Environment and Traits

Grade 3 Science Worksheet - Challenge Me

Name _____ Date _____

Circle the answer.

1. Which trait is most likely affected by both inheritance and the environment?
   the stripes on a zebra
   the number of legs on a beetle
   how tall a sunflower grows
   the color of a kitten's eyes

2. Two groups of the same kind of bean plant were grown. Group 1 had 6 hours of light; group 2 had 2 hours. Group 1 grew taller. What should the student do to trust this result?
   use different kinds of seeds
   repeat the test with more plants
   give group 2 more water next time
   stop after one test

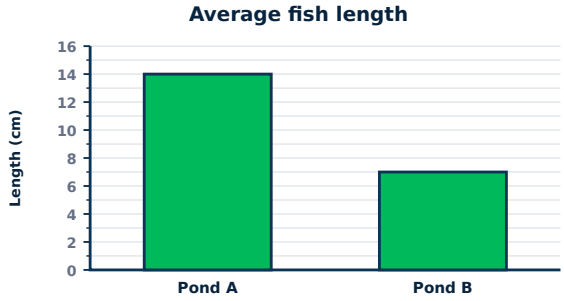
3. A student grows two bean plants from the same kind of seed, in the same pots, with the same water. One sits in a sunny window and one sits in a closet. What is being tested?
   whether water affects how the plants grow
   whether the pots affect how the plants grow
   whether the kind of seed affects growth
   whether sunlight affects how the plants grow

4. A student grows two seedlings in the same light and soil, but waters one twice as often. What is being tested?
   whether the seedlings inherited different traits
   whether the kind of soil affects growth
   whether the amount of water affects growth
   whether the amount of light affects growth

5. A student wants to test whether fertilizer makes tomato plants bigger. Which plan is a fair test?
   fertilizer and extra water for the same plant
   same seeds, but one in sun and one in shade
   same seeds, light and water; fertilizer for only one
   different kinds of seeds, fertilizer for both

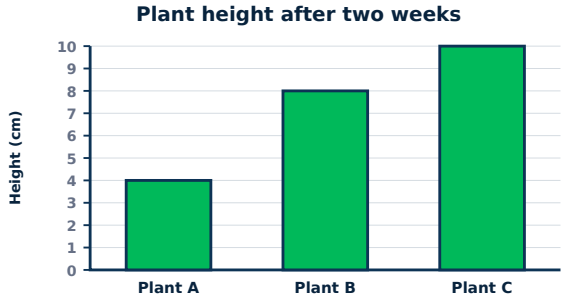
6. Plant 1 is in a warm room and plant 2 is in a cold room. Plant 1 also gets more water. Why is this not a fair test?
   the plants are the same kind
   the rooms have the same light
   only one condition changed
   two conditions changed, so the cause is unclear

7. Pond A has 10 fish and pond B has 100 fish. The ponds are the same size. Use the graph. How much longer are the fish in pond A?



7 cm 14 cm 2 cm 21 cm

8. Plant A was watered 1 time a week, plant B 3 times, and plant C 5 times. Use the graph. What pattern does it show?



plant B grew the most
more water gave taller plants in this test
water made no difference
more water gave shorter plants

9. Plant A got 1 hour of sun a day, plant B got 3 hours, and plant C got 6 hours. Use the graph. Plant D gets 4 hours. About how tall will it grow?



about 12 cm about 2 cm about 10 cm about 7 cm

10. Why do scientists grow two plants of the same kind in the same soil and light, changing only the water?
so the plants can use different pots
so a growth difference comes from the water
so the plants inherit different traits
so they can test two things at once

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Answer Key - Grade 3 Science Worksheet - Challenge Me

Circle the answer.

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   - **repeat the test with more plants**
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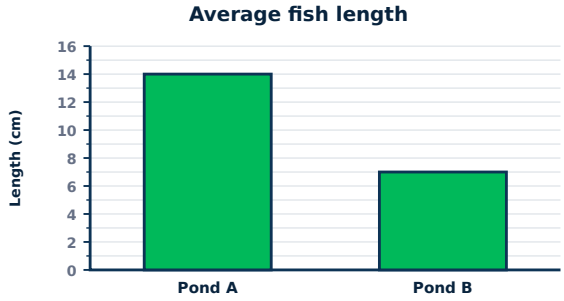
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   - whether the kind of soil affects growth
   - **whether the amount of water affects growth**
   - whether the amount of light affects growth

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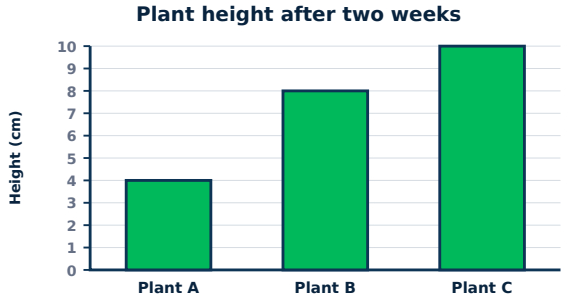
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