

Science Answer Key: Weeks 5–8

Answers that come from a child's own tests will vary. Accept any answer that matches what the child actually observed, and use the Look for lists for open items.

Week 5: Testing Materials

Test 1: Results vary. Usually the paper towel leaves the least water (0 or close to 0 spoons), then the napkin; newspaper and the coffee filter leave the most. Check that the numbers match the child's test.

1. Circle: size of square, amount of water, time. Do not circle color.

Test 2: Usually wax paper, foil and plastic bag keep the person dry (ranks 1–3 in any order the child observed) and the paper towel lets it get wet (rank 4).

2. Look for: the material that left the least water in the child's chart; the matching number of spoons.

3. Look for: foil, wax paper or plastic bag; a reason such as it does not absorb water or keeps water out.

4. Look for: the paper towel absorbs water; that is good for soaking up a spill; it lets water through to the person, so different jobs need different properties.

Scoring: Developing / Approaching / Proficient / Exemplary. Proficient: records both tests honestly, circles the three fair-test variables, and explains that the best material depends on the job.

Week 6: Properties of Matter Review

Part A chart: 20 blocks for every object. Did I add or lose any: no for every row.

Drawings: Look for: two different objects; both look like they could be made from the same set of blocks.

1. object (accept shape or thing).

2. No, it cannot be one sheet again. Yes, the pieces can be moved into new shapes.

3. Any three: soft, bends (flexible), absorbs water, squishy, rough or bumpy, a color.

4. Heat melts ice into liquid water.

5. Any irreversible change: cooking an egg, cutting paper, mashing a banana, mixing baking soda and vinegar, toasting bread.

6. Foil, wax paper or plastic bag (from the child's Week 5 test), because it does not absorb water and keeps the paper person dry.

Scoring: Developing / Approaching / Proficient / Exemplary. Proficient: counts 20 blocks each time, completes the sentence, and answers at least three of the four review questions correctly.

Week 7: What Plants Need

Seeds in Bags: Predictions vary. Typical results: A sprouts (root tip, then shoot); B also sprouts because the seed uses its stored food, but the shoot is pale; C and D show no change because they have no water.

Label a Seedling: Look for: seed coat around the bean, root growing down, shoot growing up; all three labels.

Needs: It makes leaves green and strong: sunlight. Roots drink it up: water. Leaves take it in from all around: air. Food from the soil: nutrients. Room for roots and leaves to grow: space.

1. Look for: evidence from the bags (beans with water sprouted, beans without water did not).

2. The window cup. Look for: it gets light; light helps plants grow green and strong once they have leaves.

Scoring: Developing / Approaching / Proficient / Exemplary. Proficient: records observations for all four bags, labels the seedling, matches all five needs, and uses bag evidence in the claim.

Week 8: Plant & Animal Structures

Part A: roots: drink water from soil. stem: carries water. leaves: catch sunlight. flower: makes seeds.

Part B: Predictions vary. Result: the color goes up the stem into the leaves; colored dots show in the cut stem and colored veins in the leaves.

Part C: Tallies vary. Typical best beaks: seeds, tweezers; worms, clothespin or tweezers; fish, spoon; nectar, straw.

1. Look for: a beak and food that match the child's tally chart (for example, a straw beak is good for nectar).
2. Look for: different shapes pick up different foods; the right shape helps the bird get food and survive.
3. Look for: a strong, pointed or crossed beak to pry open cones; gripping feet or claws to hold branches; a reason for each part.

Scoring: Developing / Approaching / Proficient / Exemplary. Proficient: matches all four plant parts to jobs, records the celery result, and explains how beak shape helps an animal get food.

Weeks 5–8: Vocabulary and Big Ideas

Match It: 1. material 2. fair test 3. pieces 4. roots 5. stem 6. leaves 7. beak 8. nutrients

Fill in: 9. sunlight 10. survive

11. Look for: the paper towel absorbs water (its property); absorbing is good for soaking up a spill; absorbing lets water through, so it cannot keep rain off.

Scoring: Developing / Approaching / Proficient / Exemplary. Proficient: gets at least eight of the ten words right and explains that the paper towel's absorbing property fits one job but not the other.

Weeks 5–8: My Reflection

Checklist: No right or wrong answers. Talk about any box left empty and revisit that week's investigation.

Drawing and sentences: Look for: a recognizable investigation from Weeks 5–8; at least one label; a sentence that names what was learned, not only what was fun.

Scoring: Developing / Approaching / Proficient / Exemplary. Proficient: checks honestly, draws and labels one investigation, and writes a sentence that states a science idea.