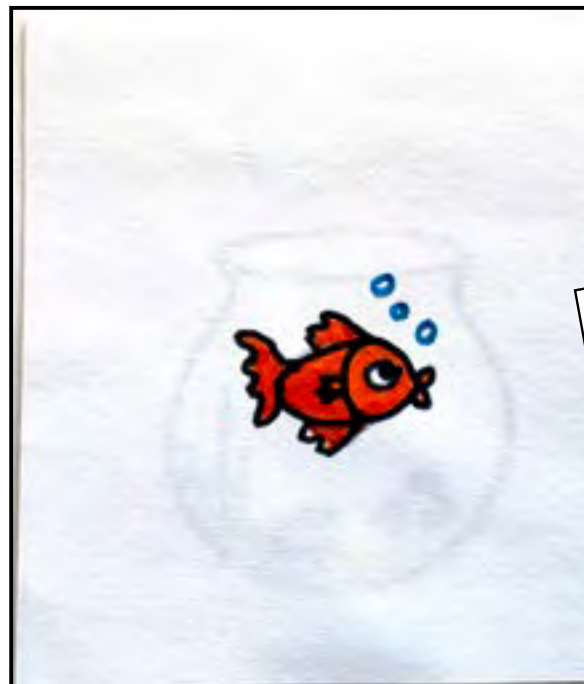


# ART ELEMENTARY

## THAUMATROPE OP ART PROJECT



**THAUMATROPE**  
Exploring Optical Illusions

Age group: Kindergarten and up  
Artist Example: John Ayrton Paice  
Big Idea: Exploring optical illusions

**Essential Questions:**

- What is an optical illusion?
- What is a thaumatrope?
- What are 2 images that when they are combined?

**Objectives: Students will...**

- Learn about thaumatrope and the possible invention of them, John Ayrton Paice.
- Discuss what perception, eye tricks, and optical illusions are.
- Create their own thaumatrope optical illusion.

**Standards:**

**Kindergarten**

- V.A.CE.2.K. Engage collaboratively in creative art-making in response to an artistic problem.
- V.A.CE.3.K. Through experimentation, build skills in various media and approaches to art-making.
- V.A.CE.4.K. Identify safe and non-toxic art materials, tools, and equipment.

**Grade 1**

- V.A.CE.1.1. Use observation and investigation in preparation for making a work of art.
- V.A.CE.1.2. Explore uses of materials and tools to create works of art or design.
- V.A.CE.1.3. Demonstrate skills and techniques.

**THAUMATROPE**  
PROJECT GUIDE

Read through the steps below to learn how to design your own thaumatrope!

**SUPPLIES:**

- White paper
- Markers
- Scissors
- Glue
- Clear tape
- Stapler

**STEP ONE:** After you've chosen your design, draw the front and back of the object on the card. Be sure to draw the object on the same side of the paper. The drawing is on the front of the card and the back of the card.

**TIP:** If you want drawing to disappear go make a mark of your design. Save the area around the drawing when you fold the card together from both sides.

**STEP TWO:** Fold the card in half and glue the edges together.

**STEP THREE:** Use a stapler to staple the card together.

**PRACTICE**

Practice ideas for your thaumatrope design below.

- In the first box draw the object whole.
- In the second box draw half of the object.
- In the third box draw the other half of the object.

Look at the spin up drawings, will it work well as a thaumatrope design?

Fill designs in all the boxes, pick the one you think will be most successful!

1. THE WHOLE IMAGE	2. HALF THE IMAGE	3. THE OTHER HALF



## OPTICAL ILLUSIONS IN ART

LESSON PLAN, PROJECT GUIDE, DEMO VIDEO & MORE

# OPTICAL ILLUSION PROJECT



This lesson pack is geared towards elementary to middle school age students.



**Perfect one-day art activity to learn about op art. No experience needed! Learn with your students.**



Teacher notes and detailed lesson plan to help you guide the project. No experience is needed!



**Project guide, demo video, teacher notes, & more**

# WHAT YOU GET

## This Project Pack Includes:

- ✔ Lesson Plan (5 pages)
- ✔ Teacher Notes (1 page)
- ✔ Demo Video (7 minutes)
- ✔ Project Guide (2 pages)
- ✔ 1 Presentation (17 slides)
- ✔ Checklists (1 page)



# LESSON PLAN & TEACHER NOTES:

- BIG IDEA
  - ESSENTIAL QUESTIONS,
  - US NATIONAL STANDARDS
  - STEP-BY-STEP INSTRUCTIONS
  - CLASSROOM SET UP
  - TEACHING TIPS
- & MORE!

## THAUMATROPE

Exploring Optical Illusions

Age group: Kindergarten and up

Artist Exemplar: John Ayrton Paris

Big Idea: Exploring optical illusions

Essential Questions:

- What is an optical illusion?
- What is a thaumatrope?
- What are 2 images that relate that make sense when viewed from different angles?

Objectives: Students will

- Learn about optical illusions
- Discuss the concept of a thaumatrope
- Create their own thaumatrope

Standards:

Kindergarten

- VA:Cr1.2.1-1.2.2-1.2.3-1.2.4-1.2.5-1.2.6-1.2.7-1.2.8-1.2.9-1.2.10-1.2.11-1.2.12-1.2.13-1.2.14-1.2.15-1.2.16-1.2.17-1.2.18-1.2.19-1.2.20-1.2.21-1.2.22-1.2.23-1.2.24-1.2.25-1.2.26-1.2.27-1.2.28-1.2.29-1.2.30-1.2.31-1.2.32-1.2.33-1.2.34-1.2.35-1.2.36-1.2.37-1.2.38-1.2.39-1.2.40-1.2.41-1.2.42-1.2.43-1.2.44-1.2.45-1.2.46-1.2.47-1.2.48-1.2.49-1.2.50-1.2.51-1.2.52-1.2.53-1.2.54-1.2.55-1.2.56-1.2.57-1.2.58-1.2.59-1.2.60-1.2.61-1.2.62-1.2.63-1.2.64-1.2.65-1.2.66-1.2.67-1.2.68-1.2.69-1.2.70-1.2.71-1.2.72-1.2.73-1.2.74-1.2.75-1.2.76-1.2.77-1.2.78-1.2.79-1.2.80-1.2.81-1.2.82-1.2.83-1.2.84-1.2.85-1.2.86-1.2.87-1.2.88-1.2.89-1.2.90-1.2.91-1.2.92-1.2.93-1.2.94-1.2.95-1.2.96-1.2.97-1.2.98-1.2.99-1.2.100
- VA:Cr2.1.1-2.1.2-2.1.3-2.1.4-2.1.5-2.1.6-2.1.7-2.1.8-2.1.9-2.1.10-2.1.11-2.1.12-2.1.13-2.1.14-2.1.15-2.1.16-2.1.17-2.1.18-2.1.19-2.1.20-2.1.21-2.1.22-2.1.23-2.1.24-2.1.25-2.1.26-2.1.27-2.1.28-2.1.29-2.1.30-2.1.31-2.1.32-2.1.33-2.1.34-2.1.35-2.1.36-2.1.37-2.1.38-2.1.39-2.1.40-2.1.41-2.1.42-2.1.43-2.1.44-2.1.45-2.1.46-2.1.47-2.1.48-2.1.49-2.1.50-2.1.51-2.1.52-2.1.53-2.1.54-2.1.55-2.1.56-2.1.57-2.1.58-2.1.59-2.1.60-2.1.61-2.1.62-2.1.63-2.1.64-2.1.65-2.1.66-2.1.67-2.1.68-2.1.69-2.1.70-2.1.71-2.1.72-2.1.73-2.1.74-2.1.75-2.1.76-2.1.77-2.1.78-2.1.79-2.1.80-2.1.81-2.1.82-2.1.83-2.1.84-2.1.85-2.1.86-2.1.87-2.1.88-2.1.89-2.1.90-2.1.91-2.1.92-2.1.93-2.1.94-2.1.95-2.1.96-2.1.97-2.1.98-2.1.99-2.1.100
- VA:Cr2.2.1-2.2.2-2.2.3-2.2.4-2.2.5-2.2.6-2.2.7-2.2.8-2.2.9-2.2.10-2.2.11-2.2.12-2.2.13-2.2.14-2.2.15-2.2.16-2.2.17-2.2.18-2.2.19-2.2.20-2.2.21-2.2.22-2.2.23-2.2.24-2.2.25-2.2.26-2.2.27-2.2.28-2.2.29-2.2.30-2.2.31-2.2.32-2.2.33-2.2.34-2.2.35-2.2.36-2.2.37-2.2.38-2.2.39-2.2.40-2.2.41-2.2.42-2.2.43-2.2.44-2.2.45-2.2.46-2.2.47-2.2.48-2.2.49-2.2.50-2.2.51-2.2.52-2.2.53-2.2.54-2.2.55-2.2.56-2.2.57-2.2.58-2.2.59-2.2.60-2.2.61-2.2.62-2.2.63-2.2.64-2.2.65-2.2.66-2.2.67-2.2.68-2.2.69-2.2.70-2.2.71-2.2.72-2.2.73-2.2.74-2.2.75-2.2.76-2.2.77-2.2.78-2.2.79-2.2.80-2.2.81-2.2.82-2.2.83-2.2.84-2.2.85-2.2.86-2.2.87-2.2.88-2.2.89-2.2.90-2.2.91-2.2.92-2.2.93-2.2.94-2.2.95-2.2.96-2.2.97-2.2.98-2.2.99-2.2.100

Grade 1

- VA:Cr1.2.1-1.2.2-1.2.3-1.2.4-1.2.5-1.2.6-1.2.7-1.2.8-1.2.9-1.2.10-1.2.11-1.2.12-1.2.13-1.2.14-1.2.15-1.2.16-1.2.17-1.2.18-1.2.19-1.2.20-1.2.21-1.2.22-1.2.23-1.2.24-1.2.25-1.2.26-1.2.27-1.2.28-1.2.29-1.2.30-1.2.31-1.2.32-1.2.33-1.2.34-1.2.35-1.2.36-1.2.37-1.2.38-1.2.39-1.2.40-1.2.41-1.2.42-1.2.43-1.2.44-1.2.45-1.2.46-1.2.47-1.2.48-1.2.49-1.2.50-1.2.51-1.2.52-1.2.53-1.2.54-1.2.55-1.2.56-1.2.57-1.2.58-1.2.59-1.2.60-1.2.61-1.2.62-1.2.63-1.2.64-1.2.65-1.2.66-1.2.67-1.2.68-1.2.69-1.2.70-1.2.71-1.2.72-1.2.73-1.2.74-1.2.75-1.2.76-1.2.77-1.2.78-1.2.79-1.2.80-1.2.81-1.2.82-1.2.83-1.2.84-1.2.85-1.2.86-1.2.87-1.2.88-1.2.89-1.2.90-1.2.91-1.2.92-1.2.93-1.2.94-1.2.95-1.2.96-1.2.97-1.2.98-1.2.99-1.2.100
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- VA:Cr2.2.1-2.2.2-2.2.3-2.2.4-2.2.5-2.2.6-2.2.7-2.2.8-2.2.9-2.2.10-2.2.11-2.2.12-2.2.13-2.2.14-2.2.15-2.2.16-2.2.17-2.2.18-2.2.19-2.2.20-2.2.21-2.2.22-2.2.23-2.2.24-2.2.25-2.2.26-2.2.27-2.2.28-2.2.29-2.2.30-2.2.31-2.2.32-2.2.33-2.2.34-2.2.35-2.2.36-2.2.37-2.2.38-2.2.39-2.2.40-2.2.41-2.2.42-2.2.43-2.2.44-2.2.45-2.2.46-2.2.47-2.2.48-2.2.49-2.2.50-2.2.51-2.2.52-2.2.53-2.2.54-2.2.55-2.2.56-2.2.57-2.2.58-2.2.59-2.2.60-2.2.61-2.2.62-2.2.63-2.2.64-2.2.65-2.2.66-2.2.67-2.2.68-2.2.69-2.2.70-2.2.71-2.2.72-2.2.73-2.2.74-2.2.75-2.2.76-2.2.77-2.2.78-2.2.79-2.2.80-2.2.81-2.2.82-2.2.83-2.2.84-2.2.85-2.2.86-2.2.87-2.2.88-2.2.89-2.2.90-2.2.91-2.2.92-2.2.93-2.2.94-2.2.95-2.2.96-2.2.97-2.2.98-2.2.99-2.2.100

Grade 2

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### TEACHER NOTES

OVERVIEW:

- This easy, fun, one-day project is perfect as a filler project, sub plan, or last day before break activity.
- I use this lesson for the second to last or last day before summer break. The simple supplies make prep and clean up so easy and can be used with every grade level. Since there is little teacher assistance needed once students assemble their first Thaumatrope, I'm able to help students finishing up other projects, clean/pack up the art room before the long break and enjoy interacting with the kiddos as they show off their fun projects.
- This is a great project to use after wrapping up a unit on animation.

TIPS:

- Assign students to be helpers once they successfully finish their own.
- If working on a dark surface place the square of paper on white drawing paper to help the lines become more visible.
- Glue sticks are easier for younger students to use and squares can be pulled apart and reused. If using bottled glue demonstrate how very small dots are all that is needed.

5

PAGES

# THAUMATROPE

## PROJECT GUIDE

Read through the steps below to learn how to design your own thaumatrope.

### SUPPLIES:

White paper  
White paper cut in 2"x2" squares  
Pencil  
Thin markers  
Scissors  
Clear tape  
Rubber band  
Glue



**STEP ONE:** After you practice designs for your thaumatrope, draw the first part of your picture on the square sheet of paper. After drawing with a pencil, go over your lines in black and add colour.

**TIP:** If your second drawing is designed to go inside of your first drawing, leave the space around both drawings white to help them blend together more easily.



STEP TWO: Draw your second piece of paper on top of your first drawing. Add your second object where it is supposed to end up in your first drawing.



STEP THREE: Cut your rubber band to turn it into a rubber string. Then your first drawing over. Place the rubber band across the middle of your drawing. Tape it down using clear tape.

# THAUMATROPE

## PROJECT GUIDE

Read through the steps below to learn how to design your own thaumatrope.

### SUPPLIES:

White paper  
White paper cut in 2"x2" squares  
Pencil  
Thin markers  
Scissors  
Clear tape  
Rubber band  
Glue



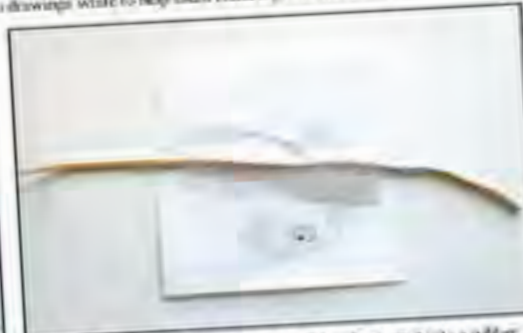
### STEP ONE:

After you practice designs for your thaumatrope, draw the first part of your picture on the small square sheet of paper. After drawing it in pencil, go over your lines in black and add colour.

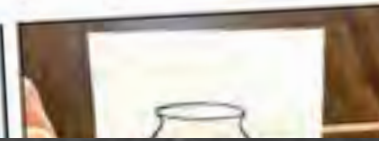
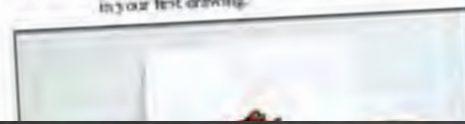
**TIP:** If your second drawing is designed to go inside of your first drawing, leave the space around both drawings white to help them blend together more easily.



**STEP TWO:** Draw your second piece of paper on top of your first drawing. Add your second object where it is supposed to end up in your first drawing.



**STEP THREE:** Cut your rubber band to turn it into a rubber string. Then your first drawing over. Place the rubber band across the middle of your drawing. Tape it down using clear tape.



## PRACTICE

Practice ideas for your thaumatrope design below.

1. In the first box draw the object whole.

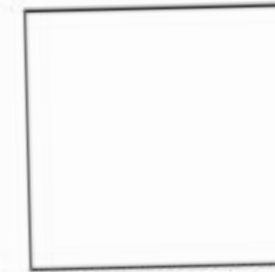
2. In the second box draw half of the object.

3. In the third box draw the other half of the object.

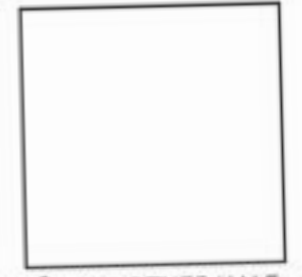
Look at the split up drawings, will it work well as a thaumatrope design? Fill designs in all the boxes, pick the one you think will be most successful.



1. THE WHOLE IMAGE



2. HALF THE IMAGE



3. THE OTHER HALF



1. THE WHOLE IMAGE



2. HALF THE IMAGE




3. THE OTHER HALF

# ACTIVITY & GUIDE

COLOR & COLOUR SPELLING

PROJECT GUIDE, PRACTICE SHEET, 2 PAGES



How to Access the File via

**GOOGLE DRIVE & YOUTUBE**

[Click here to watch the video on YouTube](#)

[Click here to download from my Google Drive](#)

\*Choose which link to click above.

\*You will be directed to Google Drive or YouTube



# DEMO VIDEO

A VISUAL TO SHOW THE STEPS

7 MINUTES LONG

# Today:

- ❑ Decide what object to draw.
- ❑ Draw one half on a small, square piece of paper.
- ❑ Outline it and add color.
- ❑ Place a second white square on top of your first drawing, use it as a guide to place the second half of the object.
- ❑ Outline it and add color.
- ❑ Cut a rubber band into a string.
- ❑ Tape the rubber band to the back, middle of the first drawing.
- ❑ Glue the second drawing UPSIDE DOWN on top of the rubber band.
- ❑ See if your thaumatrope works!
- ❑ If you have extra time, make a second one.



## What is an optical illusion?

- An optical illusion is an image that can trick your brain into seeing something that is not really there.
- For example, look at the image on the right. It is actually a 3D object, but it looks like a 2D image.



## Inventor to Know: John Ayrton Paris

- John Ayrton Paris (1791-1868) was an English inventor and scientist.
- He is best known for his invention of the thaumatrope, a toy that creates an optical illusion when spun.
- He also invented the first camera lucida, a device that projects a 3D image onto a 2D surface.



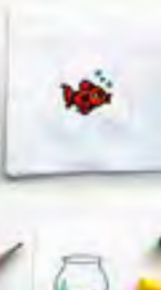
## What is a Thaumatrope?

- A thaumatrope is a toy that creates an optical illusion when spun.
- It consists of two drawings of different objects on opposite sides of a flat, circular object.
- When the object is spun, the two drawings appear to merge into a single image.



## Your Project

- You will design your own thaumatrope.
- Think about an object that can be split into two drawings, similar to the flowers and vase example.
- Follow the steps to make your thaumatrope.



## Step One:

- Decide what object you want to draw.
- Think about what both halves need to be placed on. It is important to make sure the two halves can be joined together.
- Draw the first half on the back of the paper.



## Step Two:

- Get another small, square piece of paper.
- Lay it on top of your first drawing. You should be able to see your first drawing through the paper.



## Step Three:

- Cut the rubber band so it becomes a line.
- Center it on the back of your first image.
- Tape it down using clear tape.

## Step Five:

- Pick up the rubber band between your fingers, one side to each hand.
- Roll the rubber band between your fingers to make the image flip.



# PRESENTATION

VISUALLY SHOW INFORMATION

17 SLIDES

NAME: \_\_\_\_\_

# THAUMATROPE

## CHECKLIST

- \_\_\_\_\_ A design was created that has 2 parts of one image.
- \_\_\_\_\_ Half of the object is drawn on one paper, the other half is drawn on a second paper.
- \_\_\_\_\_ The pencil lines are outlined in a dark color and color is added to the design.
- \_\_\_\_\_ The rubber band was properly placed.
- \_\_\_\_\_ The 2 drawings are glued together, one is upside down.
- \_\_\_\_\_ When the rubber bands are rolled it spins the design making it look like one image.
- \_\_\_\_\_ The student cared for supplies and cleaned up after themselves.

# CHECKLIST

CHECK THAT EACH STEP IS COMPLETED, 1 PAGE



# BUYERS LOVE MY ART LESSONS:

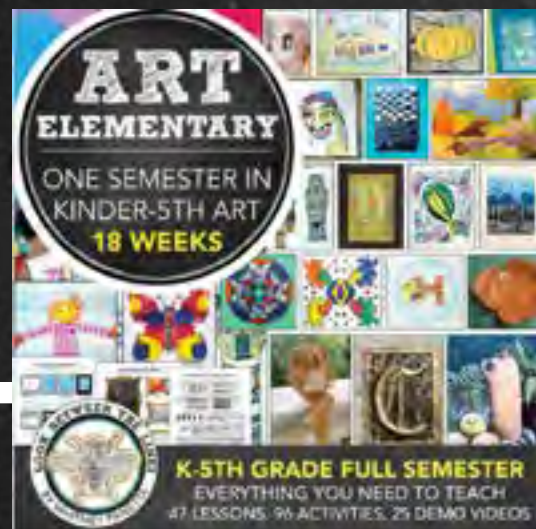
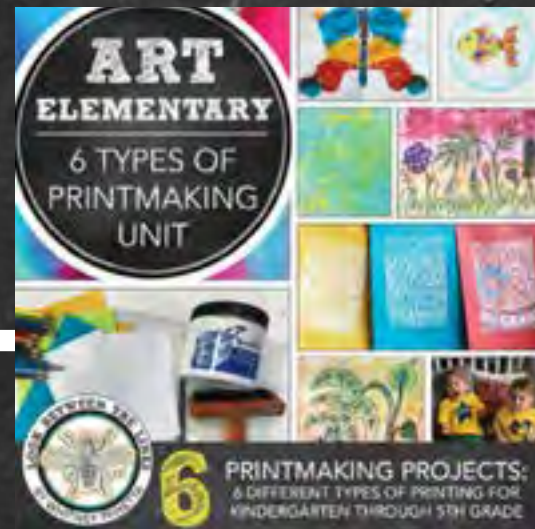


"This was so helpful to my students! The PowerPoint along with it was such a great resource and I will definitely be using this every year!"



"Fabulous resource! Students loved it!!!!  
Thank you for sharing!"

# CHECK OUT MORE PRODUCTS:



Check out more projects for elementary through high school students.

Grab early finishers for those quick artists or an entire curriculum so you can focus on teaching.

[VIEW MORE HERE](#)

# LOOK BETWEEN THE LINES

## BY WHITNEY PANETTA



I'm Whitney, a former art teacher turned art curriculum developer. I now focus on designing art lessons, resources, & full curriculums for elementary, middle, high school art teachers, homeschool parents, & general art enthusiasts.

I am so glad to still be connected to the world of art education and I love seeing my resources "in the wild" all over the globe. Reach out anytime with questions or comments at [whitneywpanetta@gmail.com](mailto:whitneywpanetta@gmail.com).