

Lesson Summary

Title of Lesson	Optical Illusion Toy
Grade Level	1-5
Standard	Knows a range of subject matter, symbols, and potential ideas in the visual arts
Pre-test of understanding	<p>Ask: What is the definition of “opposite”? What are some examples of “opposites”?</p> <p>Brainstorm examples of opposites such as happy/sad, in/out, top/bottom.</p> <p>In a sketchbook, draw three or more examples of opposites.</p>
Enduring Idea	We all develop symbols.
Essential Question	How can art toys show symbols?
Measurable Objective(s)	After students have accurately defined “opposites” and sketched three or more examples of opposites, <i>each student will create a thaumatrope that effectively shows an optical illusion that utilizes opposite symbols.</i>
Resources and Materials	<p>Sketchbook (one per student)</p> <p>Pencil</p> <p>Tag board (about 4-in square; two per student)</p> <p>Circle template</p> <p>Scissors</p> <p>Markers</p> <p>Drinking straw</p> <p>Masking tape</p> <p>Glue</p>
Motivation	Ask students what sorts of toys they enjoy. Inform students that toys in Victorian times were much simpler. Toys such as thaumatropes were often used for entertainment. Show an example of a thaumatrope.
Vocabulary	<p>Thaumatrope (Thaw’ muh trohp) A toy that was popular in Victorian times; A disk or card with a picture on each side that when twirled quickly creates an optical illusion</p> <p>Optical illusion In art, a drawing, painting, or other artwork that tricks the eye.</p>
Activity	<ol style="list-style-type: none"> 1. Distribute sketchbooks and pencils. 2. Tell students to draw three or more opposites. 3. Ask students to select their favorite opposites. 4. Distribute tag board, scissors, and circle templates. 5. Demonstrate how to draw around the template to create a circle on a piece of tag board.

	<ol style="list-style-type: none"> 6. Tell students to draw a circle on each tag board piece. 7. Cut out the circles. Encourage careful cutting so that edges are smooth and both circles are the same size. 8. On one circle, draw the symbol for one opposite (e.g., a symbol for up might be an arrow pointing towards the top of the circle). 9. On the second circle, draw the symbol for the opposite of the first (e.g., the symbol that is opposite of the up arrow would be a down arrow). 10. Use markers to carefully color the symbols. 11. Distribute straw, tape, and glue. 12. Demonstrate how to tape the straw to the back of one circle. 13. Tell students to tape the straw to the back of one circle. Check that the tape holds the straw firmly in place. 14. Demonstrate how to place glue close to the edge of one circle and then press the two sides together. Hold for a few moments until the two sides are adhered. 15. Hold the straw between the palms of hands and twirl to create an optical illusion.
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Differentiated Instruction

	Challenged	Target	Above
Content (Readiness)	One concept	All concepts	In-depth study
Process (Interest)	Direct instruction for each step of the process	Model what is expected	Minimal instruction; independent work
Product (Evaluation)	Group product	Group product and contribute to oral discussion	Group product and lead discussion

Assessment Rubric

	Below	On Target	Above
Thaumatrope	Thaumatrope is improperly assembled and shows lack of skill	Thaumatrope is generally well assembled, but lacks some skill of construction	Thaumatrope is properly assembled and shows skill of construction
Opposite symbols	Symbols are not opposites	Symbols suggest opposites	Symbols clearly represent opposites
Optical illusion	When twirled, an optical illusion is not evidenced	When twirled, an optical illusion is suggested	When twirled, an optical illusion is clearly evidenced

Student Check List

	Yes	No
A list of opposites is written.		
Three or more sketches of opposites are drawn in the sketchbook.		
The best opposite pair is shown on the thaumatrope.		
The opposite pairs are carefully drawn and colored.		
The thaumatrope is carefully constructed (sides match, careful use of scissors, no glue shows, the straw is firmly attached).		
An optical illusion occurs when the thaumatrope is twirled.		

Student Reflection

Discuss or write:

- 1 How are symbols important to your thaumatrope?
- 2 How does your thaumatrope show an optical illusion?