Design and Test a Solution

Grade 4 Science Worksheet - Building Confidence

Name _____ Date _____

Circle the answer.

1. Problem: younger students cannot reach the classroom light switch. Which is a constraint?

   the solution is safe to use

   younger students can turn the light on

   the solution cannot change the wall's wiring

2. Materials: 10 straws, 1 meter of tape. Goal: a tower at least 40 cm tall that holds a tennis ball. Which is a constraint?

   the tower holds a tennis ball

   the tower is at least 40 cm tall

   use only 10 straws and 1 meter of tape

3. Materials: one shoe box, cotton balls, foil. Goal: keep an ice cube for 60 minutes. Which plan stays within the materials?

   line the box with foil and pack cotton around the ice

   wrap the ice in a wool sock

   put the ice in a freezer bag in a cooler

4. A team's toy car rolls off its ramp because the ramp has no sides. What is the best fix?

   add short walls to the ramp edges

   make the ramp steeper

   paint the ramp a new color

Scan to get this marked free. No screen time for your child.
Print it · do it in pencil · scan it · PencilGo picks the next sheet.

Design and Test a Solution

Answer Key - Grade 4 Science Worksheet - Building Confidence

Circle the answer.

1. Problem: younger students cannot reach the classroom light switch. Which is a constraint?

   the solution is safe to use

   younger students can turn the light on

   the solution cannot change the wall's wiring

2. Materials: 10 straws, 1 meter of tape. Goal: a tower at least 40 cm tall that holds a tennis ball. Which is a constraint?

   the tower holds a tennis ball

   the tower is at least 40 cm tall

   use only 10 straws and 1 meter of tape

3. Materials: one shoe box, cotton balls, foil. Goal: keep an ice cube for 60 minutes. Which plan stays within the materials?

   line the box with foil and pack cotton around the ice

   wrap the ice in a wool sock

   put the ice in a freezer bag in a cooler

4. A team's toy car rolls off its ramp because the ramp has no sides. What is the best fix?

   add short walls to the ramp edges

   make the ramp steeper

   paint the ramp a new color