# LESSON PLAN

**Title of Lesson:** Op Art Inquiry Lesson (Patterns & Repetition)  
**Estimated Class Time:** 2 x 1 hour

**Course:** Visual Arts for Elementary Teachers – Grades 3-5

<table>
<thead>
<tr>
<th>Curriculum Objectives</th>
<th>Body of the Lesson</th>
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</table>
2. Create an original optical illusion (Op Art) design using pattern and repetition.  
3. Evaluate each space in the design to determine which color needs to be in the pattern. | **Day One:**  
*Introduction (20 minutes):*  
Inquiry of Op Art and how patterns are used to create optical illusions, with particular reference to Bridget Riley.  
- Demo famous illusions through the PowerPoint presentation. Through this PowerPoint students will be introduced to the term “Op Art” and become familiar with its definition. *refer to, and follow along with, power point presentation (which should be opened prior to this lesson)*  

**Development (40 minutes):**  
- The students will have the opportunity to experience optical illusions and how they affect vision. (Ask students what they know about optical illusions or if they know of any that they may have experienced before).  
- During this portion of the lesson give students time and sufficient instructions so that they can experience the optical illusion.  
- Do an exploration and response to Bridget Riley’s work (Shadow Play). See “Bridget Riley – Shadow Play Inquiry Plan”.  
- Display “Shadow Play” for the whole class to see.  
- Ask students observational questions, interpretive questions, and include select necessary information for the piece (see Bridget Riley – Shadow Play Inquiry Plan). Pre-read notes for inquiry so that you are better able to lead the discussion and inform the students.  
- Talk about the patterns in her work.  
- Students will be asked if they know what symmetry is (ask where the piece may be split in the middle which will make both parts look the same). Asymmetry will also be discussed at this time.  
- Also, there should be a conversation, at this time, about repetition and vertical/horizontal lines. |

**Background Information**  
- Bridget Riley was an art teacher for many years.  
- In some works, lines of color are used to create a shimmering effect, while in others the canvas is filled with tessellating patterns. Typical of these later colorful works is *Shadow Play*.  
- Op Art is a form of abstract art that gives the illusion of movement by the precise use of pattern and color, or in which conflicting patterns emerge and overlap. Bridget Riley and Victor Vasarely are its most famous exponents.  
- *Further Information available: See Inquiry Plan* |

**Materials and Resources**  
- Demonstrate how this activity is done in front of the class.
- Op Art Powerpoint
- “Shadow Play” – Bridget Riley
- Inquiry Plan
- Assessment Rubric
- Compases for each student
- White paper for each student
- Rulers for each student
- Markers & pencil crayons
- Permanent black markers (sharpies)

Tell students that they can be creative in determining the size of their circles and lines as well as the colors that they want to use for the checkerboard pattern.

Explain today’s activity using Slide 13.

Have students gather materials and begin activity.

During this time, the teacher’s role is to walk around and ensure that students are following the checkerboard pattern. The teacher may also aid students who are struggling.

Once everyone is finished the students will have the opportunity to do the class art walk. Prior to the art walk students must demonstrate that they have returned all materials by showing a clean and tidy desk area. *refer to summary and closure.*

The teacher will assess the artwork, using the rubric, before displaying them.

Below (left): “Shadow Play” (right) Checkerboard activity example.

<table>
<thead>
<tr>
<th>Vocabulary</th>
<th>Accommodation / Modification</th>
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<tbody>
<tr>
<td>- Op art</td>
<td>Accommodations: Offer students the option to do fewer circles, use stencils for circles, or have an EA draw the circles for them.</td>
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<tr>
<td>- Optical illusion</td>
<td>Modifications: Give students a template with the checkerboard pattern and circles already outlined. Offer them two colors to choose from (or choose for them) and color around the lines in each checker square.</td>
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<tr>
<td>- Patterns</td>
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<tr>
<td>- Symmetry</td>
<td>If a student in the class is colorblind, offer to have an EA or teacher assist them or place a readable label on each marker and explain a rotation strategy for each colored marker (on the checkerboard pattern).</td>
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<tr>
<td>- Asymmetry</td>
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<tr>
<td>- Repetition</td>
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<td>- Movement</td>
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<td>- Vertical/horizontal lines</td>
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</tr>
<tr>
<td>Summary and Closure</td>
<td>Assessment</td>
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<td>-----------------------------------------------------------------------------------</td>
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<tr>
<td>- Students will have a chance to share their art with other class members in a</td>
<td>- Students will be assessed on how well they followed instructions by</td>
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<tr>
<td>class walk through (where students will have a few minutes to walk around the</td>
<td>demonstrating a pattern in their artwork</td>
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<td>class to other students desks and look at their artwork). The art will then be</td>
<td>- A short rubric will be used (which will be shared with the students)</td>
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<td>displayed in hallway or on a class bulletin board.</td>
<td>based on creativity and participation. * See rubric attached</td>
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Bridget Riley- “Shadow Play” Inquiry Plan

Outcome: Evaluate designs to determine the elements of different patterns.

Artwork/Artist: “Shadow Play” Bridget Riley

Grade Level: 3-5

Theme: Op Art, Optical Illusions & Patterns/Repetition in Art

1. Observational Questions
   - What patterns do you see in this piece?
   - Do you see any geometric shapes?
   - What parts of this piece do you think are repetitive?
   - What colors do you see in this painting?

2. Interpretive Questions
   - Where is the first place that your eyes go when looking at this piece?
   - If you owned this piece of art where would you put it?
   - What does this painting remind you of?
   - Does this piece make you feel odd (dizzy, wobbly, etc.) / Do you think your eyes are playing tricks on you?
   - What is your favorite/least favorite part of this painting?
   - Does this look like it would be hard or easy to paint?

3. Selected Information
   - Bridget Riley was an art teacher for many years.
   - Her early works were mostly done in black and white. Many people explained that they induced the same sensation of skydiving (as well as dizziness).
   - After a trip to Egypt in the early 1980s, where she was inspired by colorful hieroglyphic decoration, Riley began to explore color and contrast.
   - In her colored works, the grouping of the colors affected the spaces between them to produce transitory glimpses of other colors, hence the illusion of movement.
   - In some works, lines of color are used to create a shimmering effect, while in others the canvas is filled with tessellating patterns. Typical of these later colorful works is Shadow Play.
   - “Shadow Play” is oil on canvas.
   - This painting now resides in a private collection in London, UK.
   - It has been said that Riley, in her later works, employed ‘assistants’ to do the actual paintings once she had designed them.

4. Notes for Inquiry
   - Ensure that students have an understanding or previous experience with Op Art or Optical Illusions.
   - Important Vocabulary Terms:
Op Art (adult definition) - a form of abstract art that gives the illusion of movement by the precise use of pattern and color, or in which conflicting patterns emerge and overlap. Bridget Riley and Victor Vasarely are its most famous exponents.

Repetition – the act of doing/showing something over and over again.

Optical Illusion – something that deceives (tricks) one’s eyes into seeing something that does not exist or that is other than it appears.

Patterns – a repeated or decorative design (sequence of items arranged similarly).

Symmetry – exactly similar parts facing each other or around an axis.

Asymmetry – lack of equality or ‘sameness’ between parts of something.

Movement – changing physical location or position.

If students are having trouble ‘getting’ the optical illusions offer paper copies with hints so that they will be easier for them to ‘see’.

5. Suggested Art Activities

After this inquiry you could do a variety of art activities, you could:

- Explore tessellations by having students create a ‘two-dimensional’ piece of art using repeating patterns and colors.
- Do a research project looking for tessellations and patterns in the real, everyday, world.
- Get students to investigate other famous optical illusions and share them with the class.
- Create pop art (Andy Warhol) that includes a popular/famous logo instead of Marilyn Monroe.
- Construct checkerboard patterns that include different patterning shapes to create your own optical illusion.
**Assessment rubric: Op Art Inquiry Lesson**

Name: _______________________________________

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<thead>
<tr>
<th>Evaluation criteria</th>
<th>Not there yet</th>
<th>Getting there…</th>
<th>Made it!</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Participation: The student completed the activity as per requirements, and there is evidence of time and effort in their work.</td>
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<td>Creativity: Student shows evidence of both patterns and repetition, while their own creative outlook is present.</td>
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