

- a) Use the following chart to keep track of how many times you flip or swap the tiles throughout your game. Each time you **flip** or **swap** jot down a tally mark.

Flips	Swaps

- b) Analyze the totals for each side of your table. What similarities or differences do you notice? Which move is easier to see when you're playing?

Total flips: _____

Total swaps: _____

- c) Who won the game (circle one):

We won

The other team won

- d) Compare your chart with the other teams. What conclusions can you make about flipping, swapping and how important each one is in the game? Is one type of move more helpful when trying to score points?

2) Strategic Next Moves

a) What is your next move? Please draw it below!
Cross off the cards you would discard. Show any flips or swaps. Circle card(s) you score.



Your Hand



b) Describe the steps in your turn. Why did you do that?

c) How many points did you score in part a)? _____