

## 1: LESSON PLAN - QUARTEX

<b>LEARNING AIMS</b>	<p>Students will:</p> <ul style="list-style-type: none"> <li>● Engage in cooperative play</li> <li>● Reflect on their own logical and spatial reasoning</li> <li>● Gain a basic understanding of game mechanics, rules, fundamental gameplay, scoring, strategies</li> <li>● Logical reasoning: <b>Investigate</b> the game to learn how to create good, legal moves (W1) – getting to know the game</li> <li>● Spatial reasoning: <b>Tactilizing</b> (touching, manipulating, moving around, testing out) with the tiles to figure out how to place tiles on the emerging board (W1) – getting to know the game</li> </ul>
<b>MATERIALS</b>	<ul style="list-style-type: none"> <li>● Enough copies of <i>Quartex</i> for your class</li> <li>● Scoring sheet</li> <li>● Students need pencil for scorekeeping</li> <li>● Reflection sheet</li> </ul>
<b>SPECIAL CONSIDERATIONS</b>	<ul style="list-style-type: none"> <li>● Could introduce game through modelling the game (ELL students)</li> <li>● Organize groups according to student needs: <b>Play individually the first class with 4 players per table, with tiles revealed to help each other out (students will see more turns)</b>. Encourage discussion and understanding of the game. Focus on the rules and the games.</li> <li>● One round of Quartex game play takes takes approximately 30 minutes.</li> </ul>
<b>LESSON ACTIVITIES</b>	<ol style="list-style-type: none"> <li>1. Show the box and start by asking questions about it. Has anyone played this game before? What do you notice about the tiles? Does it look similar or different to Qwirkle (if students have played Qwirkle)?   <p>Today, you're going to learn a new game by <b>investigating</b> how to put tiles on a board. Investigating means trying out tiles and spots on the board (or could ask kids what it means) ... and the best way to do that is to <b>touch</b> and <b>move</b> the tiles around to figure out how to put them on the board for legal, good moves! While you're playing today, take time to examine the tiles and be ready to share what you noticed!</p> </li> <li>2. Introduce the game via Youtube Video: <ul style="list-style-type: none"> <li>● <a href="#">Quartex: Game Review</a> – start at 29 seconds (set up); can stop around 2 minutes if wanted (another video can be used: <a href="#">How to Play - Quartex</a>)</li> <li>● Feel free to stop at times to ensure clarity on the rules</li> <li>● Rather than demo the game, proceed to dividing students into groups and first unboxing question.</li> </ul> </li> <li>3. Divide students into their groups and hand out reflection sheets. <ol style="list-style-type: none"> <li>a. Explore pieces, read rules that come with the game</li> <li>b. If students want, they could have open play, where all tiles are</li> </ol> </li> </ol>

	<p>visible to all players.</p> <p>c. <b>UNBOXING:</b> Ask students to pull tiles from the bag and pick one to answer #1 a and b – what they notice about the tile.</p> <p>d. Play!</p> <p>4. Reminder of rules:</p> <ol style="list-style-type: none"> <li>a. Each player takes 5 tiles. You can choose to show or hide tiles.</li> <li>b. Players alternate turns, adding one tile to the board each turn. First person “starts” the board.             <ul style="list-style-type: none"> <li>● To place a tile, tile needs to line up along a whole side and match corner colour/shape.</li> <li>● Draw a new tile from the bag.</li> </ul> </li> <li>c. If your tile completes a shape, take a colour token/chip of matching colour. This is how you get points at the end of the game.</li> <li>d. If you can’t play on a turn, show tiles to all players to confirm. Then exchange for 5 new tiles.</li> <li>e. Near the end when tiles run out in the bag, continue playing. If you can’t play, you must pass and you’re out for the rest of the game. The game ends when no one can play.</li> <li>f. To score, the number of colour tokens left in each pile equals the point value for that colour token. Use the score sheet to figure out everyone’s scores.</li> </ol> <p>5. Teacher circulates and prompts student discussion of strategies.</p> <p>6. Students clean up games.</p> <p>7. Students complete the reflection sheet. <b>Students will need a tile to complete the first question – do this right at the end of class or have games out later.</b> Give students time after their math class.</p>
<p><b>QUESTIONS/ REFLECTION</b></p>	<p>Focus Prompts for Week 1:</p> <ul style="list-style-type: none"> <li>● Did you look at the tiles first? Board first?</li> <li>● How is this game similar and different to Qwirkle? (is students have played Qwirkle before)</li> <li>● What are you doing to find a spot to put your tile?</li> <li>● What did you say to your partner to figure out your next move?</li> <li>● Do you stop after finding one spot or do you keep looking?</li> <li>● If you have two good plays, how do you choose?</li> <li>● How did you know you’d get a colour token that turn? How did you know you could complete a corner shape?</li> </ul>

	<ul style="list-style-type: none"> <li>● What do you notice about the tiles?</li> <li>● Did you know you can flip the tile over? How do the two sides compare?</li> <li>● What are the most or least colours that could be on the corners of tiles?</li> <li>● How are the colours on the corners of the tiles arranged?</li> </ul> <p>Other questions/prompts:</p> <ul style="list-style-type: none"> <li>● When your turn starts, how do you decide what piece to play? Use drawings and words.</li> <li>● Look at the board below. Let's say you're going to put your next piece in the spot where the arrow is pointing. Draw a picture of at least two different pieces that would fit there. Explain why both would fit.</li> <li>● Tell me one interesting thing you learned about Quartex. Use drawings and words.</li> <li>● What strategy helps you get a high score in the game? Is there something you do during the game to get a high score?</li> <li>● How do you know you're an expert at Quartex? How would you know if a friend you were playing Quartex with was an expert at the game?</li> <li>● A strategy I'm testing today is _____. My reason for trying this strategy is _____.</li> <li>● Here's a strategy I use to set up to get a colour token (points).</li> <li>● A good move/strategy that my partner shared with me today was _____.</li> <li>● If you could start the game with any piece, which one would it be? Draw a picture and explain why with words.</li> <li>● What are <b>ALL</b> the <b>DIFFERENT</b> ways you could place the piece pictured on the game board? Use the tiles below to show (draw). Explain how you know you have all. [Give a piece and then 12 boxes to draw in.]</li> <li>● Here's what we did to find the best place to play (draw and explain).</li> <li>● Here's what we did to try to finish a shape and get a colour token (points) today (draw and explain). Here is one thing I did in the game today to finish a shape and get a point chip (use drawings and words):</li> <li>● Pick a piece and examine it. Draw it below. Tell me everything about the piece you can.</li> <li>● If you have two good plays, how do you choose? Use drawings and words. Convince me your choice is the best move.</li> <li>● Today you learned the rules for how to find your score at the end of the game. How did that affect how you played Quartex?</li> <li>● For your fourth turn, draw the tile you played. Explain why you picked that tile. Explain what you did to put it fit it on the board.</li> <li>● These are two different boards that came up in your class. Circle which</li> </ul>
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	<p>game board you would rather play on. Convince me <b>why</b> it's a better board! Why is the other board not as good?</p> <ul style="list-style-type: none"><li>● STOP when you get your first colour chip for finishing a shape! How did you first know you would finish a shape? Tell me what you did to finish the shape – use drawings and words.</li><li>● Can you tell me three things you noticed about the playing pieces? Be sure to draw pictures to help me understand! (give them three squares to draw in)</li><li>● When you're setting up, find a tile that has symmetry. Draw it: Make a dashed line - - - - - for any lines of symmetry.</li><li>● Find a second piece that has at least one more line of symmetry. Draw it: Make a dashed line - - - - - for any lines of symmetry.</li><li>● STOP when someone finishes a shape for the <b>first</b> time. Get a picture taken! How many of the four corners on a tile have to make a match on the board? Why?</li><li>● Explain a situation where you can finish three shapes at the same time (drawings and words). How many of the corners have to match?</li><li>● Do more lines of symmetry make a piece harder or easier play? Explain why (drawings and words).</li><li>● These are two different boards that came up in your class. (give 2 photos). How many spots can you complete a shape on this board? _____ . How do you know you found all the spots?</li></ul>
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## Reflection Sheet: Quartex

Your Name: \_\_\_\_\_ Team Members: \_\_\_\_\_

### 1) What I Noticed about the Tiles after Touching and Moving Them!

a) **UNBOXING!!** Select a tile from the bag and **DRAW** it!



b) Pick up the tile and examine it. Think about and write everything about the piece that you can. Use words & drawings.

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c) **AFTER YOU FINISH THE GAME:** What else did you notice about the playing pieces when you played today? Be sure to draw pictures!

### 2) Investigating Moves in a New Game!

Today you learned how to play a new game, Quartex. When it was your turn, **what did you do to figure out where to put a tile on the board?** Be really specific – describe the steps you used and draw pictures.

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OPTIONAL: If you have played Qwirkle before, think about how Qwirkle and Quartex are **similar** and how they are **different**. Use drawings and words to explain.