

3: LESSON PLAN - Gobblet Gobblers

LEARNING AIMS	<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, winning, strategies, cooperative principles ● Logical reasoning: Investigating the game to learn how to create good, legal moves and analyzing first move – getting to know the game (W1) ● Spatial reasoning: Tactilizing (touching, manipulating, moving around, testing out) with the Gobblers to figure out different sizes of Gobblers and how to place Gobblers – getting to know the game (W1) ● Logical reasoning: Analyzing game board configurations to slow play and be more strategic (W2) ● Spatial Reasoning: Locating different sizes of Gobblers in order to win the game (W2) ● Logical reasoning: Explaining emerging strategies with precise words and drawings (W3) ● Spatial Reasoning: Dimension-shifting from 2D (photo) to 3D (board) to 2D (drawing) to explore and explain game strategies to win (W3)
MATERIALS	<ul style="list-style-type: none"> ● Enough copies of <i>Gobblet Gobblers</i> for your class (4 students per game) ● Whiteboard and marker ● Gobblet Gobblers How to Play Sheet ● Optional: Mini whiteboards or sheet protectors with paper in them and markers (one per group)
SPECIAL CONSIDERATIONS	<ul style="list-style-type: none"> ● Gobblet Gobblers is a quick game. Once students know how to play, one round of Gobblet Gobblers game play takes a couple of minutes. ● Organize groups according to student needs: Play in pairs, so two on two. Encourage discussion and understanding of the game. Focus on the rules of the game. ● A quick reminder to students about trying to focus on thinking about each move they make and why they decide to make it- don't rush.
LESSON ACTIVITIES	<p>1. There is fantastic reasoning coming from everyone, and lots of great conversations between partners about what move to make next and why. Here are two game photos to analyze: <i>Starter Image</i> (see below).</p> <p>Is there a way we can improve the way we communicate with our team members? What mathematical vocabulary might help us clearly explain to our team members exactly what we are thinking? Let's create a class list of vocabulary to use with our partners today -- write on the board. (Look for horizontal, vertical, diagonal, perimeter, adjacent ...).</p> <p>Great! To start today, we have a challenge question to try first. Look at your reflection sheet – for the first question, you will predict from the</p>

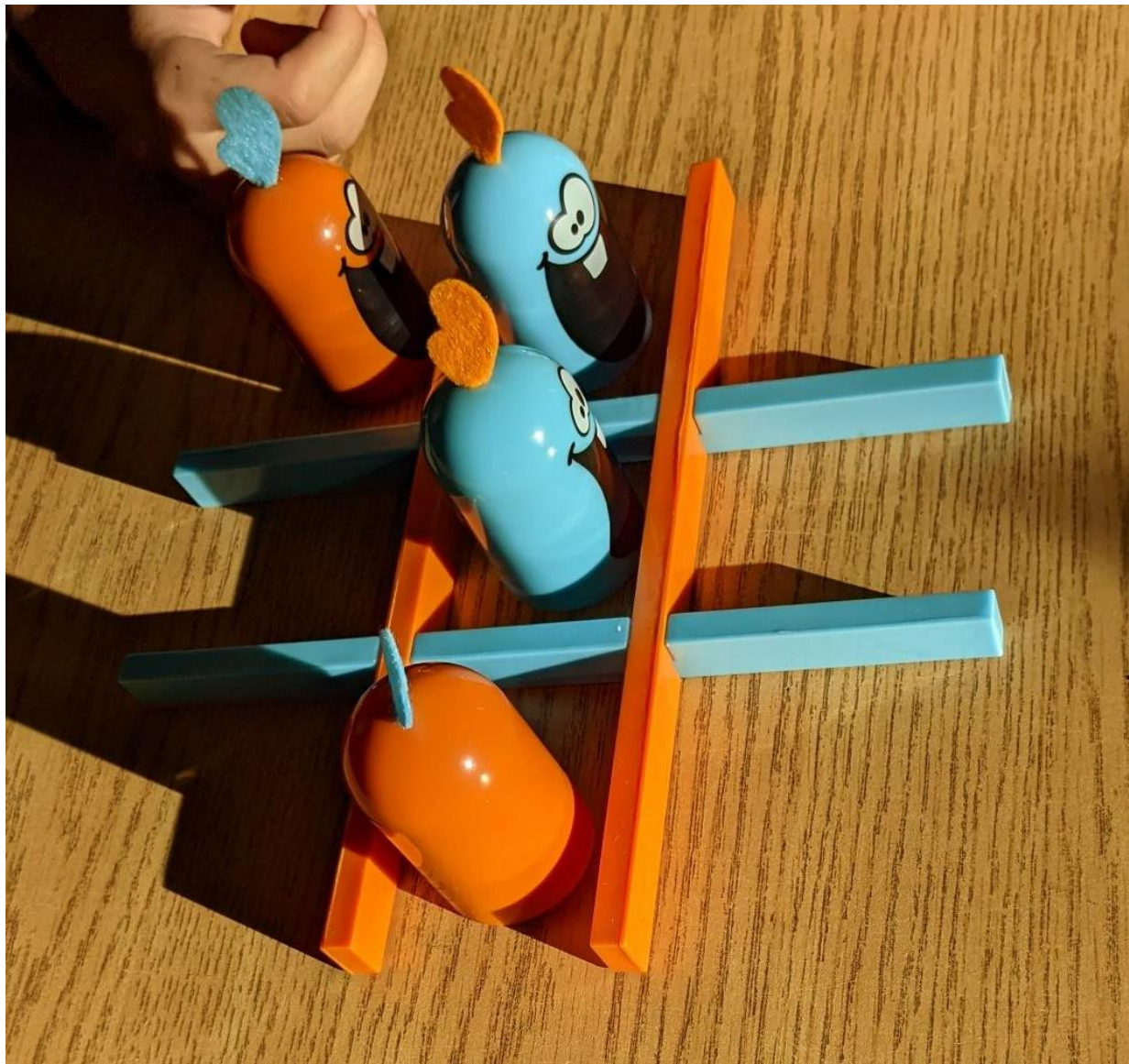
	<p>photo which team will win. Then set up the board, play the game, and draw your final board. Try to use some of the vocabulary from the list we just created to explain your turns and thinking.</p> <ol style="list-style-type: none"> 2. Divide students into their groups: pair playing against another pair. 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. 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 do that? b. Could you have tried a different strategy? c. What are the benefits or risks of gobbling? 5. At the end of the game time, encourage students to complete the reflection sheet.
<p>QUESTIONS/ REFLECTIONS</p>	<p>Questions for students/prompts:</p> <p>Focus for Week 3: Emerging Strategies</p> <ul style="list-style-type: none"> ● Can you predict your opponent’s next move? What about the one after that? ● What vocabulary are you using to make sure your team member knows exactly what you are thinking? ● What could you do to indicate to your partner what spot to play in next (e.g., numbering spaces, using symbols) to better communicate with your partner? ● How many turns does it take you before you think you know what your opponents are trying to do? <p>“Think about it for next time” Reflection Question:</p> <p>How would using the new vocabulary from today help you communicate better with your partner next week?</p> <p>Other questions to consider:</p> <ul style="list-style-type: none"> ● Is there a point in the game when you can tell who is going to win? ● Are you making moves based on a plan you made with your partner? ● Are there any particular spots on the grid you try and control? ● What do you do if your opponent takes a spot that you want to control? ● A good move/play we made during Gobblet Gobblers today ways (explain why with pictures and words):

- How did you figure out your next move?
- What's one good idea you shared with your partner?
- What did you do to not give your opponent an advantage?
- What Tic Tac Toe strategy helps you play Gobblet Gobblers? How did it help?
- What new strategies did you need to use in order to win?
- What are all the unique opening moves for the first player?
- Is there a way to set up 3 different ways to win?
- For each person, tell me what you said to your partner to convince them of a good move at any point in the game.
- Tell me about how you plan ahead to either set up a win for you or a loss for your opponent. Using drawings and words.
- We played 5 games in a row starting with the small gobblet. This is how it went: (explain with drawings and words).
- We played 5 games in a row starting with the medium gobblet. This is how it went: (explain with drawings and words).
- We played 5 games in a row starting with the big gobblet. This is how it went: (explain with drawings and words).
- One group realized that with the board as pictured [include image], that the _____ team would win on their next turn. How did they know?
- Here's a new rule we came up with for Gobblet Gobblers! Use drawings and words to show.
- Explain how and why you created the new rule. Did you have to modify it after trying it out? Defend why it's a good new rule.
- How did your new rule change your play or your strategies? Use drawings and words.
- Imagine you've been hired to make a tips & tricks website for Gobblet Gobblers. Create two important tips to help players. Use drawings to help explain. Tip 1: Tip 2:
- Take a look at the three boards, showing different opening moves for Gobblet Gobblers. Rank how good the move is by writing great, okay or poor on the lines below. Explain your ranking below each one by saying why. [include images]
- In all of the games, students told us about playing on the sides or corners. Can you tell me how playing on the sides and/or corners helps in Gobblet Gobblers? Use drawings and words.
- This board is a few turns into the game. You can see some pieces hiding! You're blue gobblet player. Draw where you would put your next piece. Why is it a good move? Use words. Start with the picture above -- can you show what the board would look like if there were 3 more moves? Explain.

What is orange's best move? Why?



What is blue's best move? Why?



Reflection Sheet: Gobblet Gobblers

Your Name: _____ Team Members: _____

1) Photo → Board → Drawing & Explaining Strategies with Words and Drawings:

Set up your game board so that it matches the photograph (the medium orange gobblet in the top left corner spot has been gobbled by the large blue one shown behind it). It is Orange's turn.

a) Who do you predict will win this game? (Circle one)

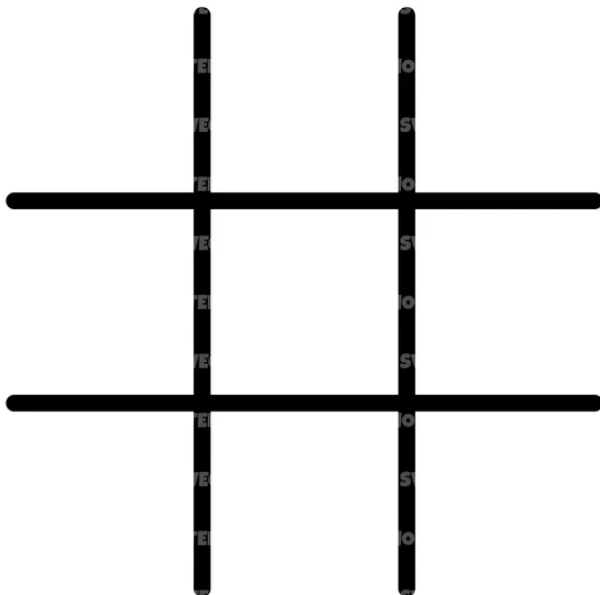
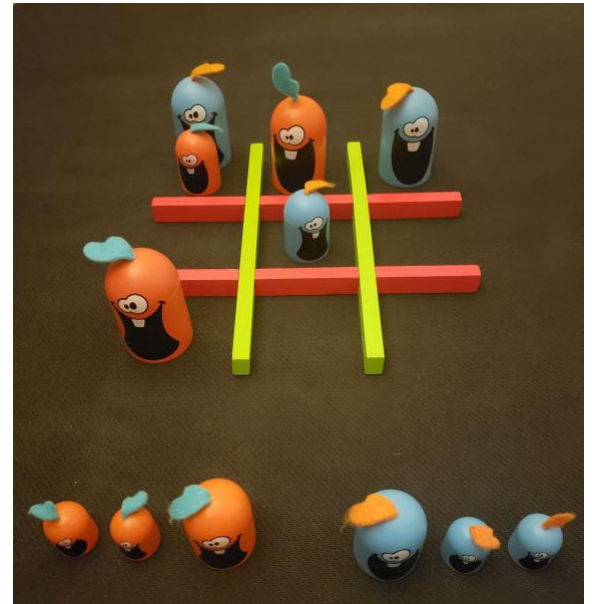
Orange / **Blue**

b) In your teams, play this game out to its end from the turn shown in the photograph.

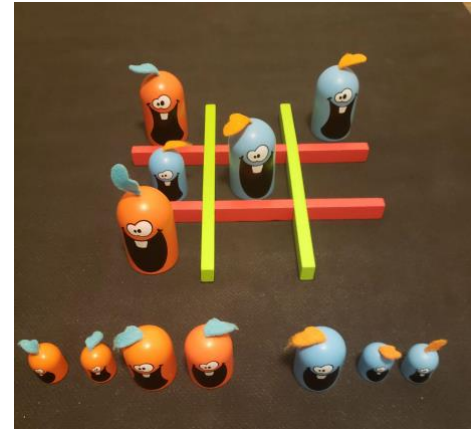
c) Who won the game? (Circle one)

Orange / **Blue**

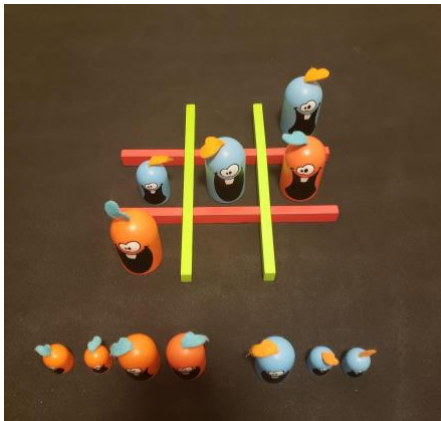
d) Draw out the final location of pieces on the grid (hint: show hidden pieces!). Explain what happened in the final turn of the game on the lines.



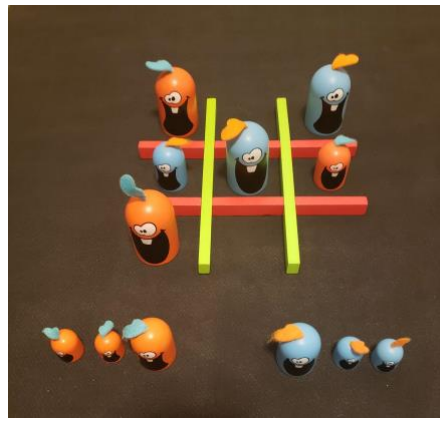
2) Explaining Strategies with Precise Words and Drawings:



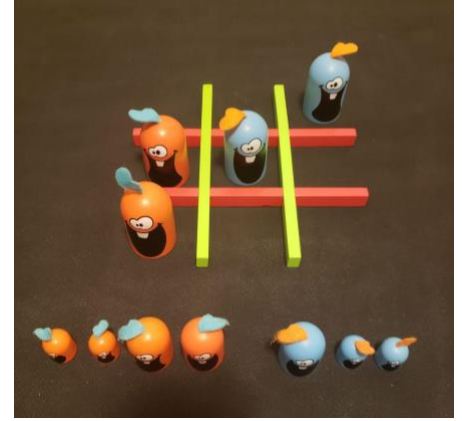
- a) It is orange's turn and no gobblers have been gobbled. Circle the letter underneath image which you believe shows the best move orange can make if the board looks like the photograph on the right:



A



B



C

- b) Use the lines below to explain **why** you chose either image **A**, **B**, or **C** as the best move. Describe where the piece was placed/moved and how it helps orange.

Think about it for next time: How would using the new vocabulary from today help you communicate better with your partner next week?

Find more resources on <http://www.learnmathwithgames.com/>