Questions in the Garden

Turn observations into focused research questions

8.W.5.a "Formulate a research question."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline two pairs of details in the garden that someone could compare. Circle the time span in the compost question to see how a specific limit helps focus a question.

A Garden Full of Questions

1 At Cedar Middle School, a courtyard garden gives students more than a place to grow plants. It also offers problems worth investigating. Near the gate, a compost bin holds fruit peels and fallen leaves. A student wonders whether the mix changes as seasons change. Instead of asking, "Is compost good?" she writes, "How does the proportion of fallen leaves in our compost bin change from September to November?" She can check the bin's contents each week and record the amounts. Her question names a place, a detail, and a time span.

2 Along the garden path, purple coneflowers and black-eyed Susans bloom in late summer. Students have noticed bees on both kinds of flowers, but they have not counted visits. A count made during equal periods on the same morning could help them compare the flowers fairly. Nearby, butterflies sometimes settle on plants in sunlight and sometimes on plants in shade. Their movements may also change with the weather. Students could observe the same area on several days rather than trust one quick glance.

3 Water brings another set of choices. A rain barrel beside the garden collects runoff from a roof, but a dry spell can empty it. Gardeners sometimes use tap water when the barrel runs low. They also spread shredded leaves as mulch around some plants, leaving other patches uncovered. Mulch can reduce water loss from soil, yet the garden has no measurements showing how damp those patches remain after watering. A student planning a study would need to decide what to compare and what information to collect.

2 ANSWER WITH EVIDENCE

Use the passage

1. Write a research question that compares bee visits to the two kinds of flowers. Include a fair time period for counting.

2. Write a research question about where butterflies settle in the garden. Name the two conditions you would compare.

3. Write a research question that compares soil moisture in two kinds of garden patches after watering.

4. Write a research question about the rain barrel and tap water use. Name something gardeners could track each week.

3 YOUR TURN

Your own words

Choose a school or neighborhood issue not mentioned in the passage. Write one focused research question that names what you would compare or track, then write one sentence explaining what evidence you could gather.

ANSWER KEY

Questions in the Garden

GRADE 8 · 8.W.5.a

PART 1 · READ AND MARK

Underline two pairs of details in the garden that someone could compare. Circle the time span in the compost question to see how a specific limit helps focus a question. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Write a research question that compares bee visits to the two kinds of flowers. Include a fair time period for counting.	**During equal ten-minute periods on the same morning, how many bees visit purple coneflowers compared with black-eyed Susans?**
2	Write a research question about where butterflies settle in the garden. Name the two conditions you would compare.	**Over several days, how often do butterflies settle on plants in sunlight compared with plants in shade?**
3	Write a research question that compares soil moisture in two kinds of garden patches after watering.	**How does soil moisture after watering compare between patches covered with shredded leaves and uncovered patches?**
4	Write a research question about the rain barrel and tap water use. Name something gardeners could track each week.	**How does the amount of rainwater collected in the barrel relate to the amount of tap water gardeners use each week?**

PART 3 · YOUR TURN (SAMPLE ANSWER)

How does the number of bicycles parked at our school's racks change between Monday and Friday afternoons? I could count parked bicycles at the same time each afternoon for four weeks.

Accept questions that use the stated garden details and specify a comparison or a measurable change. For Part 3, accept a new school or neighborhood topic with a focused question and evidence that could help answer it.