
Phenomenal
SCIENCE
1
STUDENT BOOK
Chelsea Riley
Pearson

# Phenomenal SCIENCE

1

## STUDENT BOOK

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Pearson

# Content Table

# Do you have a problem?

## When Something Goes Wrong

When something goes wrong, we say we have a **problem**. Sometimes, things **break**, get old, or stop working properly. Or, we need to change something to make it work better. When we face problems, we look for **solutions**. Some problems are easy to **fix**, but others may require more time and more people to solve it.

**Word Box**

problem
break
solutions
fix

1. **Think about a problem you've had. How did you solve it? Draw it in your notebook.**

Phenomenal Video: Let's Do It!

# What are problems and solutions?

## Identify a Problem

To **identify** a problem is to observe and recognize it. Identifying a problem is the first step to take toward fixing it.

**Word Box**
identify

1. **Draw something you had that was broken.**

2. **Circle the photos that show problems.**

1 

2 

3 

# Find a Solution

When you have a problem, you need a solution. A solution is a way to **solve** a problem.

**Word Box**
solve

Problems can be uncomfortable, so fixing them is important. Sometimes, there is more than one way to solve a problem. Be open-minded! Think of all the possibilities! We should always look for the best solution.

**3. Match the problems to the solutions.**

1 

2 

3 

a 

b 

c 

**4. With a classmate, think about ways to solve these problems.**

feeling cold

hole in pocket

messy hair

broken plate

uneven teeth

# Make a Plan to Solve It!

Once you identify the problem, and have an idea about how to solve it, you need a **plan**. A plan is how you are going to put your idea into action. Sometimes, it's good to make a plan alone. Other times, it's good to work with others.

**Word Box**
plan

**5.** **In pairs, look at the picture of the pipe. In your notebook, list three ways you could fix the problem.**


**6.** **How do you solve your problems? Underline your answer.**

1 I prefer to think about my plans alone.

2 I prefer to talk with others about my plans.

Lesson 2

# How do ideas become solutions?

## Make a Design

A **design** is anything that makes your plan visible. It can be in writing, it can be a drawing, or it can be a **model**. A model is often smaller and simpler than the final product. Others can give you suggestions and opinions about your design.

**Word Box**
design
model
tool

## Choose Tools

A **tool** is a device that helps us do an action. Tools help us cut, paste, tie, punch holes, connect, curl, and bend materials. You need to choose the right tools to make your design.

**1. Match the actions to the pictures.**

1 writing 2 drawing 3 model

a 

b 

c 

**2. Think about the tools you know. With a classmate, complete the following directions.**

1 Name a tool that helps you cut things.

2 Name a tool that helps you put two objects together.

3 Name a tool that helps you punch holes in things.

# Choose Materials

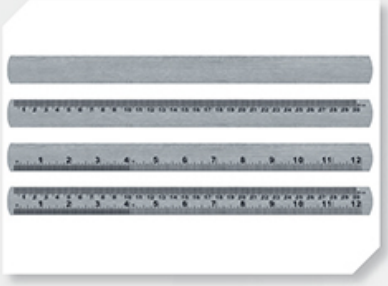
A **material** is what you use to create your solution. The right materials are important for your solution to work well.

**Word Box**
material

**3. Imagine you need to invent a ramp for a toy car to roll down fast. Circle the materials you need.**

1

cardboard

3

rulers

2

pipe cleaners

4

wood

**4. In your notebook, design a ramp for the toy car.**

5. **In pairs, identify the problem in the picture.**

6. **Circle the solutions you would use to solve the problem in Activity 5.**

1 

garbage bag

2 

recycle bin

3 

broom and dustpan

4 

shovel

## Share Solutions

**Word Box**
share

Knowing how to **share** solutions is important. How can you share your solution with others? You can write, talk, draw, show pictures, and present the model you made.

Lesson 3

# How can we solve a problem?

## Identify a Problem

Birds sometimes have difficulty finding food in winter. Can you identify the problem? Can you help these birds?

**1. Complete the sentences.**

1 Birds eat _____.

2 Birds eat with their _____.

## Think of a Solution

Can you design and make a bird feeder? What will your bird feeder need? How big are the birds near you? Think about how to protect the bird feeder from different weather conditions and other animals.

bird feeder

## Make a Plan

Look around your neighborhood for ideas. Do any of your neighbors have bird feeders? You can also look online for more ideas. What will you need to make it?

**2. In your notebook, draw your bird feeder design.**

## Choose Your Tools and Materials

Word Box
test

Based on your design, what tools and materials do you need? Look around your home and school. Can you recycle any of the materials from these places?

## Test Your Design

Construct your bird feeder. **Test** it outside for a few days to see if any birds come to feed there. Can your bird feeder withstand all weather conditions?

## Redesign, if Needed

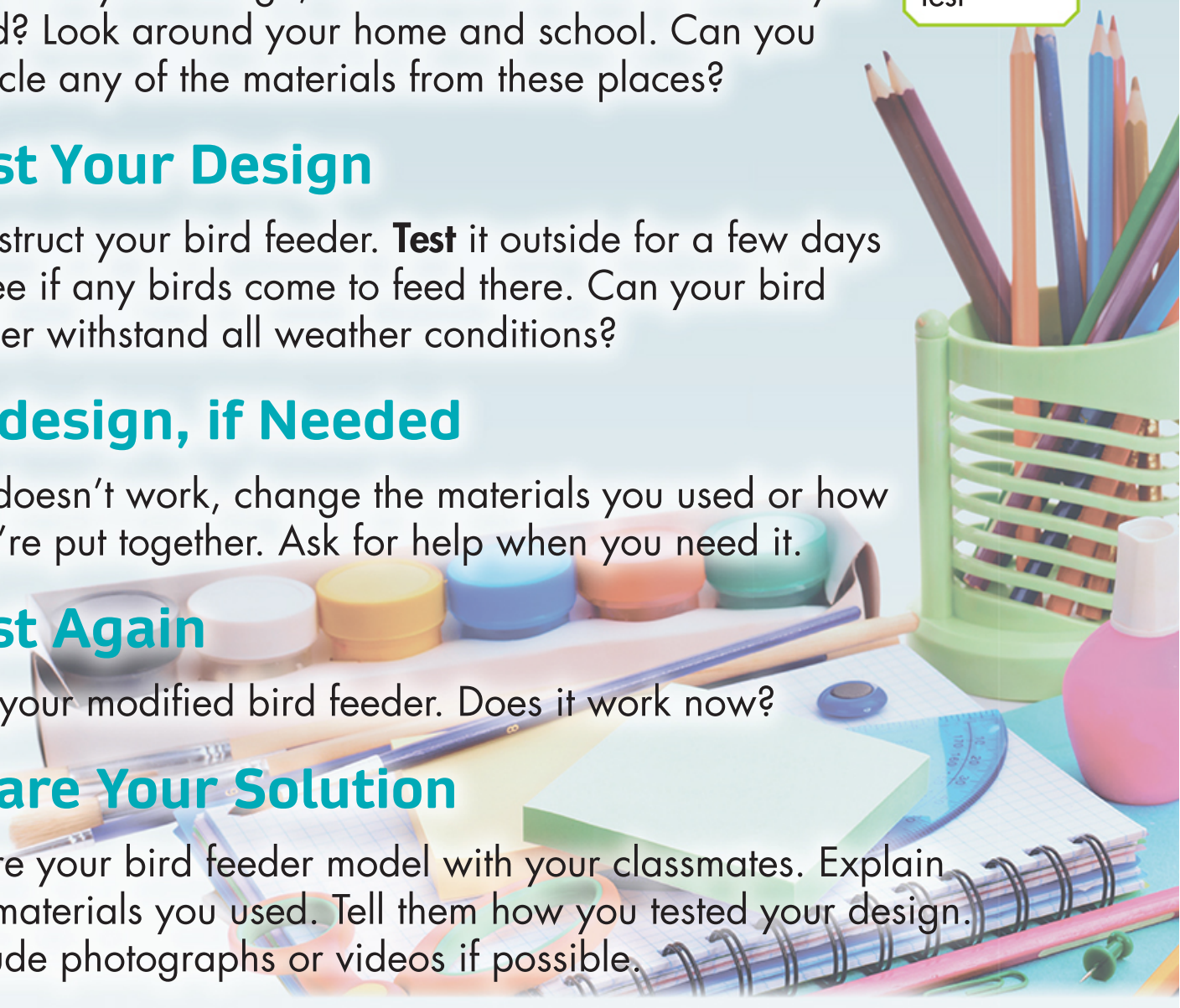
If it doesn't work, change the materials you used or how they're put together. Ask for help when you need it.

## Test Again

Test your modified bird feeder. Does it work now?

## Share Your Solution

Share your bird feeder model with your classmates. Explain the materials you used. Tell them how you tested your design. Include photographs or videos if possible.



3. **Read the questions. Write your classmates' names in your notebook.**

   1 Who built a bird feeder that also keeps birds safe?

   2 Who built a bird feeder that is resistant to weather conditions?

   3 Who built a bird feeder that the most birds ate from?

   4 Who do you think built the best bird feeder? Why?