Design and Test a Solution

Grade 4 Science Worksheet - Challenge Me

Name _____ Date _____

Circle the answer.

1. A pet-door design keeps out cold and lets a cat through. Test: the cat gets through, but cold air leaks at the edges. What should the team improve first?

   change the flap color add a bell for the cat make the opening bigger

   seal the edges of the flap

2. A team's bridge held 30 washers, meeting the goal of 25. It bent in the middle. What is a good next step?

   stop, because the design can never improve

   strengthen the middle so it holds more safely

   use fewer washers next time

   remove the middle support

3. A team builds a cardboard boat. Criterion: hold 20 pennies. Constraint: one sheet of cardboard. Test: it sinks at 12 pennies because water leaks in. What should change?

   paint the boat a brighter color

   use two sheets of cardboard

   seal the seams with tape

   test with 12 pennies only

4. A team built three tower ideas but tested none. They pick the tallest one. Why is this a weak choice?

   testing is only for the final design

   they should pick the shortest one

   they don't know if it meets the criteria

   the tallest tower always falls

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Answer Key - Grade 4 Science Worksheet - Challenge Me

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