From Seed to Stem

Trace how connected changes help a bean plant grow.

3.T.T.2.b "Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text. (I)"

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline words that show order. Then number four important changes in the order they happen, from 1 to 4.

A Bean Seed Wakes Up

1. Before a bean seed can grow, it needs water, air, and warmth. Water softens the seed coat, the hard outside covering. Then water enters the seed. The tiny plant inside, called an embryo, begins using food stored in the seed. This first change matters because the embryo needs energy before it can push out new parts.

2. Next, a small root breaks through the seed coat and grows downward. The root takes in water and helps hold the young plant in the soil. After the root starts working, a shoot grows upward. This order helps the plant. It gets water through its root before its leaves must work above the ground in sunlight.

3. Finally, leaves open on the shoot. In sunlight, the leaves use water and a gas called carbon dioxide from the air to make food for the plant. This food lets the plant grow taller and make more leaves. The events are connected: water starts the seed growing, roots bring in more water, and leaves make food after they open above the soil.

2 ANSWER WITH EVIDENCE

Use the passage

1. How does water help the embryo begin growing?

2. Why does the root grow before the leaves need to work above the ground?

3. What is the relationship between the shoot and the leaves?

4. How are water, roots, and leaves connected in the plant's growth?

3 YOUR TURN

Your own words

Write three sentences that explain how you clean a muddy toy. Use First, Next, and Finally. In one sentence, tell how one step helps the step after it.

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PART 1 · READ AND MARK

Underline words that show order. Then number four important changes in the order they happen, from 1 to 4. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How does water help the embryo begin growing?	**Water softens the seed coat and enters the seed, helping the embryo use stored food for energy.**
2	Why does the root grow before the leaves need to work above the ground?	**The root takes in water, so the plant has water before its leaves make food.**
3	What is the relationship between the shoot and the leaves?	**The shoot grows upward, and then leaves open on the shoot.**
4	How are water, roots, and leaves connected in the plant's growth?	**Water starts growth, roots bring in more water, and leaves use water to make food.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

First, I rinse a muddy toy with water. Next, I scrub it with soapy water, which loosens the mud for the last rinse. Finally, I rinse away the soap and mud.

Accept answers that accurately explain how one event, idea, or step leads to, supports, or happens before another. For Part 3, accept any logical three-step procedure that uses the required order words and includes a clear connection between steps.