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PM

Science can be used to make wonderful art, and art can be used to help people understand interesting scientific processes. In this book, learn how to use science to make two exciting works of art: an exploding volcano and a Rube Goldberg machine that pushes a toy car over a finish line.



Procedure

Nelson

ISBN 978-0170332279

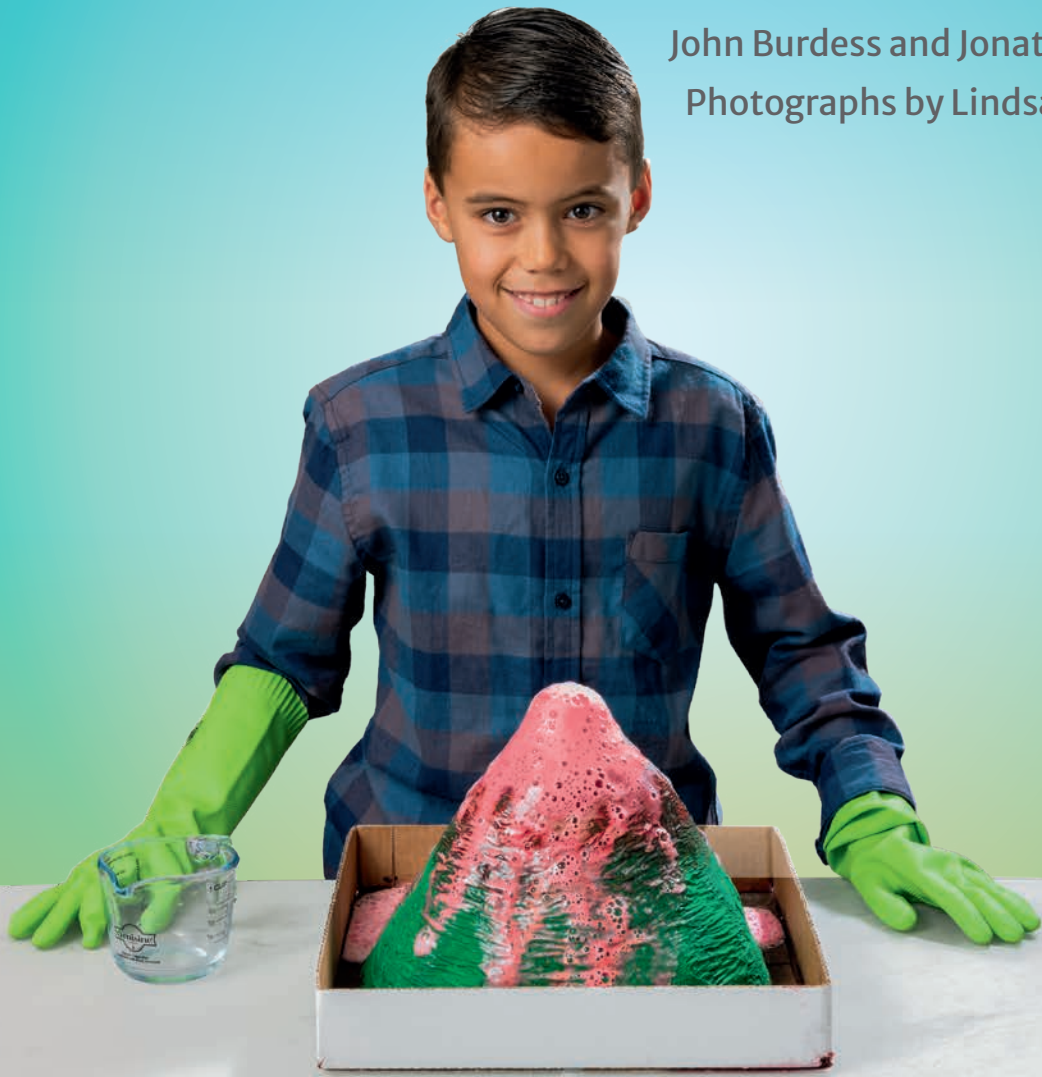
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Level
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PM
Using Science to Make Art
John Burdess and Jonathon Phillips

Using Science to Make Art

John Burdess and Jonathon Phillips
Photographs by Lindsay Edwards



PM

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Science and Art

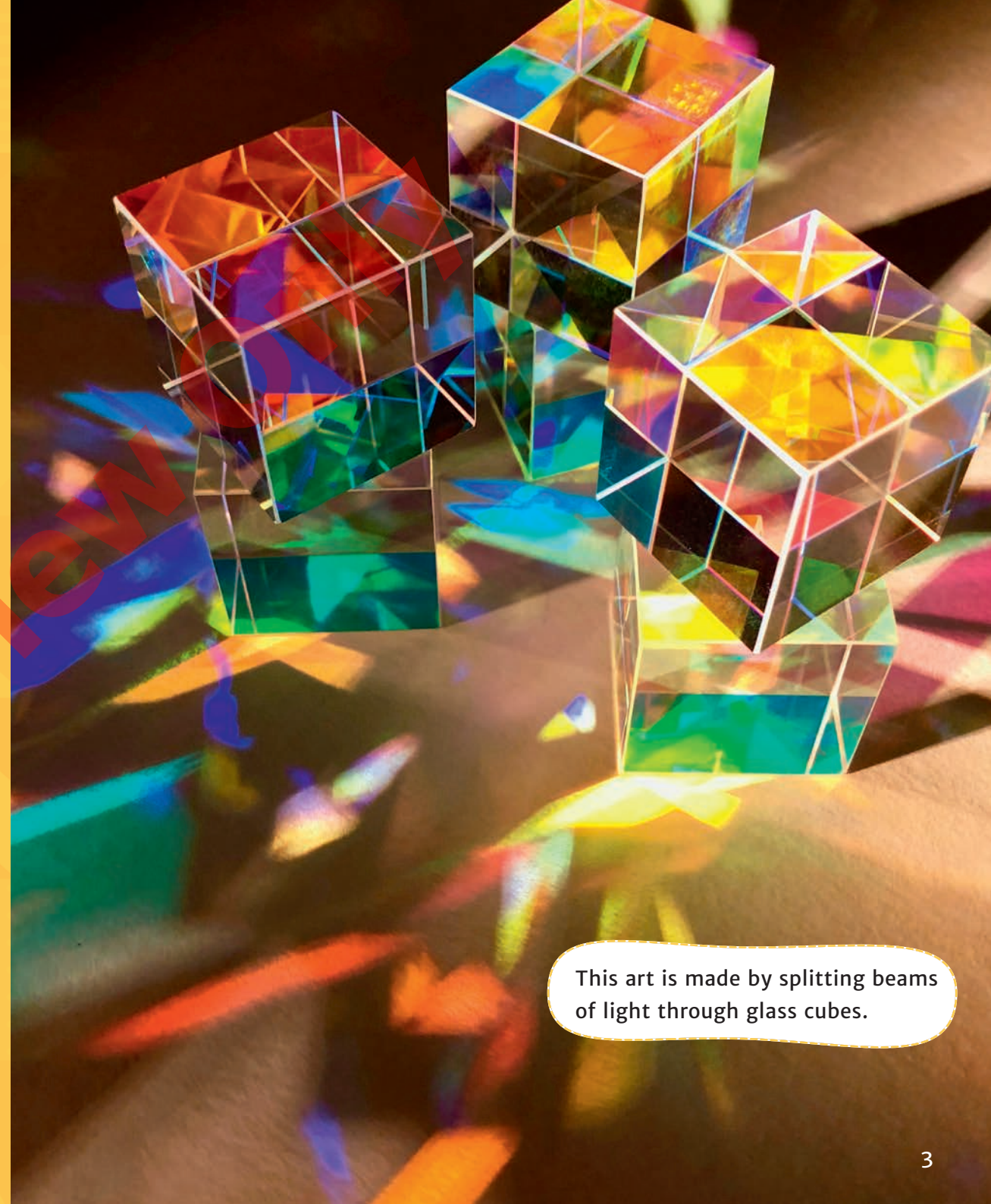
“Science and art sometimes can touch one another, like two pieces of the jigsaw puzzle which is our human life ...”
– M. C. Escher (artist)

Artists are known for their creativity, or their ability to use their imaginations to invent and make things. However, scientists need to be creative, too. Artists use their creative skills to make wonderful works of art, and scientists use their creative skills to solve problems. Art can also help us to understand and enjoy scientific processes.

In this book, there are two activities that use science to make colourful and exciting artworks.



This art using living microbes is so small it can only be seen through a microscope.



This art is made by splitting beams of light through glass cubes.

Make a Model of an Erupting Volcano

How a Volcano Erupts

A volcano is a mountain or hill with an opening in its surface. A volcanic eruption occurs when hot gases and melted rock, called **magma**, move up to Earth's surface through cracks. Some flows across the land as **lava**; some explodes into the air as volcanic ash. This is similar to when a can of fizzy drink is shaken up. Pressure builds up inside the can. When the can is opened, the pressure is released and the liquid sprays out.

When a volcano erupts it can cause widespread destruction. But it can also create fertile soil for farming, and new landforms.

The active volcano Anak Krakatau is in Indonesia.

Goal

To make a model showing what happens when a volcano erupts



Materials

- a clean, empty plastic bottle (lid removed), about 16 centimetres tall
- a shallow cardboard box about the size of a pizza box
- masking tape
- 20 sheets of newspaper
- some plastic containers
- measuring spoons
- white glue
- a box of tissues



- paintbrushes
- coloured paints
- rubber gloves
- 2 tablespoons of baking soda
- 4 drops of red food colouring
- some dishwashing liquid
- a small jug
- 8 tablespoons of white vinegar
- a funnel

