

## Teacher Guide to Student Worksheet 1-The Missing Piece

**Directions:** With a partner put the assigned puzzle together. You will have 5 minutes to complete this task. At the completion of this activity, answer the questions below.

**1. What strategy did you and your partner use to put the puzzle together?**

*Answers may vary. Sample responses might include:*

- *Looked for flat edges first*
- *Matched patterns and shapes*
- *Trial and error*

**2. Was your strategy successful? Explain.**

*Answers may vary. Sample responses might include:*

- *Yes, our strategy was successful because we were able to put the puzzle together in the amount of time allocated.*
- *No, our strategy was not successful because we did not have all the pieces necessary to complete the task.*

**3. Were you able to complete the puzzle? Why or why not?**

*Answers may vary. Sample responses might include:*

- *Yes, we were able to complete the puzzle because our strategy of putting flat edge pieces together first, then matching shapes worked.*
- *No, we were not able to complete the puzzle because we did not have all the needed pieces.*

**4. Can you accurately identify the object in the puzzle even with missing pieces? Explain.**

*Answers may vary. Sample responses might include:*

- *Yes, we can accurately identify the object in the puzzle even with missing pieces because we used the shapes and patterns in the other pieces to help us name the object.*
- *No, we could not accurately identify the object in the puzzle because the other pieces didn't provide enough clues to help us name the object.*

**5. What might the missing piece look like? Illustrate your idea below.**

*Answers may vary. Students should consider adding patterns and shapes.*

**6. What elements of the puzzle did you use to recreate the missing piece?**

*Answers may vary. Sample responses might include:*

*We used the other shapes and images already present in the puzzle and deduction to recreate the missing piece.*

**7. Infer how the puzzle project is similar to the job of an historian and other scientific experts.**

*History and science share many commonalities. To identify the facts, the truth, or the story, many artifacts and/or concepts must be put together. However, often there are missing pieces that make this task challenging and can often lead to mistruths. It might take days, months, or years until the missing piece of a document or artifact can be found. Many scientists, inventors, and historians had to try many times to identify the facts. Sometimes time, technology, and different perspectives from other individuals are needed to unfold the real story.*