Lesson 1.1 – What Makes Soil Alive? Launching S.O.I.L.

Quarter 1 · The Living Ground: Soil Science · Week 1

Name: _____ Partner: _____ Date: _____ Period: _____

Big Question: Is the ground beneath our school garden alive, and how could we find out?

Word Bank: soil · biotic factor · abiotic factor · organic matter · observation · inference · field notebook · testable question

Safety: Gloves on, mist the soil first, never reach under rocks or boards with your hands, and wash your hands with soap.

My Task

Sort your soil observations, then compare with classmates from other spots.

Observation	Living, Once-Living, or Never-Living?	Evidence
1		
2		
3		
4		
5		
6		

Support: Provide a picture word bank (root, worm, pebble, leaf, ant) and the frame "I observed ___. I infer ___ because ___."	**Challenge:** Which of the four spots had the most life? Propose one abiotic factor that could explain the difference and describe how you would test it.

Think & Respond

1. Write one observation and one inference about your sample.

2. Write two testable questions about our garden soil.

PRACTICE ITEM — answer the item for your grade

Grade 6: Which item in a soil sample is a biotic factor? A) sand grain B) water droplet C) fungus thread D) pebble

Grade 7: A student finds more earthworms under mulch than in bare ground. Which statement is an inference, not an observation? A) Twelve worms were under the mulch. B) The bare ground felt dry. C) Worms prefer mulch because it keeps soil moist. D) Three worms were in the bare ground.

Grade 8: Which question is the most testable? A) Is our garden soil healthy? B) Does adding compost increase the number of earthworms per 1-liter sample? C) Why is soil important? D) What is the best soil?

My grade: ____ My answer: ____ Why: _____

EXIT TICKET

1. Name one biotic and one abiotic part of your soil sample.

_____

_____

2. Write one observation and one inference about your sample.

_____

_____

3. Write one testable question about the garden soil.

_____

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