

## Biodiversity Detectives: Student Activity Workbook

### Detective Information

Complete your detective profile to begin your biodiversity investigation!

Detective Name: \_\_\_\_\_ Date: \_\_\_\_\_

Class: \_\_\_\_\_ Badge Number: \_\_\_\_\_

#### Mission Brief:

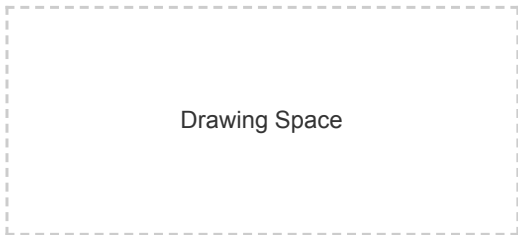
As a Biodiversity Detective, your mission is to:

- Investigate different species in your local environment
- Document evidence of biodiversity
- Analyze connections between living things
- Propose solutions for protecting nature

### Activity 1: Mystery Box Observations (30 minutes)

Your first mission is to investigate natural objects using your detective skills!

#### Mystery Item 1



Drawing Space

Description:

\_\_\_\_\_

Color:

\_\_\_\_\_

Texture:

\_\_\_\_\_

Origin Hypothesis:

\_\_\_\_\_

#### Mystery Item 2



Drawing Space

Description:

\_\_\_\_\_

Color:

\_\_\_\_\_

Texture:

\_\_\_\_\_

Origin Hypothesis:

\_\_\_\_\_

### Detective Analysis

**Compare and Contrast:**

How are the items similar? \_\_\_\_\_

How are they different? \_\_\_\_\_

What evidence suggests these items came from living things?

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## Activity 2: Ecosystem Connections Investigation

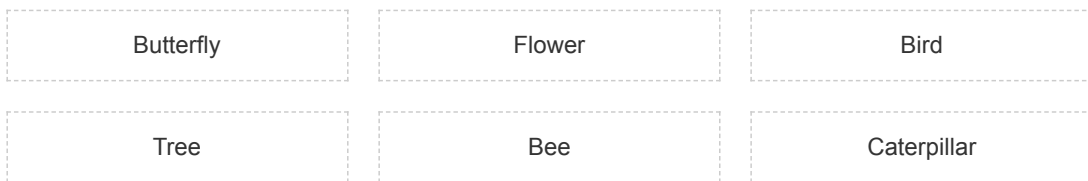
Study how different organisms in an ecosystem depend on each other.

### Part A: Connection Web

Draw lines between organisms that have a relationship. Use different colored lines for different types of relationships:

- Red = Predator/Prey
- Green = Food Source
- Blue = Shelter
- Purple = Pollination

[Connection Web Drawing Space]



### Part B: Detective's Analysis

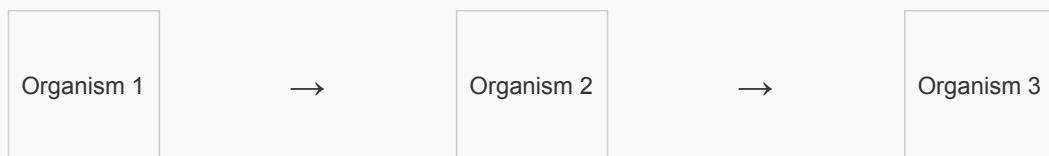
1. Describe the most interesting connection you found:

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2. What would happen if one organism was removed?

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3. Create a food chain using three organisms from above:



### Activity 3: Habitat Investigation Field Report

*Document your observations of a local habitat ecosystem.*

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

Weather: \_\_\_\_\_

Time: \_\_\_\_\_

Temperature: \_\_\_\_\_

#### Plants Observed

| Type       | Count | Description |
|------------|-------|-------------|
| Trees      | _____ | _____       |
| Flowers    | _____ | _____       |
| Grass/Moss | _____ | _____       |

#### Animals Observed

| Type    | Count | Behavior |
|---------|-------|----------|
| Birds   | _____ | _____    |
| Insects | _____ | _____    |
| Other   | _____ | _____    |

### Habitat Sketch

*Draw a detailed map of your habitat investigation area.*

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- 
- 
- 

*Remember to include:*

- Plant locations
- Animal activity areas
- Water sources
- Natural shelters

## Activity 4: Biodiversity Protection Plan

Create an action plan to protect and enhance biodiversity in your study area.

### Current Challenges

#### Challenge 1:

Description:

\_\_\_\_\_

Impact on biodiversity:

\_\_\_\_\_

#### Challenge 2:

Description:

\_\_\_\_\_

Impact on biodiversity:

\_\_\_\_\_

### Solution Proposals

| Action | Resources Needed | Timeline | Expected Impact |
|--------|------------------|----------|-----------------|
| _____  | _____            | _____    | _____           |
| _____  | _____            | _____    | _____           |
| _____  | _____            | _____    | _____           |

## Community Engagement Strategy

### Target Audiences:

#### Students

Activities:

\_\_\_\_\_

#### Teachers

Activities:

\_\_\_\_\_

#### Parents

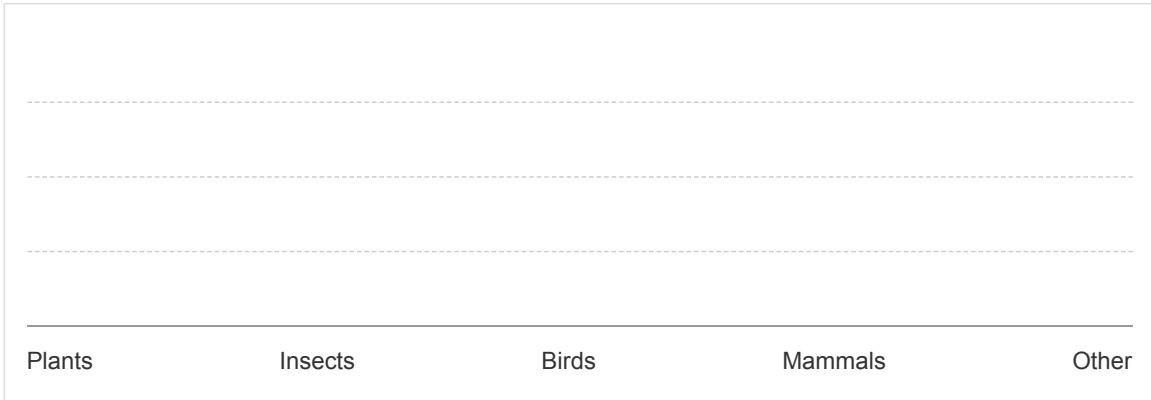
Activities:

\_\_\_\_\_

## Activity 5: Data Collection and Analysis

Record and analyze your biodiversity findings.

### Species Abundance Chart



### Statistical Analysis

| Category | Total Count | Percentage | Trend |
|----------|-------------|------------|-------|
| Plants   | _____       | _____      | _____ |
| Insects  | _____       | _____      | _____ |
| Birds    | _____       | _____      | _____ |

## Conclusions and Recommendations

### Key Findings:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

### Recommendations for Biodiversity Enhancement:

#### Short-term Actions:

\_\_\_\_\_

#### Long-term Strategy:

\_\_\_\_\_

## Final Detective Report

Complete your investigation findings and recommendations.

### Investigation Summary

#### Key Discoveries:

1. Most important thing I learned about biodiversity:

\_\_\_\_\_

2. Biggest surprise during my investigation:

\_\_\_\_\_

3. How ecosystems work together:

\_\_\_\_\_



*"As a Biodiversity Detective, I pledge to continue protecting and learning about nature in my local environment."*

Detective Signature: \_\_\_\_\_

Date: \_\_\_\_\_