

YEAR 6 BIOLOGICAL SCIENCE

A YEAR 6 SCIENCE JOURNAL



OBSERVE ✓
MEASURE ✓
ANALYSE ✓
UNDERSTAND ✓

SCIENCE
JOURNAL

INVESTIGATE. MEASURE. ANALYSE. UNDERSTAND.
DISCOVER THE WORLD AROUND YOU!



NAME:



CLASS:



TEACHER:



OBSERVE



MEASURE



RECORD



ANALYSE



UNDERSTAND



PART A

WHAT IS A HABITAT?

CLASSIFYING HABITATS



Before you begin your investigation, you need to identify the type of habitat you are investigating.



What is a habitat?



Classify the features of the two main types of habitats.

Aquatic Habitat



Terrestrial Habitat



Which Habitat will you be investigating? Circle.



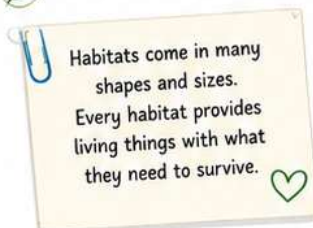
OR



How do you know this?



SCIENCE IS ALL AROUND US!



EXPLORE

Observe the natural world around you.



INVESTIGATE

Ask questions and collect evidence.



UNDERSTAND

Use your findings to explain the world.

Observe. Investigate. Understand. Protect. ♥



PART B

PLANNING YOUR INVESTIGATION



1 INVESTIGATION QUESTION

2 PREDICTION

3 PHYSICAL CONDITION BEING INVESTIGATED

(Tick what physical habitat condition will you compare?)

- | | |
|--|---|
| ☐ Light level | ☐ Shade |
| ☐ Soil moisture | ☐ Wind exposure |
| ☐ Leaf litter depth | ☐ Amount of bare soil |
| ☐ Soil temperature | ☐ Distance from a path or building |
| ☐ Air temperature | ☐ Presence of rocks or logs |
| ☐ Soil pH | ☐ Human disturbance |

4 VARIABLES

Independent variables – the physical condition you are comparing:

I will Investigate:

Dependent variables – what will you measure to determine plant growth:

I will measure:

Controlled variables – What must stay the same to make the investigation fair?

5 EQUIPMENT

Tick the equipment you will use.

- | | | | |
|--|--|---|---|
| ☐ Light level | ☐ Ground cover (%) | ☐ Amount of bare soil | ☐ Slope of the ground |
| ☐ Soil moisture | ☐ Soil pH | ☐ Presence of rocks or logs | ☐ Type of plants present |
| ☐ Number of trees | ☐ Number of insects | ☐ Number of flowers | ☐ Soil type |
| ☐ Leaf litter depth | ☐ Shade | ☐ Distance from a path or building | ☐ Number of weeds |
| ☐ Air temperature | ☐ Grass height | ☐ Human disturbance | |
| ☐ Number of shrubs | ☐ Wind exposure | ☐ Number of birds | |
| ☐ Soil temperature | ☐ Number of plant species | | |

6 RISK ASSESSMENT

Identify one risk.

How will you stay safe?



7 METHOD

Write your investigation method.





PART C – HABITAT INVESTIGATION

Habitat Investigation – Habitat A Field Recording Sheet



1 GROUP INFORMATION

Habitat Name: _____

Date: _____

Group Members: _____



2 DESCRIBE YOUR HABITAT – Where are you investigating?

3 DESCRIBE WHAT YOU CAN SEE.

- | | |
|--|---------------------------------------|
| ☐ Mostly sunny | ☐ Trees |
| ☐ Mostly shaded | ☐ Shrubs |
| ☐ Grassy | ☐ Rocks |
| ☐ Leaf litter | ☐ Other: _____ |

4 HUMAN IMPACTS YOU OBSERVED.

- | | |
|-------------------------------------|---------------------------------------|
| ☐ Footpaths | ☐ Buildings |
| ☐ Mown grass | ☐ Garden beds |
| ☐ Rubbish | ☐ Other: _____ |

5 COLLECT YOUR DATA – Measure three different sample sites within your habitat.

Sample Site	Light (lux)	Soil Moisture	Leaf Litter (cm)	Ground Cover (%)	Shrubs (number)
1					
2					
3					

6 WHAT DID YOU NOTICE?

Circle any patterns you observed.

- ☐ More light = fewer plants
☐ More moisture = more plants
☐ More leaf litter = more shrubs
☐ No obvious pattern
☐ Something different

Explain your observations.

7 HABITAT SKETCH

Draw your investigation area.

Include:

- ☐ Trees
☐ Shrubs
☐ Grass
☐ Rocks
☐ Human features

8 ANY OTHER NOTES OR INTERESTING THINGS OBSERVED:





PART C – HABITAT INVESTIGATION

Habitat Investigation – Habitat B Field Recording Sheet



1 GROUP INFORMATION

Habitat Name: _____

Date: _____

Group Members: _____



2 DESCRIBE YOUR HABITAT – Where are you investigating?

3 DESCRIBE WHAT YOU CAN SEE.

- | | |
|--|---------------------------------------|
| ☐ Mostly sunny | ☐ Trees |
| ☐ Mostly shaded | ☐ Shrubs |
| ☐ Grassy | ☐ Rocks |
| ☐ Leaf litter | ☐ Other: _____ |

4 HUMAN IMPACTS YOU OBSERVED.

- | | |
|-------------------------------------|---------------------------------------|
| ☐ Footpaths | ☐ Buildings |
| ☐ Mown grass | ☐ Garden beds |
| ☐ Rubbish | ☐ Other: _____ |

5 COLLECT YOUR DATA – Measure three different sample sites within your habitat.

Sample Site	Light (lux)	Soil Moisture	Leaf Litter (cm)	Ground Cover (%)	Shrubs (number)
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☐ Human features

8 ANY OTHER NOTES OR INTERESTING THINGS OBSERVED:



PART D – COLLATING AND COMPARING DATA

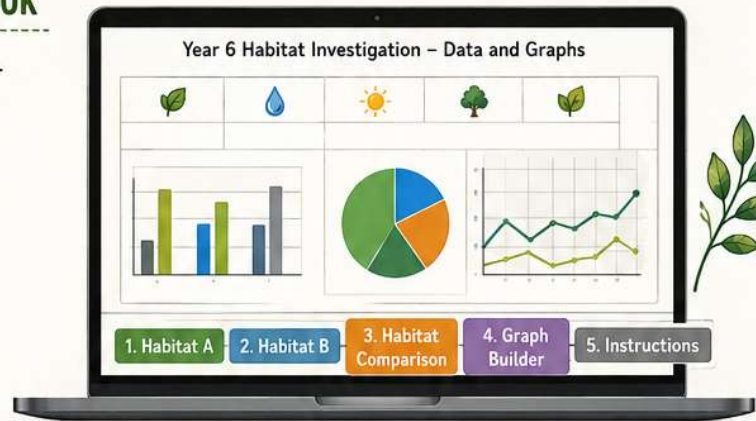
Student Instructions – Using the Habitat Investigation Spreadsheet

STEP 1 OPEN THE WORKBOOK

Open the Year 6 Habitat Investigation – Data and Graphs workbook.

You will see five tabs at the bottom:

- 1 Habitat A
- 2 Habitat B
- 3 Habitat Comparison
- 4 Graph Builder
- 5 Instructions



STEP 2 ENTER HABITAT A DATA



Click on the **Habitat A** tab.
Enter your data from your field recording sheet.



Make sure you enter all measurements carefully.
Check your numbers.

STEP 3 ENTER HABITAT B DATA



Click on the **Habitat B** tab.
Enter your data from your field recording sheet.



Make sure you enter all measurements carefully.
Check your numbers.

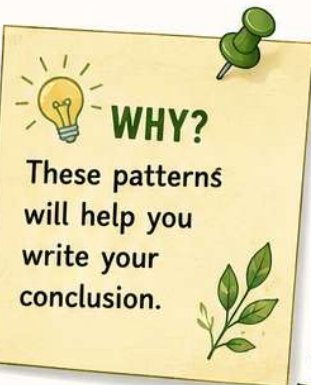
STEP 4 COMPARE YOUR HABITATS



Open the Habitat Comparison sheet.
The spreadsheet will automatically calculate the average for each measurement.
Look carefully at the results.

Ask yourself:

- Which habitat had the most light?
- Which habitat had the highest soil moisture?
- Which habitat had more shrubs?
- Which habitat had the deepest leaf litter?
- Which habitat had the greatest ground cover?





PART D – COLLATING AND COMPARING DATA



STEP 5 DECIDE WHAT YOU WANT TO SHOW

Before making a graph, think about your investigation question.

Ask yourself:



What am I trying to compare?

Examples:

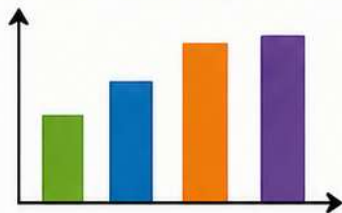
- Does more light mean less ground cover?
- Which habitat has more shrubs?
- Does soil moisture affect ground cover?



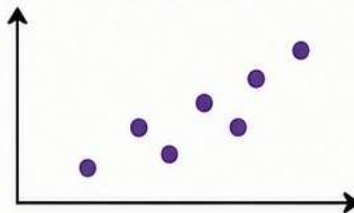
STEP 6 CHOOSE THE BEST GRAPH

Use the **Graph Builder** sheet to help decide.

COLUMN GRAPH



SCATTER GRAPH



LINE GRAPH



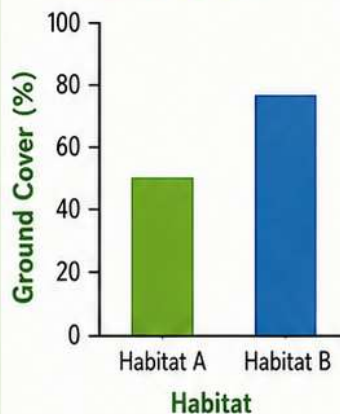
STEP 7 CREATE YOUR GRAPH

- 1 Highlight the data you need.
- 2 Click **Insert**.
- 3 Choose the graph type you selected.
- 4 Add:

- A clear graph title
- X-axis label
- Y-axis label

Make sure your graph is easy to read.

Example Graph



TIPS

- ✓ Choose the graph that best answers your question.
- ✓ Label everything clearly.
- ✓ Keep it simple and easy to read.



PART E – ANALYSING THE EVIDENCE



WHAT DID YOU NOTICE IN YOUR RESULTS?

Did you notice that:

- ☐ Areas with more light had more plants.
- ☐ Areas with more light had fewer plants.
- ☐ Areas with more soil moisture had more plants.
- ☐ Areas with deeper leaf litter had more shrubs.
- ☐ Habitat A and Habitat B were very different.
- ☐ I noticed something else:



PATTERNS

What pattern did your data show?

This image shows a full page of a handwriting practice worksheet. It consists of multiple rows of horizontal dashed lines spaced evenly down the page, providing a guide for letter height and placement. The background is plain white, and there are no other markings or text present.

SENTENCE STARTERS

I noticed...

The graph shows...

This suggests...





A decorative illustration in the bottom right corner featuring several green plants with long, thin leaves and small white flowers, growing out of three grey, rounded rocks. The background is white with some faint, scattered green dots.



A decorative illustration of a rocky shoreline with a small tree and various plants, set against a background of horizontal lines. The scene features a small, leafy tree on a grassy bank, surrounded by large grey rocks and smaller green plants. The water is a light blue color. The background consists of several horizontal lines, suggesting a writing area.



HUMAN IMPACTS



Human activities can change habitats in many different ways.



1. HOW HAVE PEOPLE CHANGED THIS HABITAT?

- ☐ Mown grass
 - ☐ Footpaths
 - ☐ Buildings
 - ☐ Roads or car parks
 - ☐ Garden beds
 - ☐ Rubbish
 - ☐ Weeds
 - ☐ Cut or removed trees
 - ☐ Irrigation or sprinklers
 - ☐ Fences
 - ☐ Playground equipment
- _____
- _____



2. HOW MIGHT THESE HUMAN ACTIVITIES HAVE AFFECTED THE HABITAT?

- ☐ More sunlight reached the ground.
- ☐ Less sunlight reached the ground.
- ☐ The soil was drier.
- ☐ The soil was wetter.
- ☐ There were fewer plants.
- ☐ There were more plants.
- ☐ There was less leaf litter.
- ☐ There were fewer shrubs.
- ☐ Animals may have had fewer places to live.



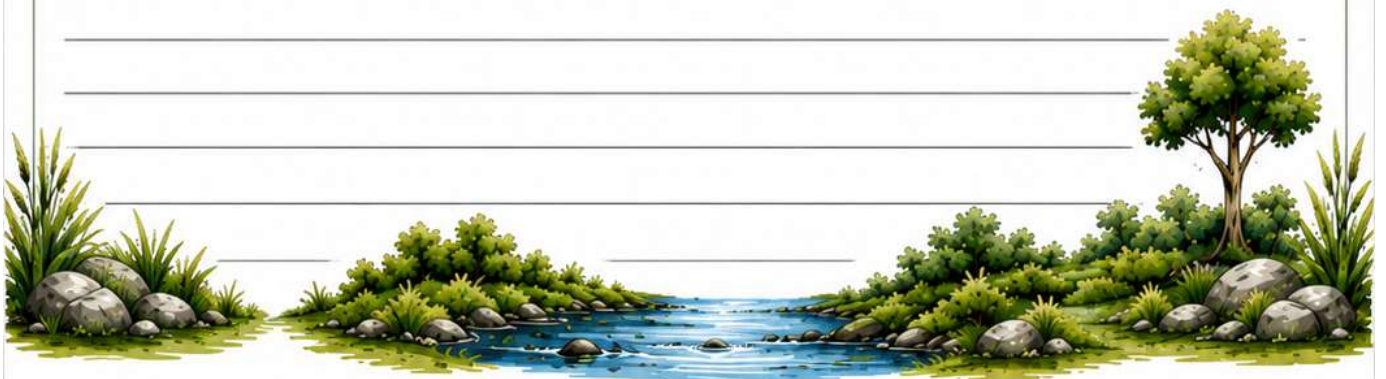
3. USE EVIDENCE TO EXPLAIN YOUR THINKING.

I think _____

because _____



4. HOW MAY HUMAN ACTIVITIES HAVE INFLUENCED EACH HABITAT? WHAT EVIDENCE SUPPORTS YOUR THINKING?





RELIABILITY



A fair investigation means you only changed one variable and kept the other conditions the same.



A reliable investigation means you collected enough data so your results can be trusted.

- ☐ We investigated the same-sized area each time.
- ☐ We used the same equipment for every measurement.
- ☐ We measured three sample sites.
- ☐ We followed the same method.
- ☐ We recorded our results carefully.
- ☐ We checked our measurements.



Was there anything that may have affected your results?

Examples

- Weather
- Shadows
- Different observers
- Uneven ground

Explain your answer using evidence.

Our investigation was fair and reliable because

.....



Was your investigation fair and reliable?





PART G – CONCLUSION



ANSWER THE INQUIRY QUESTION

Which school habitat provided the best conditions for plant growth?



EVIDENCE

Use your data to support your conclusion.



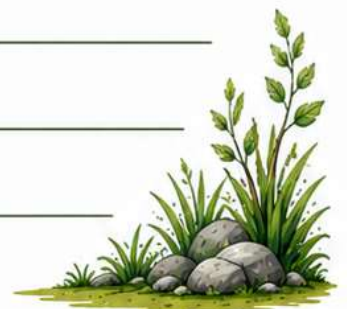
IMPROVEMENTS

If you repeated this investigation, what would you improve?



REFLECTION

What was the most important thing you learnt about habitats?



WHAT IS A HABITAT?

A habitat is the **natural place** where a plant or animal lives and gets what it needs to survive.



KEY IDEA

Different habitats have different conditions.

Living things have amazing adaptations to help them survive in their habitat!



A habitat can be big or small!



Look closely. There is a habitat all around you!



SHELTER

A safe place to hide, rest and raise young.



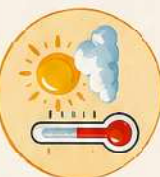
WATER

Clean water to drink and stay healthy.



FOOD

Plants or animals to eat for energy and growth.



SUITABLE CONDITIONS

The right temperature, light, moisture and air for living.



SPACE

Room to move, grow and find resources.

In every habitat, living things...

- ✓ depend on each other
- ✓ compete for resources
- ✓ adapt to change
- ✓ are part of a system (ecosystem).

EXAMPLES OF HABITATS

DESERT



Hot and dry with little water. Plants and animals save water in special ways.

FOREST



Many trees provide shelter and food. Lots of animals live in layers.

RAINFOREST



Warm and wet all year. Plants grow thick and animals find food in many places.

OCEAN



Salt water habitat. Many marine animals have body features that help them survive.

WETLAND



Land that is often covered with water. Important for many plants and animals.

URBAN



People live here too! Animals and plants adapt to city and suburban life.



EVERY HABITAT IS UNIQUE, BUT ALL ARE IMPORTANT. LET'S PROTECT THEM!

AQUATIC vs TERRESTRIAL HABITATS

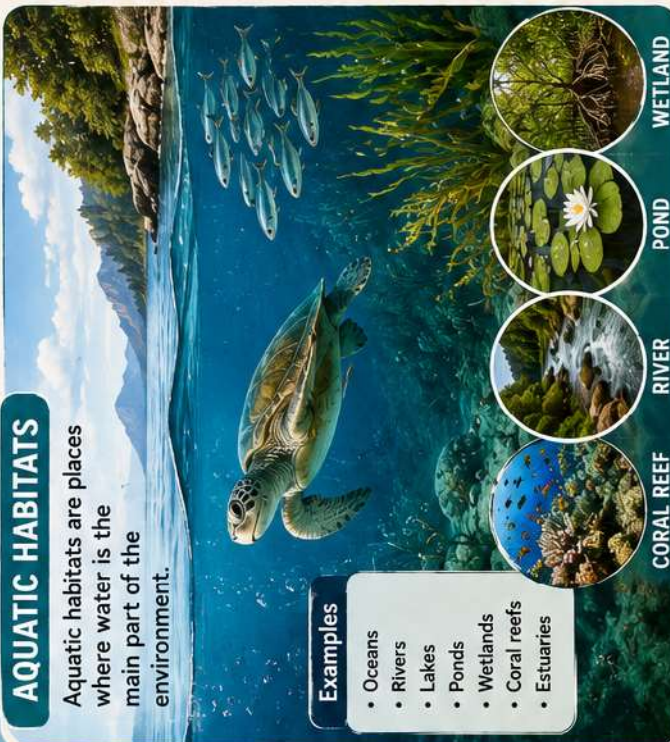
All living things need a habitat to survive.
Habitats provide the food, water, shelter and space living things need.

AQUATIC HABITATS

Aquatic habitats are places where water is the main part of the environment.

Examples

- Oceans
- Rivers
- Lakes
- Ponds
- Wetlands
- Coral reefs
- Estuaries



CORAL REEF RIVER POND WETLAND

WHY AQUATIC HABITATS ARE IMPORTANT



Provide food for many living things and people.



Help regulate weather and the water cycle.



Support biodiversity and unique ecosystems.



Provide water for life and human use.

HOW THEY COMPARE

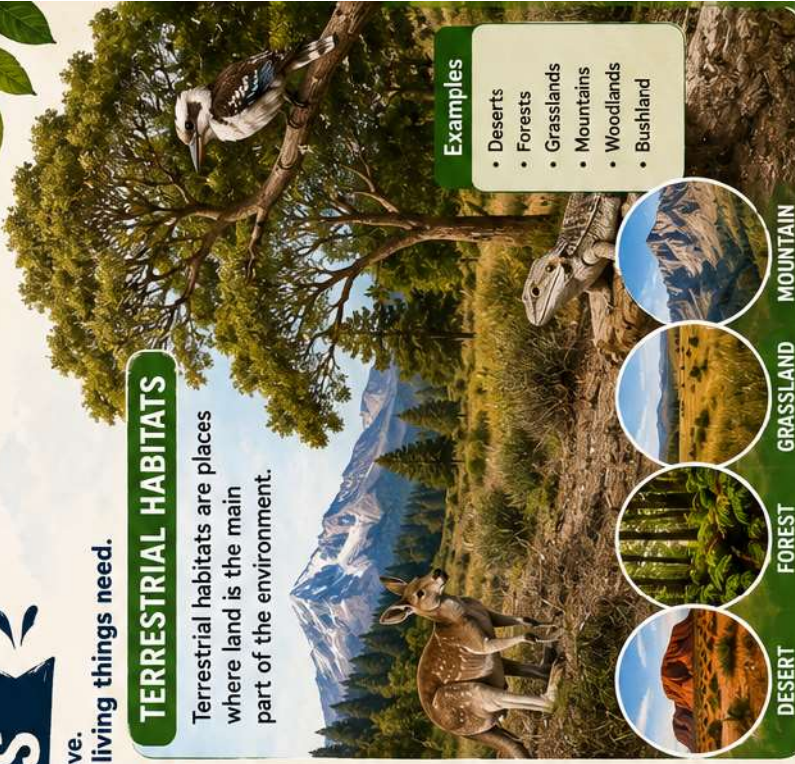
Water is the main part of the habitat.	Land is the main part of the habitat.
Oxygen is dissolved in water.	Oxygen is in the air.
Animals may have gills, fins or flippers.	Animals may have legs, wings or claws.
Water helps regulate temperature.	Air and shade help regulate temperature.
Plants are often algae, seaweed or water plants.	Plants have roots, stems, leaves and flowers.
Examples: fish, whales, jellyfish, sea turtles.	Examples: kangaroos, birds, lizards, plants, insects.

TERRESTRIAL HABITATS

Terrestrial habitats are places where land is the main part of the environment.

Examples

- Deserts
- Forests
- Grasslands
- Mountains
- Woodlands
- Bushland



DESERT FOREST GRASSLAND MOUNTAIN

WHY TERRESTRIAL HABITATS ARE IMPORTANT



Provide food, shelter and space for living things.



Store carbon and help keep our air clean.



Support biodiversity and ecosystems on land.



Provide places for people to live, work and recreate.



ALL HABITATS ARE CONNECTED.

CARE FOR NATURE, CARE FOR OUR FUTURE.

PHYSICAL HABITAT CONDITIONS

The non-living (physical) factors in an environment that affect living things.

Why Physical Conditions Matter

- ✓ They determine what living things can survive.
- ✓ They influence where living things live.
- ✓ They change and create challenges for organisms.

LIGHT

- Amount of sunlight
- Affects temperature
- Helps plants grow

TEMPERATURE

- Hot or cold levels
- Affects survival
- Changes with season

WATER / MOISTURE

- How much water is available
- Affects growth and behaviour
- Essential for life

SOIL / pH

- Nutrient content
- Acidity or alkalinity
- Affects plant growth

LEAF LITTER / GROUND COVER

- Provides food and shelter
- Keeps soil moist
- Protects small life

HUMIDITY

- Amount of moisture in air
- Affects breathing
- Influences body water loss

SOIL MOISTURE

- Wet or dry conditions
- Affects plant and animal life
- Changes with rainfall

WIND

- Direction and strength
- Affects temperature
- Can dry out plants

HOW PHYSICAL CONDITIONS AFFECT LIVING THINGS

DESERT – HOT AND DRY

- Very little water
- High temperatures
- Plants with deep roots
- Animals active at night

FOREST – WARM AND WET

- High humidity
- Low light on the forest floor
- Rich leaf litter
- Animals with camouflage

OCEAN – SALTY AND COLD

- Salty water
- Changing temperatures
- Strong currents
- Animals with fins and gills

WETLAND – WET AND SOFT

- Soft, muddy soil
- Abundant water
- Warm temperatures
- Animals with long legs

MOUNTAIN – COLD AND HARSH

- Low temperature
- Thin air
- Limited food
- Animals with thick fur

Different conditions. Different challenges. Amazing survival strategies.