

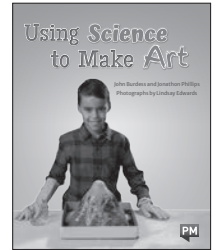
# Using Science to Make Art

PM Level 25

Emerald

**Text Type** Procedure

**Running Words** 1065



## Preparing for Guided Reading

### Prior Knowledge

- Talk with students about what art is. Invite them to respond to artworks around the school and discuss the role that art plays in our lives.

### Orientation to the Text

- People don't often associate science with creativity, but solving problems with science requires imagination and originality. See how two science-based activities can result in artworks that are both interesting and informative.

## Building the Balanced Reader

### Grammatical Conventions

- Draw students' attention to the structure of the sentences in the steps of the procedures. Talk about what tense the sentences are in and the fact that they generally start with a verb.

### Vocabulary

#### Key Vocabulary

ability, artist, axle, bristles, carbon dioxide, chain reaction, creativity, dab, energy, eruption, funnel, lava, lever, liquid, magma, pressure, ramp, Rube Goldberg machine, scientific, scientists, transferred, vinegar, volcano, wheel

### Spelling

- Make a link between the word *pressure* and the base *press* for students. Discuss how the sound the double 's' makes changes when the suffix 'ure' is added.

### Visual Literacy

- Cover the images in the procedures and re-read the text with students. Ask them to suggest why the pictures were included and what effect it would have on the reader if they were not there.

### Focusing on the Book – Guided Reading

- Look at the front cover and read the title with students. Explain that the text is a procedure. Ask, *What features would you expect to find in this type of text?*

- Read to page 4. Revise what cause and effect is. Ask, *What causes a volcanic eruption? What effect does this have?*
- Continue to page 5. Ask, *Why does a procedure need a goal?*
- Read the Materials and the Steps for building and painting the volcano. Ask, *Why did the authors include details such as colours in the materials? How are the steps in the procedure ordered?*
- Continue to page 17. Ask, *What caused the carbon dioxide to form? What effect did this have?*
- Read pages 18–19 and ask students to predict what they will find in the procedure. Ask, *What information will the authors provide? How will it be organised?*
- Read the steps to set up the Rube Goldberg machine. Ask, *Do you think the steps are easy to follow? Why or why not?*
- Invite students to identify examples of cause and effect as they read to the end of the text. Look at the Transfer of Energy diagram together and talk about the causes and effects in the chain reaction.

### Comprehension

- What is a Rube Goldberg machine? (*Literal*)
- Why do you think tissues are glued over the newspaper to make the volcano? (*Inferential*)
- Why do you think the authors chose to present this text as a procedure? Do you think this was a good way to convey the information? (*Applied Knowledge*)

### Follow-up Activities

- In small groups, have students make a Rube Goldberg machine using materials in the classroom. Allow each group to present the problem their machine solved and to demonstrate how it works.
- Read a picture story book with students and ask them to think about the causes and effects in the text. Talk about each one and whether there were any chain reactions involved in the events.
- Ask students to write a response to the two artworks described in the text. Guide them to include the context, to describe the art and how it was created, and to give their opinion about the artworks that were created.

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## Learning Intentions

- We are learning to understand causes and effects.
- We are learning to identify and describe the parts of a procedure.

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## Success Criteria

- I can explain how one event or reaction in the text leads to another.
- I can identify the effects of events and reactions in the text.
- I can find, name and describe the goals, materials and steps in a procedure.

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## Guided Reading Notes

Student's name	Reading focus	Observations/notes	For follow-up