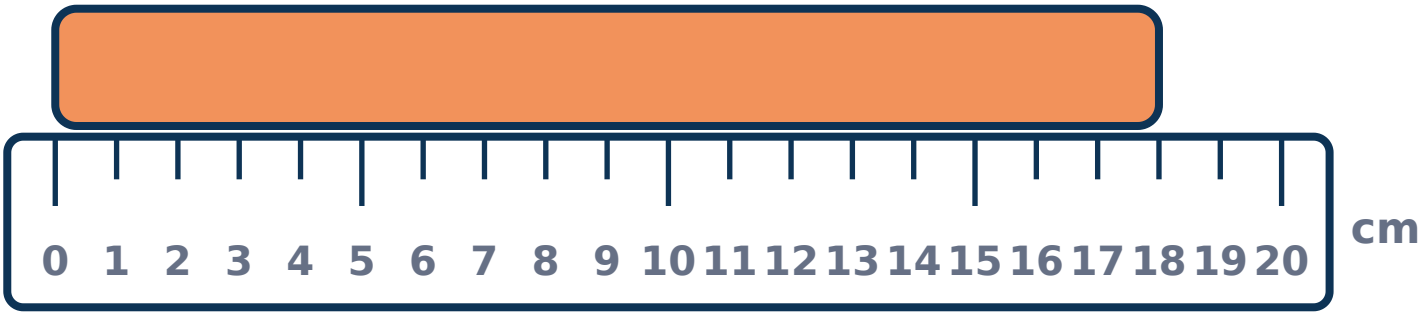
Define Engineering Problems

Grade 3 Science Worksheet - Building Confidence

Name _____ Date _____

Circle the answer.

1. A tower must be at least 15 cm tall. This tower measures 18 cm. Does it meet the goal?



no, it must be exactly 15 cm

no, it is shorter than 15 cm

yes, it is taller than 15 cm

2. A doghouse must keep rain out and fit in a small yard. It fits in the yard, but rain drips through gaps in its roof. Does it solve the problem?

yes, because it has a roof

no, because rain still gets in

yes, because it fits in the yard

3. A bridge must hold 20 washers and use only paper and tape. What is the criterion, the goal it must meet?

hold 20 washers use only paper and tape be built by Friday

4. A bridge must hold 20 washers and use only paper and tape. What is the constraint, the limit?

use only paper and tape hold 20 washers stay flat when loaded

5. Which sentence names an engineering problem?

Cups come in many colors.

Students need a way to keep cups from tipping on desks.

Our classroom has twenty desks.

6. Students get too hot in the sun at recess. What problem should a design solve?

keeping students cool at recess

making recess longer

giving students more swings

7. Which is a constraint for a classroom tower challenge?

stand at least 30 cm tall hold a small flag use only 20 straws

8. Which is a criterion for a classroom tower challenge?

stand at least 30 cm tall be built in 15 minutes use only 20 straws

9. A garden path floods after storms. Which need should the design address?

add more stones in the low spot

move extra water away from the path

make the path longer

10. An umbrella stand must hold an umbrella upright without tipping. What need does it solve?

making an umbrella open faster

keeping an umbrella from falling over

keeping an umbrella dry inside

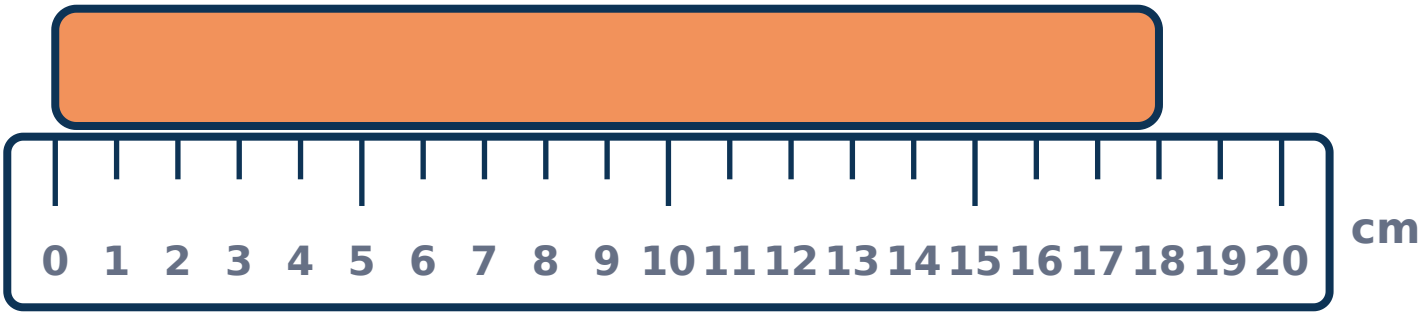
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Answer Key - Grade 3 Science Worksheet - Building Confidence

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