Fairbanks North Star Borough School District
Art Center Art Activity Kit©

Magic Machines

GRADE: 3 **TIME: one session**

Developed by Linda Pfisterer, Art Specialist

KIT INCLUDES:

- lesson plan
- 2 books:
  - --Diego Rivera: Getting to Know the World's Greatest Artists
  - --Simple Machines
- 2 step-by-step lesson boards
- 6 simple machine example boards
- 15 handout sheets simple machines
- 2 sets of machine mural boards
- vocabulary board

MATERIALS:

- black markers: each student needs a wide and a thin tipped marker
- colored marker set to share:
- 9x12" white construction paper

LESSON DESCRIPTION:

Students learn about simple machines and how they work by looking at and discussing examples. They invent their own machine using colored markers and ingenuity.

VOCABULARY:

- lines
- shapes
- inventions
- simple machines: gears, wheels, pulley, inclined plane, screw, wedge

ART ELEMENTS:

_x_ Line
_x_ Shape/Form
_x_ Color
___ Value
___ Texture
___ Space/Perspective

ART PRINCIPLES:

_x_ Pattern
___ Rhythm/movement
___ Proportion/Scale
___ Balance
___ Unity
___ Emphasis

CONTENT CONNECTIONS:

Science: simple machines and inventions

THEMES: art and industry

OBJECTIVES AND ASSESSMENT CRITERIA

1. Students will learn the types of simple machines and be able to use simple machine words.
2. Students will recognize that artists get ideas for artwork from man-made objects.
3. Students will identify the basic shapes that can be put together to draw a machine invention.
4. Students will use markers and their imagination to 'build' an invention of a simple machine.

PREPARE:

Before beginning this lesson:

1. Study the many types of simple machines. (gears, wheels, pulleys, inclined plane, screw, wedge) Students might even use Tinker toys to see if they can build the many parts of simple machines. This also helps them to understand the importance of connectors.
2. Have students brainstorm ideas for useful machines that need to be invented; do this through journal writing and drawing. Allow students to share some of their invention ideas with other students. Set out black and multi colored markers, plus white 9x12" construction paper when they are ready to start.

ENGAGE AND EXPLORE:

Why did people invent things such as the wheel, electricity, or the airplane? Because there was a need for these inventions! What would you like to invent to make your life easier?

Read the book, Getting to Know the World's Greatest Artists. Look at the mural, *Detroit Industry*, painted by Diego Rivera. Diego was invited to paint murals in the art museum in Detroit, Michigan--a city that is known for manufacturing cars. Have students find simple machine parts in the murals.

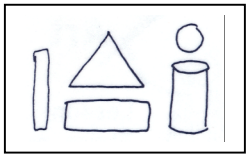
Artists like to use imagination to create art, but they also do some research about what they are drawing. Diego found out how machines look and operate and put that information in his art. Invite students to use their imaginations as they create their own "Magic Machines." The machine they draw might have a real or imaginary purpose. Let students share what kind of machine would be helpful to them.

Read the book Simple Machines to get ideas about what could be included in the machine drawings. This is the kind of research Diego Rivera did for his murals.

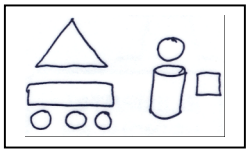
CREATE:

Drawing the "Magic Machines."

Teacher demonstration gives students confidence.

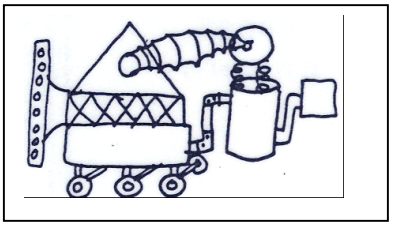


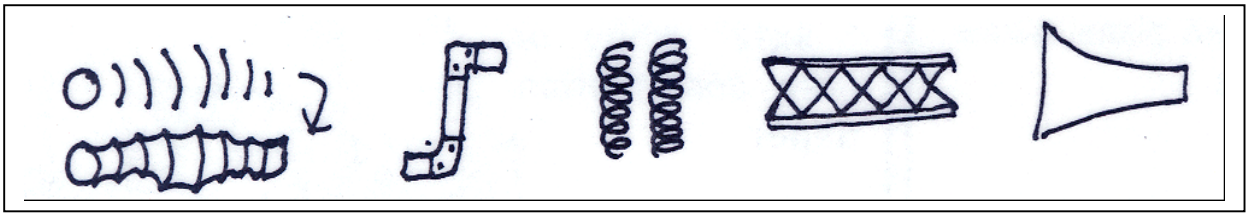
1. Draw large shapes to begin making your machine.
   Start with rectangles and squares.
   Use wide tip black marker for boldness.



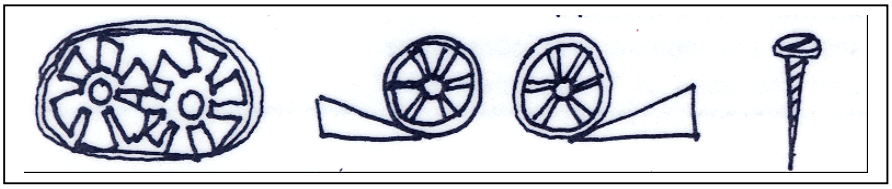
2. Add other shapes and sizes. It works best when shapes appear to be floating. (Don't overlap).

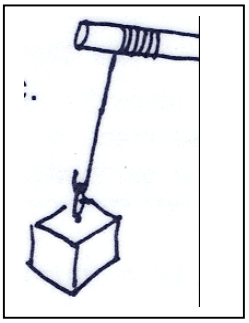
3. Now add connectors with the fine tip marker so that the machine shapes fit together and appear to connect for a logical reason. You may want to demonstrate how to make these.



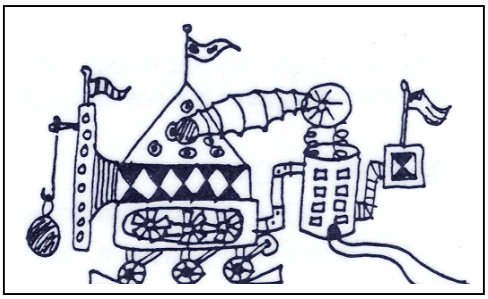


4. Add simple machines within your machine. Gears, pulleys, wheels, inclined planes (ramps), screws and wedges all help your machine appear to look authentic.

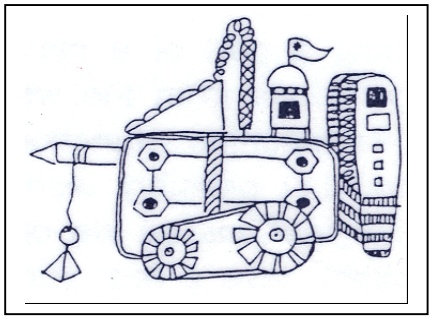


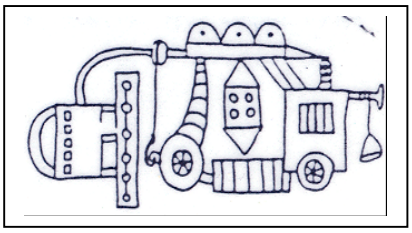


5. Add more detail such as repeated circles or rectangles inside the larger shapes.
Flags add a nice touch of embellishment.



6. Add color using the wide tip color pens.
Use color only in small spaces.
Filling in large areas looks messy and takes away from the careful line drawing.





7. With the thin marker, sign your name in the lower right hand corner.
Mount this on a larger dark paper for display.

EXTENSIONS:

1. Have students name and describe their machines to the class.

2. Write a description or a poem about the machine and what it does.

CLOSE:

ASSESSMENT: Group Discussion Prompt-Group Critique Prompts-Teacher project assessment tools-Teacher student assessment tool-Student self assessment tool

Teacher administered assessment tool

DN.	OK	UP	Lesson_____ Teacher_____ Grade_____Date_____Number of Students_____
			Using the thumbs up, ok, and down technique, ask your students the following questions and record their answers. (K=knowledge, S=skills, C= creativity, A=attitude, E=engagement
			1. Did you find at least two simple machines in the Diego Rivera murals? (K)
			2. Can you name at least 2 different shapes in your machine drawing? (K)
			3. Did you draw at least 2 shapes and 2 simple machines in your invention? (S)
			4. Did you add small amounts of color to enhance your machine? (S)
			5. Did you add an imaginative touch to your art? (C)
			6. Did you actively listen and follow directions? (A)
			7. Did you do your best during this lesson? (E)

Teacher self-critique

8. My teaching of this lesson:

1 2 3 4 5 6 7 8 9 10

needed improvement was highly successful

9. What would I do differently next time?

ALIGNMENT:

Alignment of Standards:	**Alignment of GLE's:**
Art: A1,2,3,4; B4,5; C4,5; D6 English: A,B,D Math: B Science: B	

CREDITS:

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