



Name(s): \_\_\_\_\_ Date: \_\_\_\_\_

BugQuest Sampling Location: \_\_\_\_\_

### What Did We Observe?

Scientists begin investigations by observing the environment and identifying patterns.

What features of this habitat could influence biodiversity?

| Environmental Factor     | What did you observe? | How might this influence insects? |
|--------------------------|-----------------------|-----------------------------------|
| Plant diversity          |                       |                                   |
| Sunlight / shade         |                       |                                   |
| Ground cover             |                       |                                   |
| Moisture / water sources |                       |                                   |
| Soil conditions          |                       |                                   |
| Human activity           |                       |                                   |

Based on your observations:

Which area do you predict will support the greatest insect biodiversity?

Location: \_\_\_\_\_

What evidence supports your prediction?



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### Design a Biodiversity Investigation

Scientists use observations to ask questions, make predictions, and collect evidence.

#### 1. Our Scientific Question

A strong scientific question can be investigated by collecting data.

Our Question: \_\_\_\_\_

#### 2. Our Hypothesis

A hypothesis is a prediction supported by scientific reasoning.

If \_\_\_\_\_

Then \_\_\_\_\_

Because \_\_\_\_\_

#### 3. Identify the Variables

What factor are we investigating (i.e., independent variable)?

How could we compare or measure this factor?

What biodiversity data could we collect (i.e., dependent variable)?

☐ Number of insects collected    ☐ Number of species identified    ☐ Variety of insect groups    ☐ Other: \_\_\_\_\_

What should remain the same to make our results reliable (i.e., controlled variable)?

**BugQuest combines data collected by many schools across Canada.**

- Why is it useful for scientists to collect biodiversity data from many different locations?
- How does following the same sampling method help scientists compare results?