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Design a Weather-wise Habitat - Year 1

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Teacher overview

Purpose and success

Year 1 Science • ten complete lessons, approximately 60 minutes each. Children explain a fictional garden visitor station through living needs, weather evidence and an actual safe push/pull test. Successful work connects a useful feature to a need, justifies a visitor choice from labelled weather evidence, and compares a prediction with what the gate actually did. Judge the explanation and records, not decoration or handwriting.

Ten separate editable lesson files

Design a Weather-wise Habitat - Year 1 - Lesson 01 - Presentation.pptx
Design a Weather-wise Habitat - Year 1 - Lesson 02 - Presentation.pptx
Design a Weather-wise Habitat - Year 1 - Lesson 03 - Presentation.pptx
Design a Weather-wise Habitat - Year 1 - Lesson 04 - Presentation.pptx
Design a Weather-wise Habitat - Year 1 - Lesson 05 - Presentation.pptx
Design a Weather-wise Habitat - Year 1 - Lesson 06 - Presentation.pptx
Design a Weather-wise Habitat - Year 1 - Lesson 07 - Presentation.pptx
Design a Weather-wise Habitat - Year 1 - Lesson 08 - Presentation.pptx
Design a Weather-wise Habitat - Year 1 - Lesson 09 - Presentation.pptx
Design a Weather-wise Habitat - Year 1 - Lesson 10 - Presentation.pptx

Teaching and evidence

Each deck has its own learning, noticing, modelling, guided practice, practical task, evidence record and reflection. Use the colour cases/displays/game with low-ink worksheets and their matching red model-answer pages. The practical demonstration and rubric are primary evidence; the ten-question quiz adds concept and unfamiliar-application checks. All ten lessons are required on the full route. The eight-session route below combines teaching; it omits no science strand or assessment.

Preparation, safety and access

Prepare the model

For each pair/small group, a teacher prepares a large cardboard gate on a flat cardboard base. Fix two broad guide strips parallel to the travel direction and two broad end stops. The gate should slide freely without tipping, with a large folded tab securely attached. Mark the same middle start on the base. Use cardboard and school-approved adhesive; adults handle any cutting/hot glue. Check stability and gentle travel before each test. Keep loose parts large; no cords, elastic, projectiles or sharp hardware.

Run the comparison

Choose a gentle rightward push and a gentle leftward pull on the large tab. Reset the same gate at the middle start before each action. Keep track and flat surface the same; repeat each action three times in Lesson 1. Watch and record actual direction, including no movement if it catches. Stop before optional distance measurement with equal paper units. Force is approximate and can vary. Ask the teacher to check a joint; never force or push a person.

Living things and weather

The model is a non-enclosed visitor station, not an animal enclosure. Teach suitable water/light/food for the bean plant and food/water/air/shelter opportunities for a free bird; do not deprive organisms or collect wildlife. Use teacher-chosen images for pond-edge organisms. Follow school procedures for safe weather observation, shade, clothing and indoor alternatives. Never stare at the Sun. Record teacher-provided temperature at a consistent safe time/place. Label illustrative, schematic, observed and forecast evidence separately.

Preparation, safety and access (continued)

Keep reasoning accessible

Offer a small card choice, one direction at a time, large handled materials, an uncluttered workstation, partner rehearsal and adult reading/scribing. Accept speech, drawing, pointing, pictures, gestures, a communication board/device or demonstration. Keep the same three evidence demands and rubric criteria. Extend through an alternative justified feature, comparison limit or useful safe next question, not extra construction.

Source-viewing link for Lesson 5

Teacher viewing: Bureau of Meteorology, Yawuru seasonal calendar (Yawuru Country, Broome region). Present it as one specific community place source. Link only; no calendar artwork, cultural text or knowledge is reproduced or invented. Use reliable local knowledge for a local seasonal comparison.

PREVIEW

Eight-session completion route

Sessions 1-4

- 1 • Lesson 01 slides 1–9: three-strand client brief, C01–C08 and W01.
- 2 • Combine Lessons 02 and 03. Use L02 slides 2–6 for needs modelling/audit (W02), then L03 slides 4–8 for the labelled plan and model limit (W03). Guide: 8 min retrieve; 10 min model; 15 min audit; 15 min plan; 12 min explain/reflect.
- 3 • Lesson 04 slides 1–9: illustrative five-day example, W04 and begin the separate actual-weather journal. Continue short adult-led observations between lessons at the consistent time/place.
- 4 • Lesson 05 slides 1–10: schematic pattern comparison, teacher-viewed place-specific source and W05. Five days do not provide a season.

Sessions 5-8

- 5 • Lesson 06 slides 1–9 and W06: teacher checks the gate, predict then conduct actual gentle right-push/pull trials.
- 6 • Lesson 07 slides 1–9 and W07: six repeated actual results, constants, prediction/peer comparison and hand-force limit.
- 7 • Lesson 08 slides 1–9: assemble the existing model/records and W08 evidence labels; use the assessment planning sheet.
- 8 • Combine Lessons 09 and 10. L09 slides 2–8 support pair demonstration; W09; L10 slides 3–8 supply the new cooler/wetter case, W10, limit/next question and conference. Guide: 8 min retrieve/rehearse; 30 min parallel demonstrations and teacher conferencing; 15 min transfer; 7 min reflection/cleanup. Use the rubric and quiz to supplement retained records. The core assessment covers living needs, labelled weather evidence and actual push/pull testing.



Eight-session completion route (continued)

Maintain the full evidence trail

The compact route retains every worksheet, the six-trial comparison, actual-weather record and unfamiliar transfer. Pre-prepare materials and run demonstrations in parallel groups. Continue the safe weather observations across available days; distinguish missing observations from supplied examples. Adjust within-session time for access needs while keeping all three strands and actual test evidence. No second model is required.

PREVIEW



Game: Evidence Trail – teacher guide

Use the six-stop board

Use as revision in Lesson 8 after the three strands have been taught. For 2–4 learners, choose a challenge card and its matching C01–C08 case, then move one stop at a time: Notice, Ask, Compare, Explain, Apply, Reflect. Each turn needs a response linked to that case and a respectful partner question. Rehearse a response if more support is needed; all learners reach Reflect together. Accept talking, pointing, drawing or supported communication. For movement claims, use existing real test records or discuss a prediction; never invent an actual outcome.

Response criteria for the eight challenge cards

- 1 • C01: move visitor shade beside the plant so it receives suitable light; retain suitable water and air.
- 2 • C02: explain a feature representing food, water and shelter opportunities; a bird picture alone is decoration.
- 3 • C03: justify cover or an adult-approved indoor alternative using illustrative Tuesday rain (16°C, moderate wind).
- 4 • C04: justify visitor shade using illustrative Friday sunshine (24°C, moderate wind); keep suitable plant light.
- 5 • C05: justify one change for the warm/wetter schematic while preserving living needs; do not call it a seasonal evidence.
- 6 • C06: predict, then describe the actual gentle test. Reset and record direction honestly, including catching or no movement if observed.
- 7 • C07: use the same middle starting mark for both tests; also keep the gate, track and flat surface alike. Hand force can vary.
- 8 • C08: record the actual result, compare it with the prediction and ask a relevant safe next question. Other justified responses are valid.

Lesson 1 • The habitat challenge

Ready to teach

60 minutes • Use Design a Weather-wise Habitat - Year 1 - Lesson 01 - Presentation.pptx

Materials: D1/D2, C01–C08, W01, large sorting spaces, blank paper and pencils.

Safety: Fictional case only; no animals, ponds or outdoor weather investigation without adult procedures.

Learning and success

We can name three science questions for a model visitor station.

We can show our thinking by talking, drawing, pointing or demonstrating.

Habitat: a place that supports a living thing. Evidence: what we notice or test.

Teach, model and practise

Read the fictional client brief aloud: make a visitor station beside a garden with a healthy bean plant and a free bird. It must preserve living needs, respond to weather and include a safe movable gate. Model sorting one card into each strand and show a card to span two strands when the explanation is sound. Children inspect and sort the eight cards in pairs, then use W01 to record their own three questions. Ask for a prediction from an observation rather than a favourite design colour. Collect a diagnostic explanation of all three demands. Support with two card choices or an adult-recorded explanation; extend by asking which evidence is still missing.

Suggested timing

8 min retrieve/notice • 12 min explicit model and guided example • 25 min practical inquiry/record • 10 min explain/compare • 5 min cleanup and exit response.



Lesson I · The habitat challenge (continued)

Evidence and response choices

Keep your first idea and prediction.

Say which evidence would help you check a need, a weather choice and a movement.

Does a colourful model alone prove that living needs are met?

No. Explain what each useful feature does.

Tell one question you still want to investigate. Accept talking, drawing, pointing, supported pictures/gestures, a communication board/device or an adult-recorded explanation. Support with smaller choices, extend with an evidence limit or a safe further question. Keep actual results separate from predictions.

PREVIEW



Lesson 2 · Needs audit

Ready to teach

60 minutes · Use Design a Weather-wise Habitat - Year 1 - Lesson 02 - Presentation.pptx

Materials: C01/C02, W02, existing healthy classroom plant or an adult-chosen picture, pencils.

Safety: Observe only; maintain suitable plant care, never capture or feed wild animals for this task.

Learning and success

We can explain which features support a plant or an animal.

We can show our thinking by talking, drawing, pointing or demonstrating.

Need: something a living thing requires. Audit: a careful check.

Teach, model and practise

Model the needs audit using the deliberately incomplete W02 scene: a bean plant under a light-bulb, wing of an ant, a bird whose water, food and shelter opportunities need checking. Distinguish a functional feature from an attractive icon, while you annotate missing needs, then explain a feasible change for the functional model. Observe an existing healthy plant briefly and record the date and a relevant feature without altering its care. Accept accurate drawings, gestures, picture choices or scribed statements. Ask how an adult uses a pattern such as a drying soil observation to plan suitable care, without prescribing watering amounts. In compact session 2, use the W02 audit to inform the W03 plan; do not re-copy the audit.



Lesson 2 · Needs audit (continued)

Suggested timing

8 min retrieve/notice · 12 min explicit model and guided example · 25 min practical inquiry/record · 10 min explain/compare · 5 min cleanup and exit response.

Evidence and response choices

Record: living thing → need → useful feature.

Point to the evidence. Do not claim that a model proves real animal welfare.

What is the difference between drawing water and supplying sustainable water?

What everyday garden decision could a needs check help an adult make?

Accept talking, drawing, pointing, supported picture/gestures, a communication board/device or an adult's correct explanation. Support with smaller choices; extend with an evidence link or a further question.

Keep actual results separate from predictions.

PREVIEW



Lesson 3 • Evidence-led habitat plan

Ready to teach

60 minutes • Use Design a Weather-wise Habitat - Year 1 - Lesson 03 - Presentation.pptx

Materials: W02/W03, C01/C02, large cardboard pieces, blunt pencils, teacher-prepared components.

Safety: No living organisms in models; adult prepares sharp cuts and children use large pieces.

Learning and success

We can label a model feature and explain the need it supports.

We can show our thinking by talking, drawing, pointing or demonstrating.

Design: a plan with a purpose. A label explains what a feature does.

Teach, model and practise

Show the same fictional scene used in the needs audit. Think aloud as you choose a feature from a specific need and evidence, then label the function. Keep the plant-lists separate from visitor shade. Pupils sketch and label their own plan using those large cardboard pieces to consider placement. Confer with each child about at least one plant need and one animal need. Use a shared plan in compact session 2, retaining both audit and design explanations. Support with movable picture choices or adult scribing; challenge with a feature that helps visitors but could obstruct a plant, requiring a reasoned change. Keep the plan as evidence for Lesson 8.

Suggested timing

8 min retrieve/notice • 12 min explicit model and guided example • 25 min practical inquiry/record • 10 min explain/compare • 5 min cleanup and exit response.



Lesson 3 · Evidence-led habitat plan (continued)

Evidence and response choices

Keep your labelled plan and the observation or case card behind each choice. Models simplify a place. They do not contain all the conditions a real living thing needs.

Explain one feature without mentioning its colour.

Which part of your plan needs weather evidence or a movement test next?

Accept talking, drawing, pointing, supported pictures/gestures, a communication board/device or an adult-recorded explanation. Support with smaller choices; extend with an evidence limit or a safe further question. Keep actual results separate from predictions.

PREVIEW



Lesson 4 · Read the weather

Ready to teach

60 minutes · Use Design a Weather-wise Habitat - Year 1 - Lesson 04 - Presentation.pptx

Materials: W04, C03/C04, illustrative five-day data, blank class journal, teacher-provided temperature.

Safety: Adult decides safe location; no Sun viewing or severe-weather exposure; adults provide temperature readings.

Learning and success

We can use a weather record to choose a visitor-station feature.

We can show our thinking by talking, drawing, pointing or demonstrating.

Observation: what we record now. Forecast: what is expected later.

Teach, model and practise

Read the supplied example exactly: Monday cloudy/light wind/18°C; Tuesday rain/moderate wind/17°C; Wednesday partly cloudy/light wind/19°C; Thursday sunny/light wind/20°C; Friday sunny/moderate wind/24°C. Label every use illustrative, not repeated, dated or local climate evidence. Model a sensible weather-linked visitor choice. Establish a real observation journal over several days with date/time/location, cloud, wind and teacher-provided temperature. Keep the observation time/location consistent where feasible and note a change rather than concealing it. Pupils plan a prediction and record actual later outcomes. Support by offering two weather-feature matches; extend by asking why a forecast and observation are different.



Lesson 4 • Read the weather (continued)

Suggested timing

8 min retrieve/notice • 12 min explicit model and guided example • 25 min practical inquiry/record • 10 min explain/compare • 5 min cleanup and exit response.

Evidence and response choices

Keep the weather value or observation and the choice it supports.

Ask a weather-pattern question and say a prediction. Later, compare it with what you actually observe.

Which supports changing a shelter: observed rain or a favourite colour?

What must be labelled differently from an actual weather observation?

Accept talking, drawing, pointing, supported pictures/gestures, a communication board/device or an adult-recorded explanation. Support with smaller choices; extend with an evidence limit or a safe further question. Keep actual results separate from predictions.

PREVIEW



Lesson 5 · Weather across seasons

Ready to teach

60 minutes · Use Design a Weather-wise Habitat - Year 1 - Lesson 05 - Presentation.pptx

Materials: C05, W03/W05, accumulated dated class journal, teacher internet access for official link.

Safety: Adult-guided viewing; do not copy or invent cultural knowledge, calendars or symbols.

Learning and success

We can change a plan for a different supplied weather pattern.

We can show our thinking by talking, drawing, pointing or demonstrating.

Seasonal pattern: changes noticed across a long part of the year.

Teach, model and practise

Use the two schematic sources as age-appropriate patterns, without claiming they are a particular traditional season or measured climate series.

Distinguish a long or local seasonal pattern from today's weather and from the illustrative one-on-table. Show the official Yawuru calendar only through the named teacher-viewing link, with its own authorship and place; do not copy it into a unit or invent a local calendar. Pupils justify one weather-linked change while still protecting living needs and the model mechanism.

Make a dated outdoor comparison only under safe school procedures.

Support using picture choices; challenge by asking what evidence is needed before making a local seasonal claim.



Lesson 5 • Weather across seasons (continued)

Suggested timing

8 min retrieve/notice • 12 min explicit model and guided example • 25 min practical inquiry/record • 10 min explain/compare • 5 min cleanup and exit response.

Evidence and response choices

Say whether you used a schematic scene or an actual dated observation. Note one limit: our model scene cannot predict weather for every place. Can Friday's warm weather prove that a whole season is warm? Explain. How might local knowledge and repeated observation help people plan? Accept talking, drawing, pointing, supported picture/gestures, a communication board/device or an adult's confirmed explanation. Support with smaller choices; extend with an evidence link for the further question. Keep actual results separate from predictions.

PREVIEW



Lesson 6 · Move a model gate

Ready to teach

60 minutes · Use Design a Weather-wise Habitat - Year 1 - Lesson 06 - Presentation.pptx

Materials: W06, C06, large teacher-prepared sliding gate, flat cardboard base, end stops, large folded tab, equal paper units.

Safety: Gentle motion only; teacher cuts track, fingers out of path, no projectiles/cords/elastic/small parts/pupil pushing.

Learning and success

We can safely test a push and a pull and describe the movement.

We can show our thinking by talking, drawing, pointing or demonstrating.

Push: press away. Pull: draw towards. Direction: where something moves.

Teach, model and practise

Before class, construct a board sliding cardboard gate between two guide strips on a flat base with two end stops and a large folded pull tab. Mark a central start position. Check the movement is smooth and components are large and secure. Model reset, gentle push right, stop, observe, reset, gentle pull left. Pupils predict, then test two actions with a partner and record actual direction and an optional informal distance in equal paper units after the gate stops. Hand strength is approximate; do not pretend it is precisely controlled. Keep obstructed or unexpected movement as genuine data. If fine-motor work is inaccessible, use the teacher model and allow the child to direct, observe and explain the test.



Lesson 6 • Move a model gate (continued)

Suggested timing

8 min retrieve/notice • 12 min explicit model and guided example • 25 min practical inquiry/record • 10 min explain/compare • 5 min cleanup and exit response.

Evidence and response choices

Use W06: prediction, action and actual direction or distance.

Say what you actually saw, even when it differs from your prediction.

How did the gate move after a push? After a pull?

What must stay alike to make the comparison useful?

Show one safe step. Never test forces by pushing another person. Accept talking, drawing, pointing, supported pictures/pictures, communication board/device or an adult-recorded explanation. Support with smaller choices; extend with an evidence limit or a safe further question. Keep actual results separate from predictions.

PREVIEW



Lesson 7 · Improve the comparison

Ready to teach

60 minutes · Use Design a Weather-wise Habitat - Year 1 - Lesson 07 - Presentation.pptx

Materials: W07, C07/C08, same safe gate setup as Lesson 6, equal paper units, class comparison space.

Safety: Same large secure components; gentle movements, end stops and clear track; stop if jammed, never force pieces.

Learning and success

We can repeat a safe test and compare our actual results.
We can show our thinking by talking, drawing, pointing or demonstrating.
Repeat: try again. Fair comparison: keep important parts alike.

Teach, model and practise

Revisit a comparison with two different start marks, making the method weakness explicit. Change direction rather than simultaneously altering strength and track. Children reset the same gate to the centre, use the same flat surface and make three gentle pushes right plus three gentle pulls left. Record actual results without making results fit a pattern; hand force remains approximate. Compare with a peer, identify similarities/differences and ask a next question, such as whether a catching guide affects movement. Keep explanations tentative when evidence is insufficient. Represent outcomes in a picture tally or categories if useful. Support with an adult recorder and pictured directions; extend by explaining one remaining comparison limitation.



Lesson 7 • Improve the comparison (continued)

Suggested timing

8 min retrieve/notice • 12 min explicit model and guided example • 25 min practical inquiry/record • 10 min explain/compare • 5 min cleanup and exit response.

Evidence and response choices

Compare your repeated results with your prediction and a classmate's records.

Sort or point to outcomes: right, left, stayed still. A different result is evidence too.

Which parts stayed alike? What changed?

What could explain a different result? Hair for or a catching gate are possibilities to investigate.

How can repeated tests help a person choose a useful mechanism? Accept talking, drawing, pointing, supported pictures/gestures, a communication board/device or an adult-recorded explanation. Support with smaller choices; extend with an evidence card for a further question. Keep actual results separate from prediction.



Lesson 8 · Assemble the explanation

Ready to teach

60 minutes · Use Design a Weather-wise Habitat - Year 1 - Lesson 08 - Presentation.pptx

Materials: W08, D2, existing model and W02–W07 records, large labels, teacher-prepared cardboard pieces.

Safety: No animals in model; no sharp tools or unsafe mechanisms; adult checks before demonstrating.

Learning and success

We can connect each design choice to one science record.

We can show our thinking by talking, drawing, pointing or demonstrating.

Explain: tell how a claim connects to evidence.

Teach, model and practise

Assemble an existing portfolio rather than starting assessment from nothing. Model a complete claim–evidence–reason connection for each of the three strands. Children complete or adjust their existing visitor station and prepare three evidence labels on W08, distinguishing illustrative weather examples from actual mass and mechanism observations. Conference about a supported living-needs feature, a weather choice and an observed push/pull result. Invite alternative communication modes with the same reasoning demand. In compact session 7 this preparation is essential for session 8, with no new product burden. If no actual mechanism test is available, arrange the safe supported practical before assessment; an imagined result cannot substitute.



Lesson 8 • Assemble the explanation (continued)

Suggested timing

8 min retrieve/notice • 12 min explicit model and guided example • 25 min practical inquiry/record • 10 min explain/compare • 5 min cleanup and exit response.

Evidence and response choices

Choose one specific record for every explanation.

Practise pointing, demonstrating, drawing, speaking or using a communication board/device.

Do you have all three strands and a safe tested mechanism?

Which claim is stronger with a record? Which uncertainty should you mention? Accept talking, drawing, pointing, supported pictures/gestures, a communication board/device or an audio-recorded explanation. Support with smaller choices; extend with an evidence limit to a safe further question. Keep actual results separate from predictions.

PREVIEW



Lesson 9 • Client demonstration

Ready to teach

60 minutes • Use Design a Weather-wise Habitat - Year 1 - Lesson 09 - Presentation.pptx

Materials: W09, A1, R1, model/diagram, actual gate-test portfolio, weather journal or labelled illustrative data.

Safety: Adult checks model; clear track during gentle demonstration; no public-speaking requirement.

Learning and success

We can show how our model uses living-needs, weather and movement evidence.

We can show our thinking by talking, drawing, pointing or demonstrating.

Demonstration: show what works and explain why.

Teach, model and practise

Assess the complete portfolio and a concise individual explanation. Each learner explains a plant/animal need and functional feature, justifies a weather adaptation, forming a relevant record, and safely demonstrates or directs a push/pull mechanism test with actual observations. Probe a weak choice and compare a prediction with what occurred. Use the specific rubric; do not score prettiness, volume of writing or public confidence. In compact session 8, pair demonstrations and gather individual recorded/oral-to-adult/drawn evidence throughout the 30-minute task block as well as teacher conferences. Preserve enough time for Lesson 10's transfer question; every child is assessed, including those unable to perform to the whole class.



Lesson 9 • Client demonstration (continued)

Suggested timing

8 min retrieve/notice • 12 min explicit model and guided example • 25 min practical inquiry/record • 10 min explain/compare • 5 min cleanup and exit response.

Evidence and response choices

Keep your model/diagram, weather evidence and real test record.

Compare the result with your prediction and explain a limitation or next question.

Does each strand have evidence?

Listen to a partner's question and explain your reasoning.

Your communication method does not change the science expected. Accept talking, drawing, pointing, supported pictures/gestures, a communication board/device or an adult-recorded explanation. Support with smaller choices; extend with an evidence limit or a safe further question. Keep actual results separate from predictions.

PREVIEW



Lesson 10 • Reflect and transfer

Ready to teach

60 minutes • Use Design a Weather-wise Habitat - Year 1 - Lesson 10 - Presentation.pptx

Materials: W10, C05/C08, existing portfolio, unfamiliar schematic scenario and AI conference record.

Safety: No harmful/weather-risk testing; protect healthy plants and free wildlife; no forced redesign.

Learning and success

We can explain one evidence-based change for a new condition.

We can show our thinking by talking, drawing, pointing or demonstrating.

Transfer: use our learning in a different case.

Teach, model and practise

Use an unfamiliar but age appropriate schematic cooler/wetter case and require one justified change rather than a second model. Check that the child retains biological needs, interprets weather-source limitations and identifies where the mechanism needs retesting after a change. Compare a prediction with observed evidence and elicit a genuine further question. In compact session 8 use Lesson 9 slides 2–8, then Lesson 10 slides 3–8, with one opening and closing; collect transfer evidence during the demonstration block. Children explain an everyday use of weather patterns/predictions. Support with two design choices or partner-supported communication; extend by explaining why five days cannot establish local seasonal patterns.



Lesson 10 • Reflect and transfer (continued)

Suggested timing

8 min retrieve/notice • 12 min explicit model and guided example • 25 min practical inquiry/record • 10 min explain/compare • 5 min cleanup and exit response.

Evidence and response choices

Keep one transfer explanation and one limitation or next question.

Explain how observation and prediction can help people make everyday choices.

What does the evidence support? What does it not prove?

Can you still explain all three science strands?

Share one improvement with a clear reason. Accept talking, drawing, pointing, supported pictures/gestures, a communication board/device or an adult-recorded explanation. Support with smaller choices; extend with an evidence limit or a safe further question. Keep actual results separate from predictions.

PREVIEW

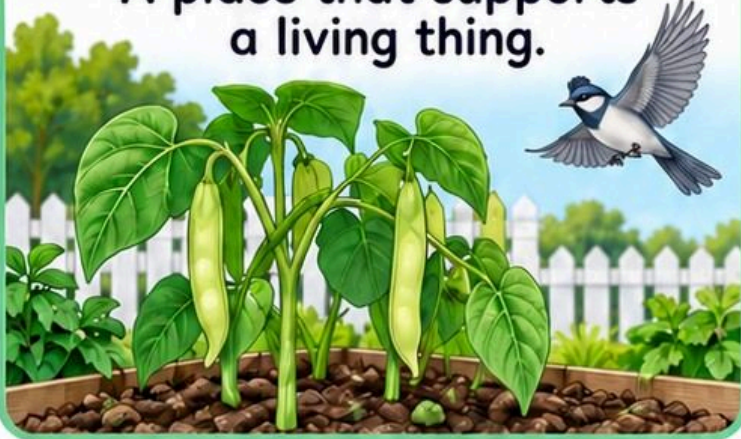


Design a Weather-wise Habitat

Key ideas • Year 1

HABITAT

A place that supports a living thing.



WEATHER

Conditions such as sunshine, rain and wind.



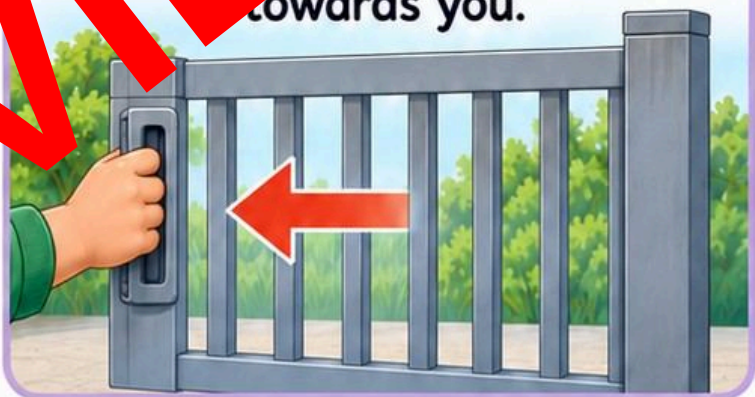
PUSH

Press something away from you.



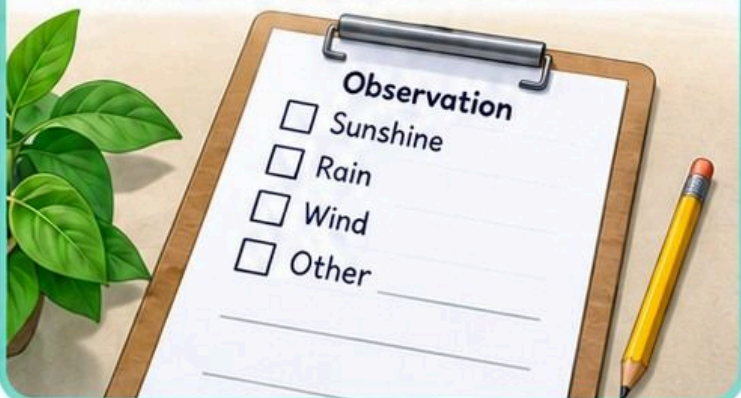
PULL

Draw something towards you.



EVIDENCE

What we observe or test.



DESIGN

A plan with a purpose.



Our model is a fictional visitor station.
It is not an animal enclosure.

How We Explain Our Evidence

1. QUESTION

Is a decorated model enough to show that needs are met?



2. EVIDENCE

A bean plant needs suitable water, light and air.

Our plan leaves the plant in light beside the visitor shade roof.



Original fictional model example — not a real enclosure.

3. EXPLANATION

Decoration alone is not enough. Explain how each useful feature supports a living thing's needs.







Case Cards 1 – 4

Original fictional garden cases



Look, think, discuss, write!

C01 • Bean plant

The bean plant needs suitable water, light and air.
Which feature supports each need?



C02 • Garden bird

Our free bird needs food, water, air and shelter.
Which useful features could the model show?



C03 • Rainy example

Illustrative, not measured:
Tuesday — rain, moderate wind, 16°C.
Which visitor feature is useful?



C04 • Sunny example

Illustrative, not measured:
Friday — sunny, moderate wind, 24°C.
Which visitor feature is useful?



Case Cards 5–8

Original model and comparison cases



C05 • Different patterns

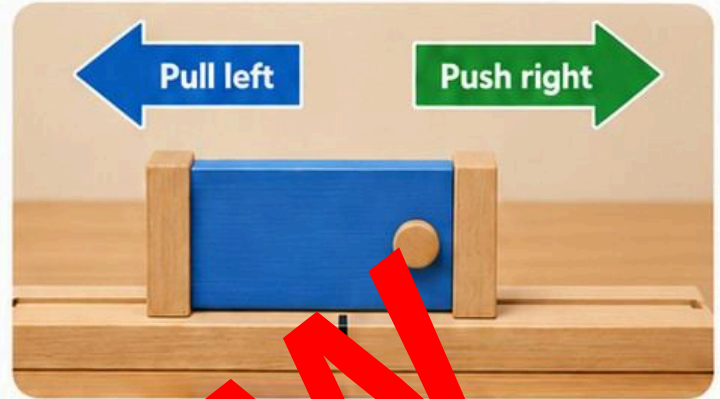
Schematic scenes: A is warmer and sunnier; B is cooler and wetter.



What would you change for visitors?

C06 • Move the gate

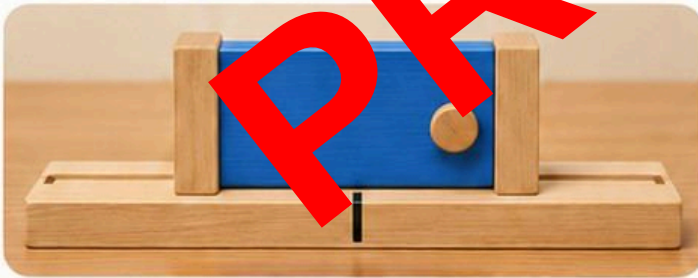
Start at the middle mark. Gently push right; reset, then gently pull left.



What do you always observe?

C07 • Keep it alike

Use the same gate, track, surface and starting mark. Repeat the chosen action.



- ☒ Same gate
- ☒ Same track
- ☒ Same surface
- ☒ Same starting mark

Why keep these alike?

C08 • Check a claim

A prediction is an idea to test. Record actual results, even when they differ.



What might you ask next?

Evidence Trail

Use your case card and evidence

Work together
Be curious
Be kind

Start

1

• NOTICE

What do you see?

2

• ASK

What could change?

4

• EXPLAIN

Which evidence supports your idea?

3

• COMPARE

What stays alike or differs?

5

• APPLY

What would you choose?

6

• REFLECT

What is a limit or next question?

Reach
Reflect
together.

Move one stop after a supported response
and a respectful partner question.



Evidence Trail

Look
Think
Discuss
Learn

A cooperative game for 2-4 learners

1

Choose one challenge card and find its case card.



2

Start at Notice. Take turns moving one stop at a time.



3

Use the stop's question to discuss your card and evidence.



4

A partner asks one respectful question.



5

Check the teacher's response criteria before moving on.



6

Reach Reflect together. There is no time limit.



Worked turn:

C03 describes illustrative rain.

"I chose cover because the example says rain."



Notice



Ask



Compare



Explain



Apply



Reflect



You may point, use a large counter, draw, speak or use a communication board/device.



Never invent an actual observation or test result.

Evidence Trail • Challenge Cards



1 • C01

Too little suitable light reaches a plant. Explain a useful change.



2 • C02

A bird picture looks lovely. Explain one need a useful feature supports.



3 • C03

The illustrative Tuesday is rainy. Choose a visitor plan and give evidence.



4 • C04

The illustrative Friday is sunny and 14°C. Explain a useful visitor feature.



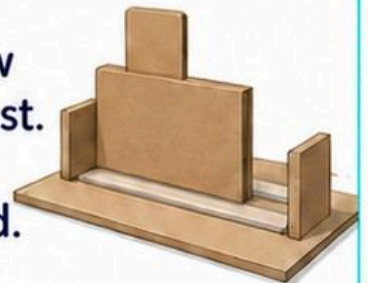
5 • C05

A cooler, wetter schematic replaces a warmer, sunnier one. Explain one change.



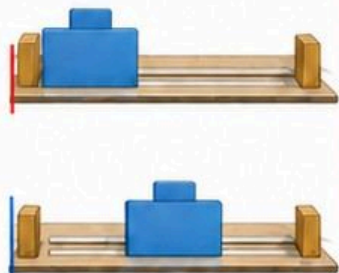
6 • C06

Predict, then show a safe push/pull test. Report what actually happened.



7 • C07

Two tests start in different places. How could we improve the comparison?



8 • C08

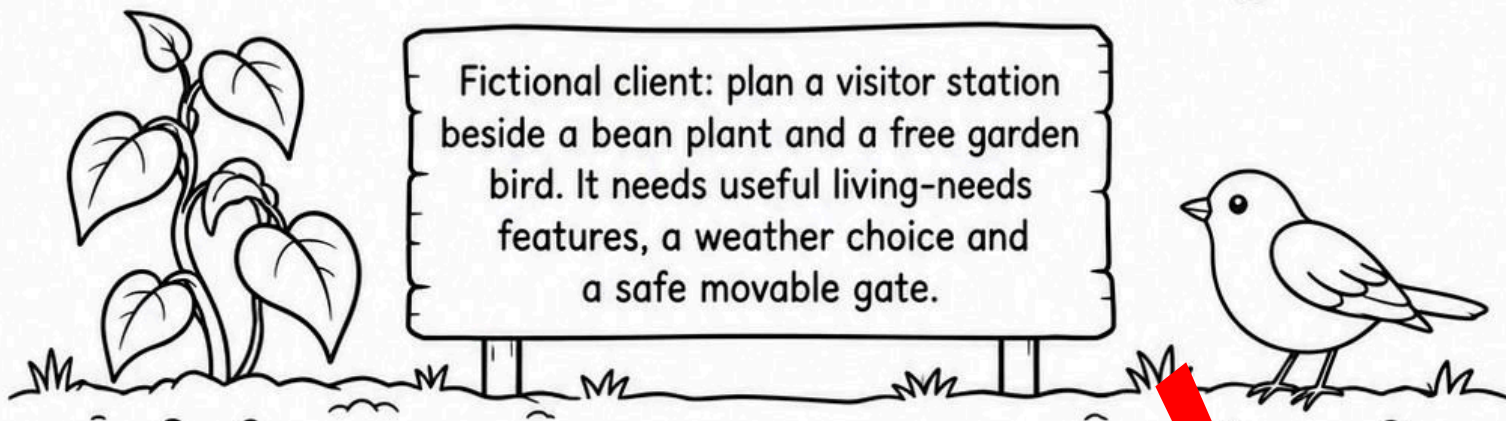
A result differs from your prediction. What do you record and ask next?



Name: _____

Date: _____

The Habitat Challenge



1. LIVING NEEDS

Draw one useful feature.
Which need does it support?

A large, empty rectangular box for drawing a useful feature.

2. WEATHER

Draw one visitor feature,
Which condition might it
help with?

A large, empty rectangular box for drawing a visitor feature.

3. MOVEMENT

Draw a safe push/pull idea.
What do you predict?

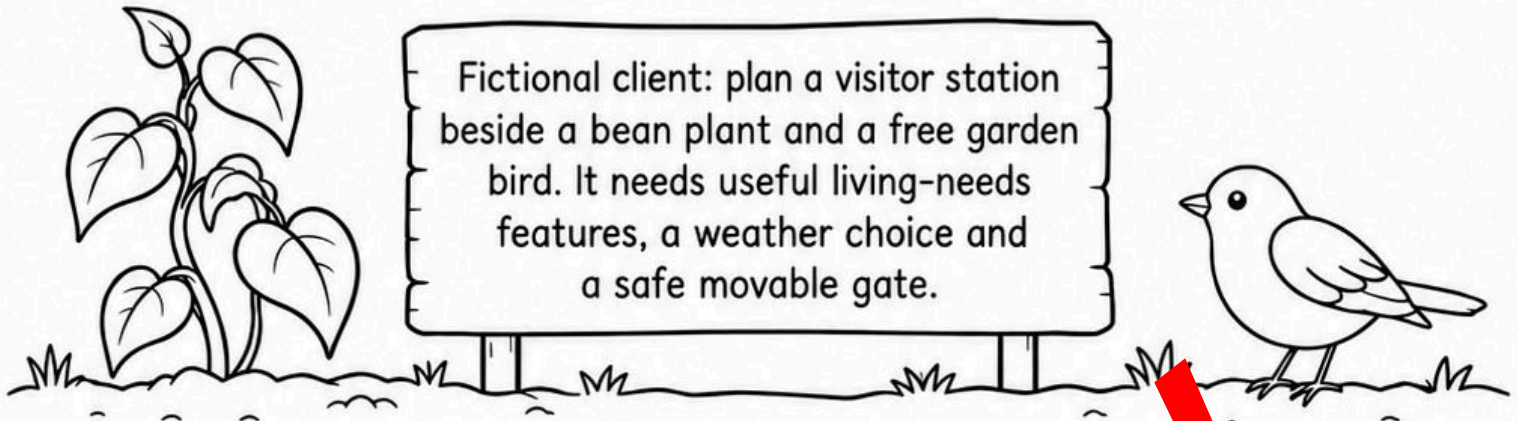
A large, empty rectangular box for drawing a safe push/pull idea.

Use C01-C08. You may explain, draw, point or ask an adult to write.

Name: **ANSWERS**

Date: _____

The Habitat Challenge



1. LIVING NEEDS

Draw one useful feature.
Which need does it support?

Example: leave
suitable light,
water and air
for the bean
plant.

2. WEATHER

Draw one visitor feature,
Which condition might it
help with?

Example:
visitor shade
in a sunny,
warmer
condition.

3. MOVEMENT

Draw a safe push/pull idea.
What do you predict?

Example
prediction:
a gentle
rightward push
may move the
model gate right.
Test to check.

Use C01–C08. You may explain, draw, point or ask an adult to write.

Name: _____

Date: _____

Needs Audit

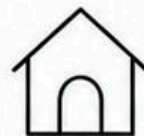
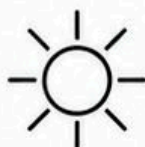
Original fictional scene — not a real enclosure

The roof leaves too little suitable light for the bean plant.
Check the bird's food, water and shelter opportunities.



1. NOTICE

Circle a missing need.



2. CHANGE

Draw useful features in the scene.

3. EXPLAIN

My feature helps ____ because ____.



Name: **ANSWERS**

Date: _____

Needs Audit

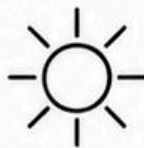
Original fictional scene — not a real enclosure

The roof leaves too little suitable light for the bean plant.
Check the bird's food, water and shelter opportunities.



1. NOTICE

Circle a missing need.



Plant light is blocked; check bird food, water and shelter opportunities.

2. CHANGE

Draw useful features in the scene.

Example: move visitor shade beside the plant; show suitable water, food opportunities and shelter.

3. EXPLAIN

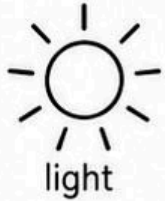
My feature helps ____ because ____.

The bean plant can receive suitable light.

The bird features represent needs; a model does not prove real welfare.

Name: _____

Date: _____



My Habitat Plan

Fictional model only — no real animals inside



PLAN

Sketch your garden and visitor station. Keep suitable plant light and space for a safe gate.

PREVIEW

LABEL

Add three user models. Use C01 and C02.

1. _____
2. _____
3. _____

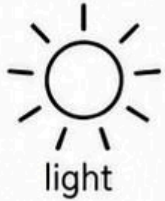
EXPLAIN

I chose ____ because it supports ____.

One thing the model cannot prove: ____.

Name: **ANSWERS**

Date: _____



My Habitat Plan

Fictional model only — no real animals inside



PLAN

Sketch your garden and visitor station. Keep suitable plant light and space for a safe gate.

One possible plan: plant in suitable light; visitor shade beside it; free bird habitat features; safe sliding gate.

LABEL

Add three useful labels. Use C01 and C02.

1. Suitable plant light
2. Suitable water
3. shelter opportunity

EXPLAIN

I chose ____ because it supports ____.

Example: plant-light space supports the bean.

One thing the model cannot prove: ____.

The model cannot prove a real animal will use it.

Name: _____

Date: _____



Read the Weather



Illustrative five-day example — not measured

Day	Conditions	Wind	Temperature
Monday	cloudy	light wind	18°C
Tuesday	rain	moderate wind	16°C
Wednesday	partly cloudy	light wind	19°C
Thursday	sunny	light wind	22°C
Friday	sunny	moderate wind	24°C

CHOOSE

Choose Tuesday or Friday. Draw one useful site feature.

PREVIEW

EXPLAIN

The example says _____. My choice helps because _____.

LIMIT

Why can this example not prove a whole season's weather?

Use C03 and C04. A forecast is not an observation.



Name: **ANSWERS**

Date: _____



Read the Weather



Illustrative five-day example — not measured

Day	Conditions	Wind	Temperature
Monday	cloudy	light wind	18°C
Tuesday	rain	moderate wind	16°C
Wednesday	partly cloudy	light wind	19°C
Thursday	sunny	light wind	22°C
Friday	sunny	moderate wind	24°C

CHOOSE

Choose Tuesday or Friday. Draw one useful visitor feature.

Example: Tuesday — covered visitor area or an adult-approved indoor alternative.

EXPLAIN

The example says _____. My choice helps because _____.

The example says rain and 16°C. Cover can help visitors keep dry.

LIMIT

Why can this example not prove a whole season's weather?

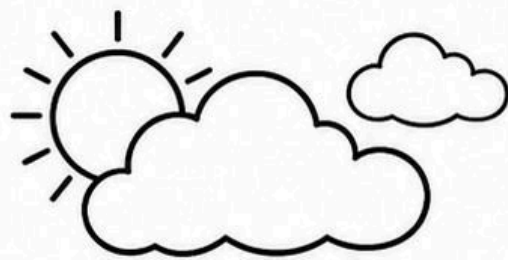
It is an illustrative short record, not measured seasonal or climate evidence.

Use C03 and C04. A forecast is not an observation.

Our Actual Weather Journal

Name: _____

Place: _____



Record actual weather with an adult at a consistent safe time.

Date and time	Cloud	Wind	Temperature (°C)	Notes

COMPARE

What repeated or changed?

My prediction was _____. What actually happened?

Only record teacher-provided temperature. Never stare at the Sun.
Follow school weather procedures.

A forecast is labelled forecast; it is not an observation.



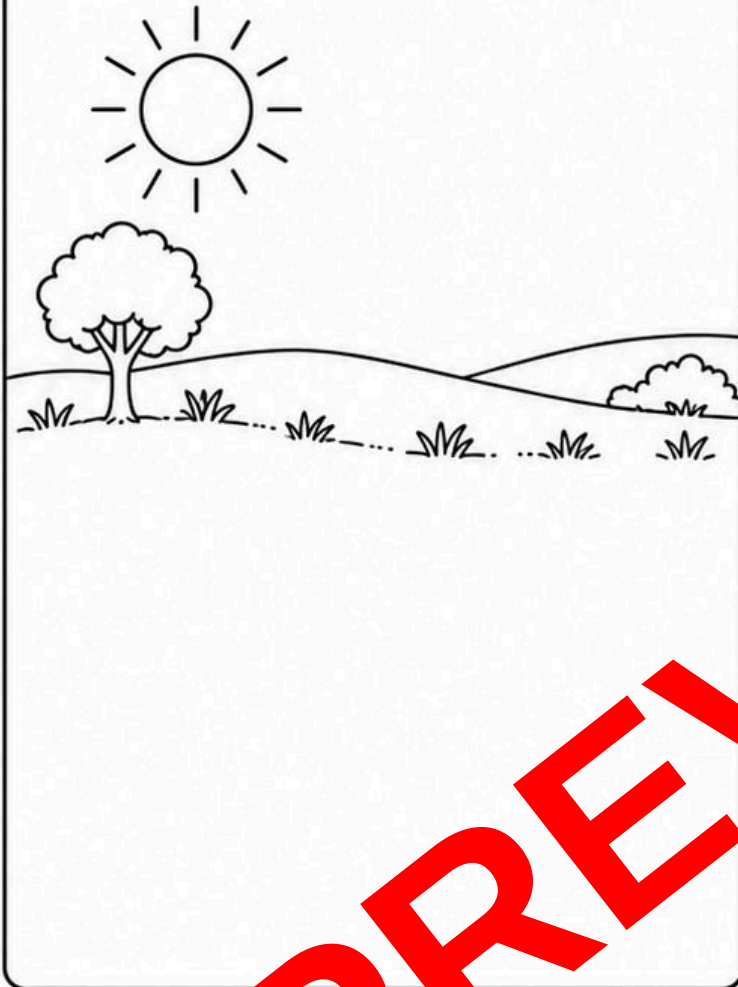
Name: _____

Date: _____

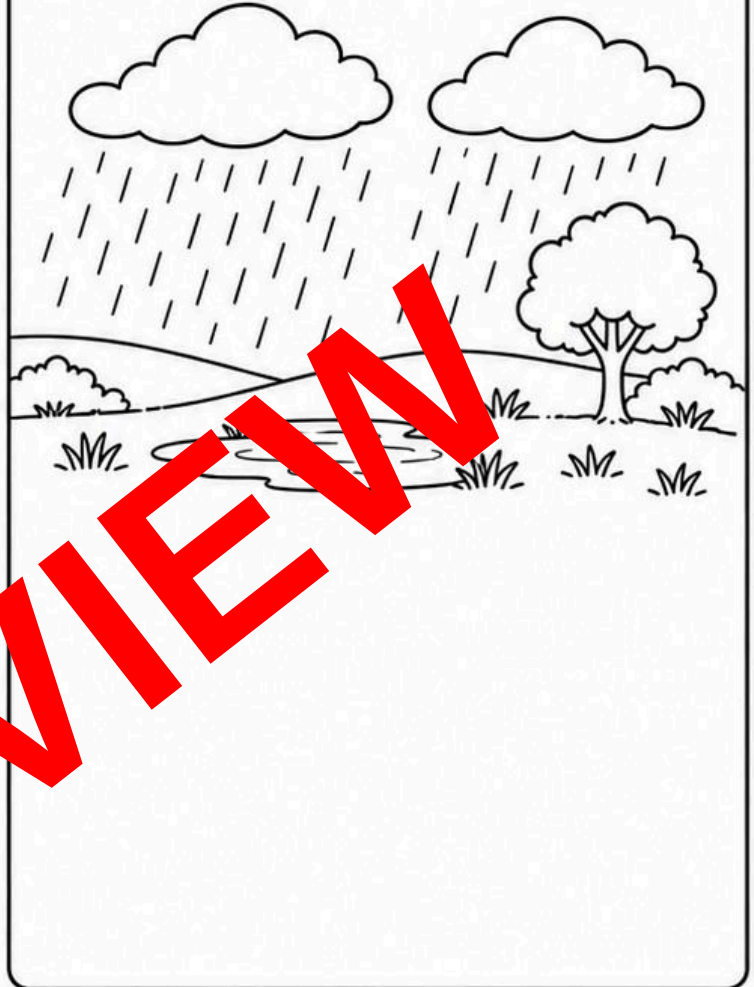
Weather Across Seasons

Two schematic teaching scenes — not measured local seasons

A • Warmer and sunnier



B • Cooler and wetter



COMPARE

Draw one useful visitor feature for **A** and one for **B**.

EXPLAIN

My change helps because _____.

Keep suitable plant water, light and air.

LIMIT

What would we need before describing a local seasonal pattern?
Use C05. Different places have different seasonal patterns.



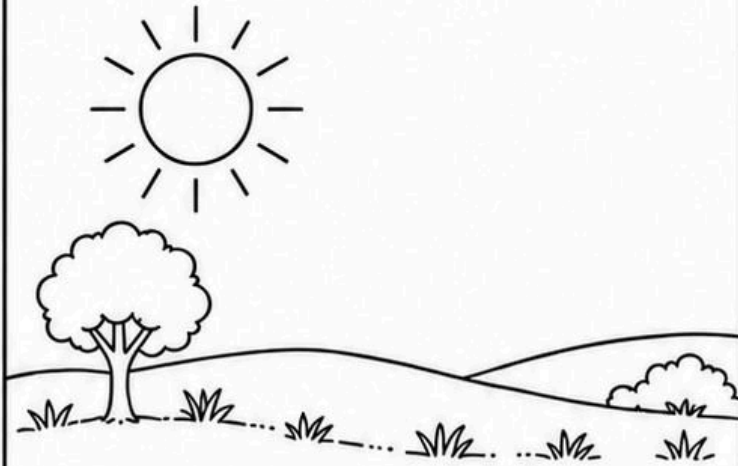
Name: ANSWERS

Date: _____

Weather Across Seasons

Two schematic teaching scenes — not measured local seasons

A • Warmer and sunnier



Example A: visitor shade.

B • Cooler and wetter



Example B: covered visitor activity or a court-approved indoor alternative.

COMPARE

Draw one useful visitor feature for **A** and one for **B**.

EXPLAIN

My change helps because _____. Shade can help in a sunnier pattern; cover can help with rain. Keep plant needs supported.

Keep suitable plant water, light and air.

LIMIT

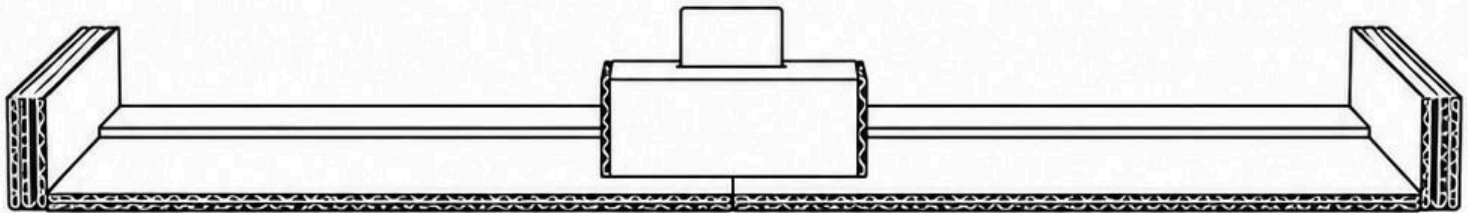
What would we need before describing a local seasonal pattern?

Use C05. Different places have different seasonal patterns.

Longer local dated observations and reliable local knowledge; five days alone are not enough.

Move a Model Gate

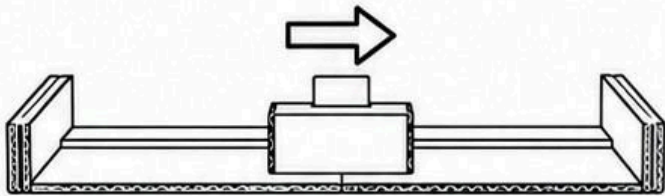
A safe teacher-prepared model • Use C06



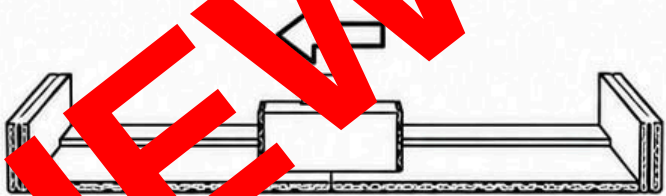
PREDICT

Draw where a gentle push right and pull left might move the gate.

Push right



Pull left



TEST AND RECORD

Reset to the middle mark each time. Keep the same gate, track and flat surface.

Action	Actual direction	Distance in equal paper units
Push right		
Pull left		

EXPLAIN

What actually happened? Was it like your prediction?



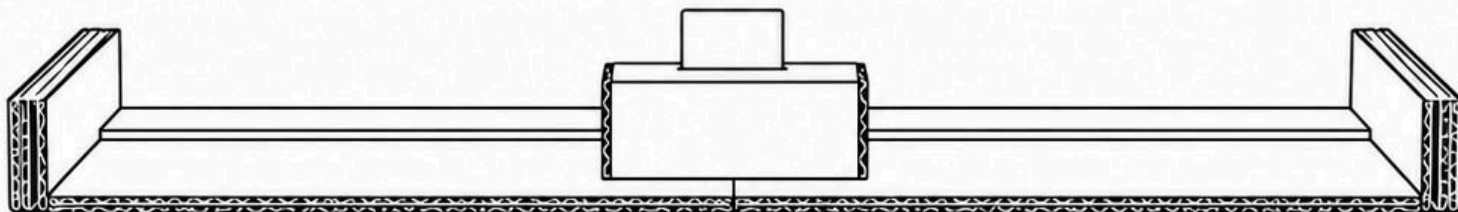
Name: _____

ANSWERS

Date: _____

Move a Model Gate

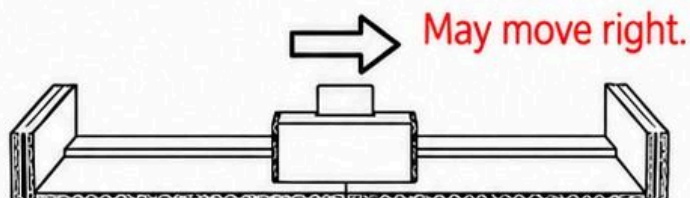
A safe teacher-prepared model • Use C06



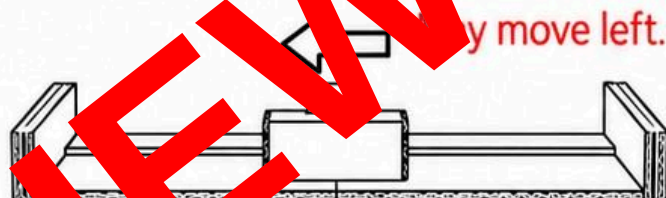
PREDICT

Draw where a gentle push right and pull left might move the gate.

Push right



Pull left



TEST AND RECORD

Reset to the middle mark each time. Keep the same gate, track and flat surface.

Action	Actual direction	Distance in equal paper units
Push right	Record actual direction.	Record actual distance.
Pull left	Record actual direction.	Record actual distance.

EXPLAIN

What actually happened? Was it like your prediction?

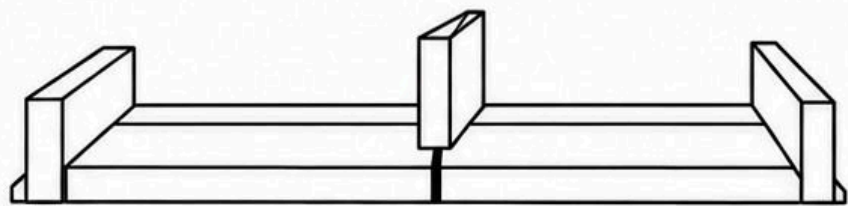


Teacher criteria: describe the actual result and compare it with the prediction. Accept catching or no movement if observed.

Improve the Comparison

Name: _____ Date: _____

Use C07 and C08 • Actual results remain blank until tested



PLAN

Change: action/direction. Keep the same gate, track, flat surface and middle start.

I predict _____. _____

REPEAT AND RECORD

Trial	Gentle push right: direction/distance	Gentle pull left: direction/distance
1		
2		
3		

COMPARE

What repeats or differs? Was it like your prediction?

A classmate noticed _____. My next question is _____



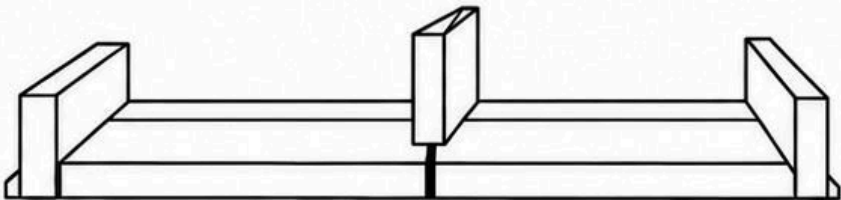
Hand force may vary. Reset each time; stop before measuring.



Improve the Comparison

Name: ANSWERS Date: _____

Use C07 and C08 • Actual results remain blank until tested



PLAN

Change: action/direction. Keep the same gate, track, flat surface and middle start.

I predict a gentle push right may move right; a gentle pull left may move left.

REPEAT AND RECORD

Trial	Gentle push right: direction/distance	Gentle pull left: direction/distance
1	Record actual direction and distance (may vary by test).	Record actual direction and distance (may vary by test).
2	Record actual direction and distance (may vary by test).	Record actual direction and distance (may vary by test).
3	Record actual direction and distance (may vary by test).	Record actual direction and distance (may vary by test).

COMPARE

What repeats or differs? Was it like your prediction?

Compare actual repeats, prediction and peer records.

A classmate noticed _____. My next question is _____.

A catching gate or variable hand force may need checking.

Ask a safe next question.



Hand force may vary. Reset each time; stop before measuring.

Name: _____

Date: _____

Three Evidence Labels

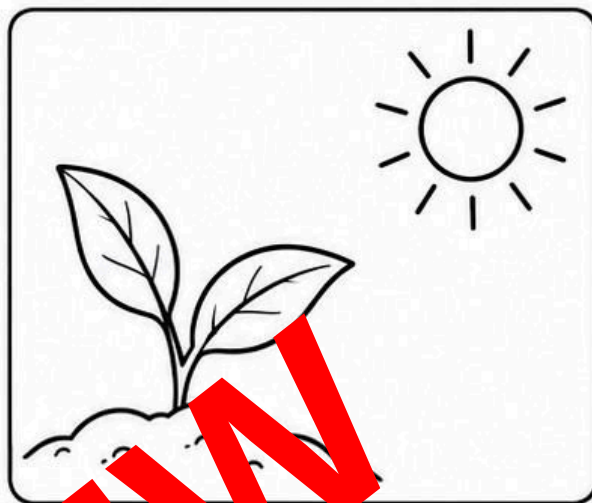
Use your existing model and records

LIVING NEEDS

My feature: ____.

It supports ____.

Evidence: ____.

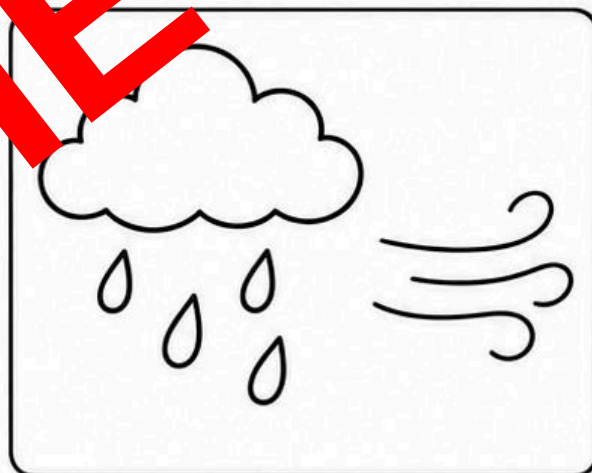


WEATHER

My choice: ____.

Weather evidence: ____.

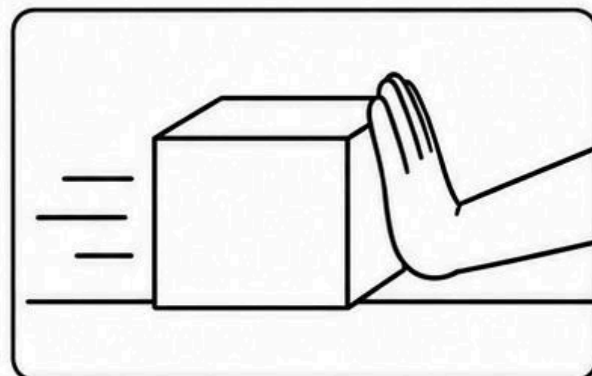
Label supplied example illustrative.
Label class observations with date, time and place.



MOVEMENT

My actual push/pull test showed ____.

Prediction compared: ____.



LIMIT

One thing I still need to check is ____.



Name: _____

ANSWERS

Date: _____

Three Evidence Labels

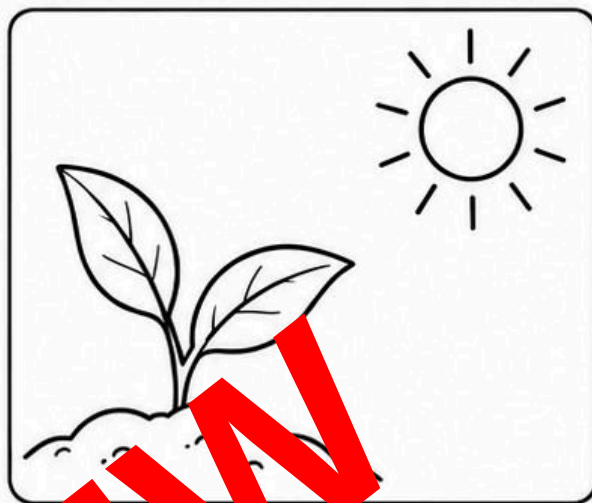
Use your existing model and records

LIVING NEEDS

My feature: Example: plant-light space.

It supports Supports suitable light.

Evidence: Use a relevant audit or observation.

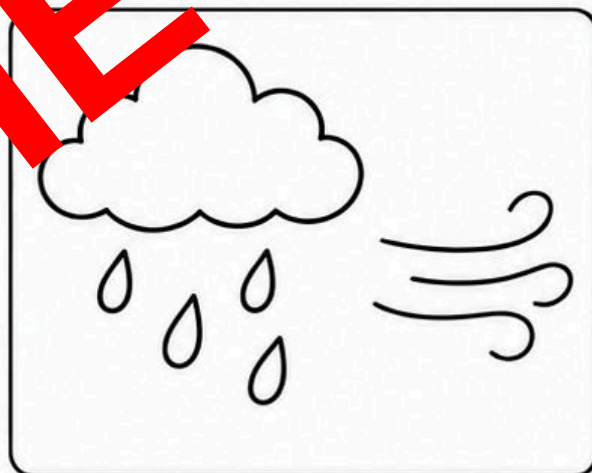


WEATHER

My choice: Example: visitor cover.

Weather evidence: Illustration Tuesday: rain, 16°C.

Label supplied example illustrative.
Label class observations with date, time and place.



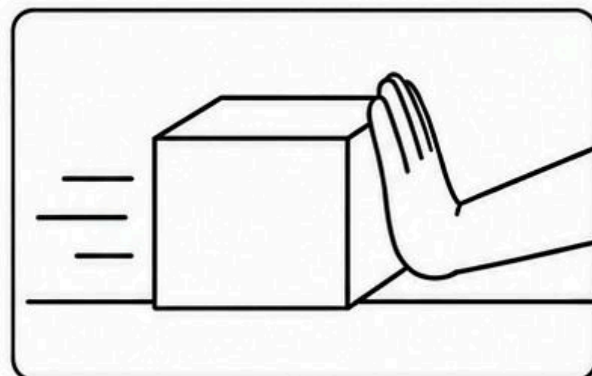
MOVEMENT

My actual push/pull test showed

Record the actual gate-test result.

Prediction compared:

Compare with the prediction.



LIMIT

One thing I still need to check is

Name what still needs checking.

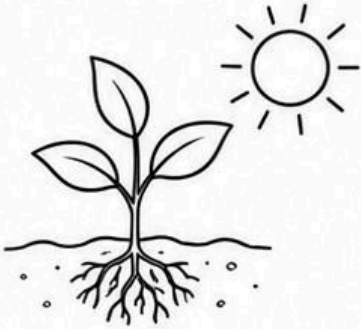
Client Demonstration

Name: _____

Date: _____

1. LIVING NEEDS

Show one useful feature and the need it supports.



2. WEATHER

Explain one visitor choice using a relevant record.



3. MOVEMENT

Show or describe your action and push/pull result. Compare with your prediction.



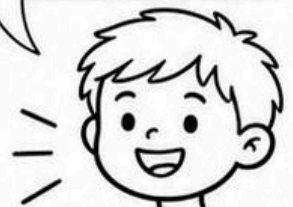
A CLIENT QUESTION

How do you know this choice helps?

MY RESPONSE

I noticed/tested _____. This supports _____.

You may speak, draw, point, demonstrate or use a communication board/device.



Client Demonstration

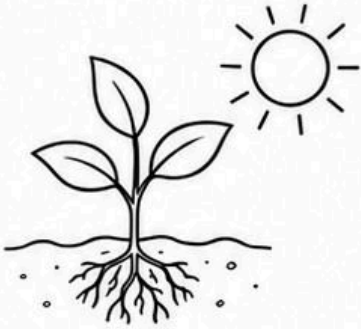
Name: _____

ANSWERS

Date: _____

1. LIVING NEEDS

Show one useful feature and the need it supports.



Explain a useful feature and the plant or animal need it supports.

2. WEATHER

Explain one visitor choice using a relevant record.



Use an actual dated observation or a clearly labelled illustrative example to justify the visitor feature.

3. MOVEMENT

Show or describe your actual push/pull result. Compare with your prediction.



Describe the actual safe gate test and compare it with the prediction.

A CLIENT QUESTION

How do you know this choice helps?

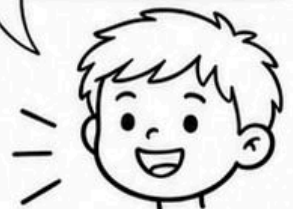
Accept a relevant explanation linked to evidence.

MY RESPONSE

I noticed/tested _____. This supports _____.

Explain a limitation or answer the client question. Other valid responses accepted.

You may speak, draw, point, demonstrate or use a communication board/device.



Reflect and Transfer

Name: _____

Date: _____

New schematic case: a cooler, wetter pattern arrives.

ONE CHANGE

Draw one useful change to the existing visitor station. No second model is needed.

REASON

My evidence suggests _____. This change helps because _____.

CHECK

How will living needs stay supported? Does the gate need retesting?

NEXT QUESTION

I still wonder _____. I could safely check by _____.

Reflect and Transfer

Name: ANSWERS

Date: _____

New schematic case: a cooler, wetter pattern arrives.

ONE CHANGE

Draw one useful change to the existing visitor station. No second model is needed.

Example: covered visitor activity or an adult-approved indoor alternative.

REASON

My evidence suggests _____. This change helps because _____.

This may help during the supplied cooler, wetter pattern;
label it schematic.

CHECK

How will living needs stay supported? Does the gate need retesting?

Keep suitable plant needs supported; retest if the track changes.
Ask a safe question and name a limit.

NEXT QUESTION

I still wonder _____. I could safely check by _____.

Example: could a smoother track help?
Ask the teacher, then compare gentle actual tests safely.

Quiz and assessment guide

Use the editable quiz

Design a Weather-wise Habitat - Year 1 - Quiz.pptx • ten questions with immediate black answer/feedback slides. Read aloud as needed and pause before revealing each answer. Accept explanation, pointing, drawing or demonstration. Questions 9 and 10 require application to an unfamiliar weather condition and a changed/jammed gate. Use quiz evidence alongside the actual model investigation, not in place of it.

Teacher answer reference

1. B. No. Explain how each relevant feature supports a living thing's needs. A decoration alone is not evidence.
2. A. Recorded rain can support a covered visitor area or an adult-approved indoor alternative. A forecast must remain labelled a forecast.
3. Keep suitable light for the bean plant, as well as suitable water and air. Move visitor shade beside the plant area; do not deprive bean plant.
4. No. It is an illustrative short example, not measure of climate evidence. Longer local observations are needed for a seasonal pattern.
5. Its direction may change. Predict and test safely, then report actual movement; a gate might catch or stay still.
6. B. Keep important parts alike and change the chosen action/direction. Repeat and record each result. Hand for wind can still vary.
7. B. Use images or other secondary evidence. The visitor-station model is not an animal enclosure. Never stress animals to test a claim.
8. Record what actually happened. Keep the prediction separately, compare them and ask a further question. Do not change data to match a guess.
9. A covered visitor area or adult-approved indoor alternative may help. Keep suitable plant light/water/air and animal needs in the plan. Label the scene schematic; other justified choices are possible.
10. No. Ask the teacher to check it, then retest the changed model gently. Keep a consistent start/surface, record actual movement and compare with the old prediction. Do not force a jammed piece.



Quiz and assessment guide (continued)

Assessment judgement

Use both assessment pages with the four-dimension rubric. Confirm needs features, evidence origin for the weather choice and a real safe test record. A decorated model alone is insufficient. Do not award or remove science achievement for handwriting, speech confidence or model neatness. Keep the child's evidence and one useful next step.

PREVIEW



Weather-wise Habitat • Assessment

Name: _____

Date: _____

THE TASK

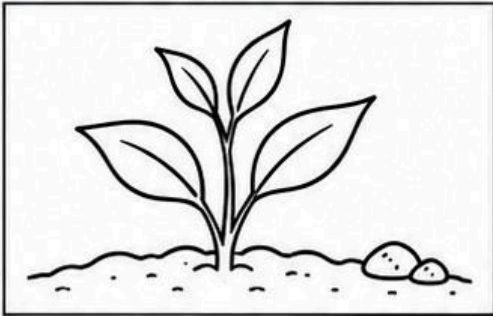
Explain three science strands using your model and records.

Use a drawing, talk, pictures, gestures, a communication board/device or an adult scribe.

A model is not an animal enclosure. Keep actual test evidence; label examples illustrative.

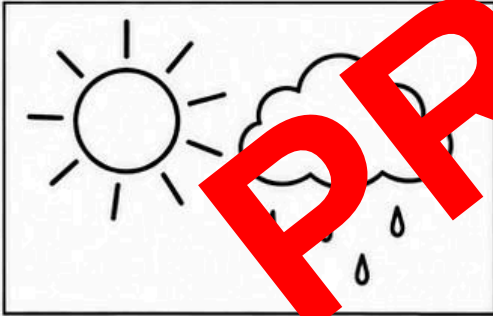


LIVING NEEDS



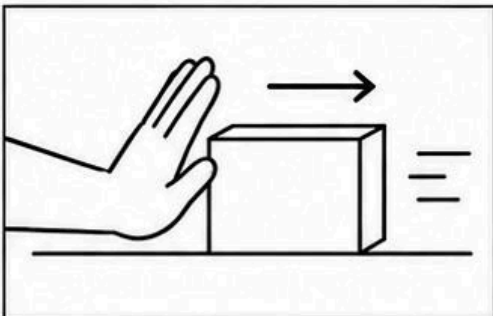
Feature → need supported → evidence

WEATHER



Indicator → choice → condition → evidence and its origin

MOVEMENT



Actual safe push/pull test → result → prediction comparison



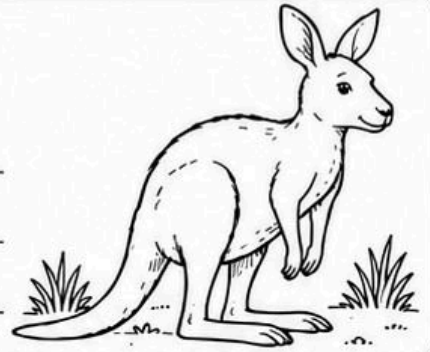
Assessment • Explain and Transfer

Name: _____

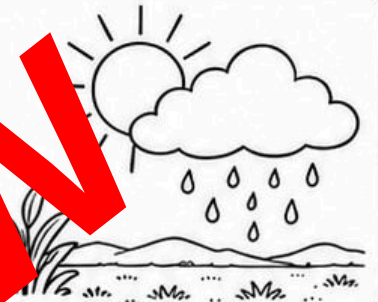
Date: _____

EXPLAIN YOUR EVIDENCE

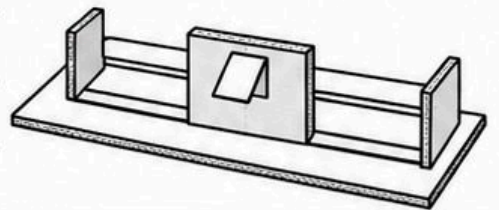
How does a useful feature support a living need?



Which weather evidence supports your visitor choice?

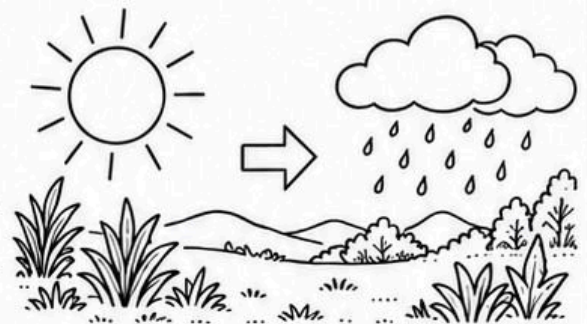


What happened in your actual push/pull test? Was it like your prediction?



NEW SCHEMATIC CASE

A cooler, wetter pattern replaces a warmer, sunnier one. Explain one change and how living needs stay supported.



LIMIT OR NEXT QUESTION

What does your evidence not prove? What could you check safely?



TEACHER RECORD

Needs evidence: ____ Weather evidence: ____ Actual test evidence: ____

Assess science reasoning, not handwriting, confidence or model neatness.

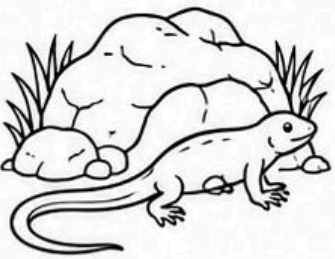
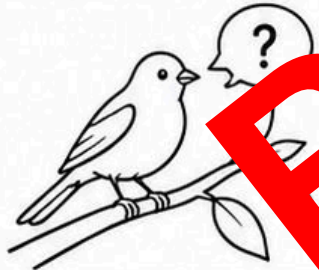
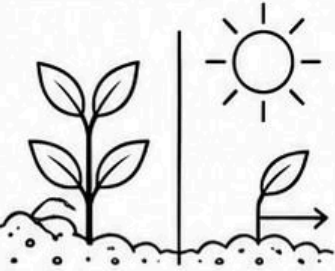


Weather-wise Habitat • Rubric

Name: _____

Date: _____

Communication choices and adult scribing do not lower achievement. Judge the science evidence.

Dimension	Developing	Sound	Extending
UNDERSTANDING 	An important need, weather link or movement idea is missing or unclear.	Explains useful living-needs features, a weather choice and actual push/pull movement accurately.	Applies these ideas to a new condition and explains a useful limit.
EVIDENCE AND PROCESS 	Claims need a relevant record or a safe method.	Uses a relevant needs record, labels weather evidence and actual safe repeated gate tests.	Explains what stayed alike, variation and a remaining comparison limit.
EXPLANATION 	Gives a choice with a clear reason or evidence link.	Connects each design choice to evidence and responds to a client question.	Justifies a new choice and compares a plausible alternative.
REFLECTION 	Prediction and actual result are not yet compared.	Compares prediction with actual results and names a safe next question.	Explains how a limitation affects the claim and proposes a useful safe check.

Teacher evidence / next step: _____



Lesson 1

The habitat challenge



Our learning

We can name three science questions for a model visitor location.

We can show our thinking by talking, drawing, pointing or demonstrating.

Habitat: a place that supports a living thing. Evidence: what we notice or test.

PREVIEW

Notice and wonder

Look at our fictional garden: a bean plant and a bird live near a visitor path.

What might each living thing need? What might visitors need when weather changes?

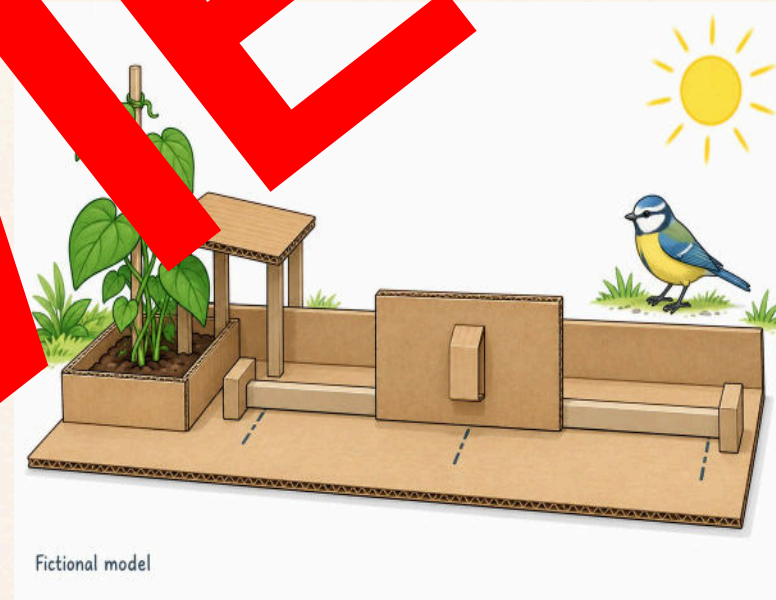
PREVIEW

A worked example

A bean plant needs suitable water, light and air.

A visitor roof can give shade. A sliding model gate can move with a push or pull.

These are three science jobs: living needs, weather choices and movement.



Try it together

Sort C01–C08 into living needs, weather and movement. Some cards connect more than one job.

Ask: Which weather change might affect the village? Say what you predict and why.

PREVIEW

Your practical task

Use W01 to draw one idea for each science job.

Use large cards and point, explain to a partner or ask an adult to write your words.

We plan a cardboard model. We can put real animals inside it.

PREVIEW

Record your evidence

Keep your first idea and prediction.

Say which evidence would help you check a need, a weather choice and a movement.

PREVIEW

Check and reflect

Does a colourful model alone prove that living needs are met?

No. Explain what each useful feature does.

Tell one question you still want to investigate.

PREVIEW

Well Done!



Lesson 2

Needs Audit



Our learning

We can explain which features support a plant or an animal.

We can show our thinking by talking, drawing, pointing or demonstrating.

Need: something a living thing requires. Audit: a careful check.

PREVIEW

Notice and wonder

A bean plant has water and air, but a solid roof leaves it with too little suitable light.

A bird is drawn on the visitor roof. Does drawing of bird provide food or shelter?

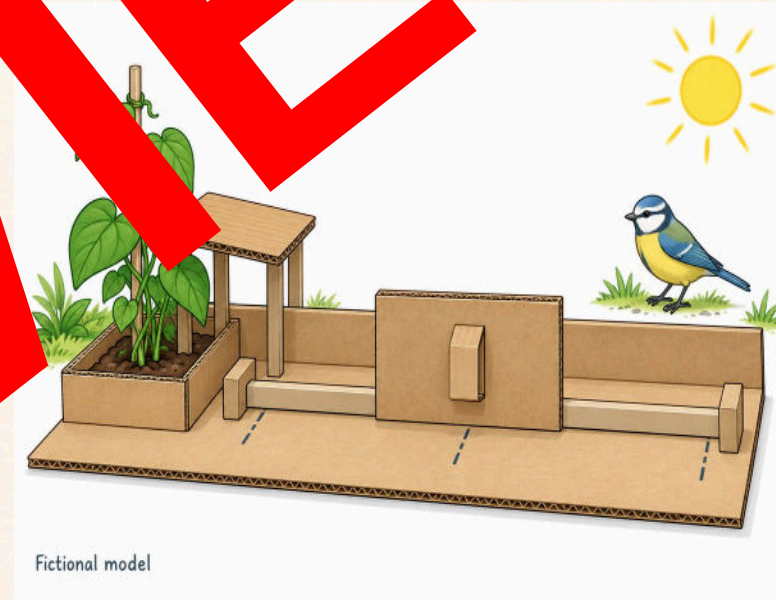
PREVIEW

A worked example

Check each need, then look for the feature that supports it.

Keep suitable light for the bean plant; a visitor shade roof must not block all plant light.

For our fictional bird, identify water, food opportunities and shelter. A model cannot prove a bird will use them.



Try it together

Use C01 and C02. Explain a useful feature and one missing need.

A decoration may be attractive. We still need evidence about what it does.

PREVIEW

Your practical task

On W02, find the missing features in the fictional scene.

Add a feature and explain how it helps.

Observe an existing healthy plant with the teacher. Do not change its care or deprive it of light or water.

PREVIEW

Record your evidence

Record: living thing → need → useful feature.

Point to the evidence. Do not claim that a model proves real animal welfare.

PREVIEW

Check and reflect

What is the difference between drawing water and supplying suitable water?

What everyday garden decision could a needs check help an adult make?

PREVIEW

Well Done!



PREVIEW

Lesson 3 Evidence-led habitat plan



Our learning

We can label a model feature and explain the need it supports.

We can show our thinking by talking, drawing, pointing or demonstrating.

Design: a plan with a purpose. A model explains what a feature does.

PREVIEW

Notice and wonder

Return to the missing needs from your audit.

Which change helps a living thing? Which change only changes the colour?

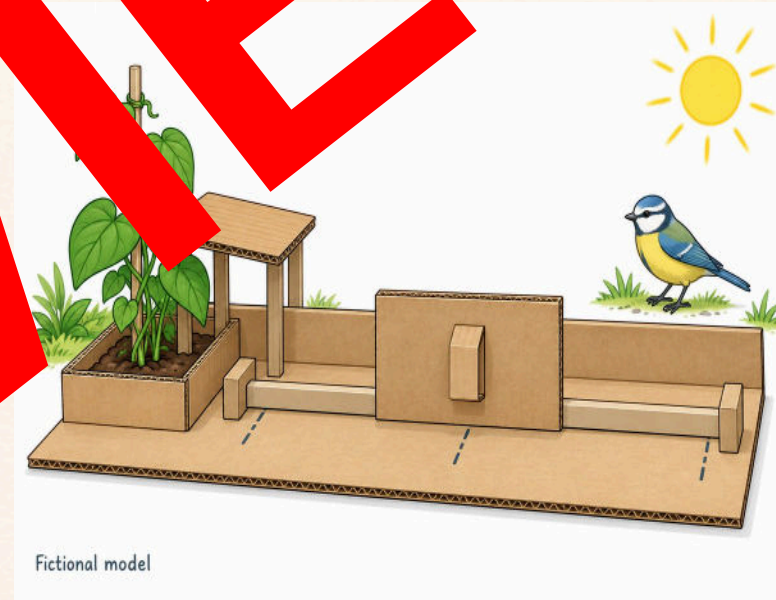
PREVIEW

A worked example

Keep the bean plant in suitable light, with suitable water and air.

Show vegetation or another suitable shelter opportunity for the fictional bird.

Place the visitor shade roof beside the growing area, not over every plant.



Try it together

Choose one need from C01/C02. Point to the feature that supports it.

Rehearse: “I chose ____ because it helps ____.”

PREVIEW

Your practical task

Sketch the garden and visitor station on W03, or extend your W02 audit into the compact route.

Add three useful labels. Keep space for the mobile gate and a clear visitor path.

Use large safe pieces to explore an arrangement before fixing them.

PREVIEW

Record your evidence

Keep your labelled plan and the observation or case card behind each choice.

Models simplify a place. They do not contain all the conditions a real living thing needs.

PREVIEW

Check and reflect

Explain one feature without mentioning its colour.

Which part of your plan needs weather evidence and a movement test next?

PREVIEW

Well Done!



Lesson 4

Read the weather



Our learning

We can use a weather record to choose a visitor-station nature

We can show our thinking by talking, drawing, pointing or demonstrating.

Observation: what we record now or past: what is expected later.

PREVIEW

Notice and wonder

An illustrative example says Tuesday has rain and 16°C.

Is this a measured class record? No. It is a supplied teaching example.

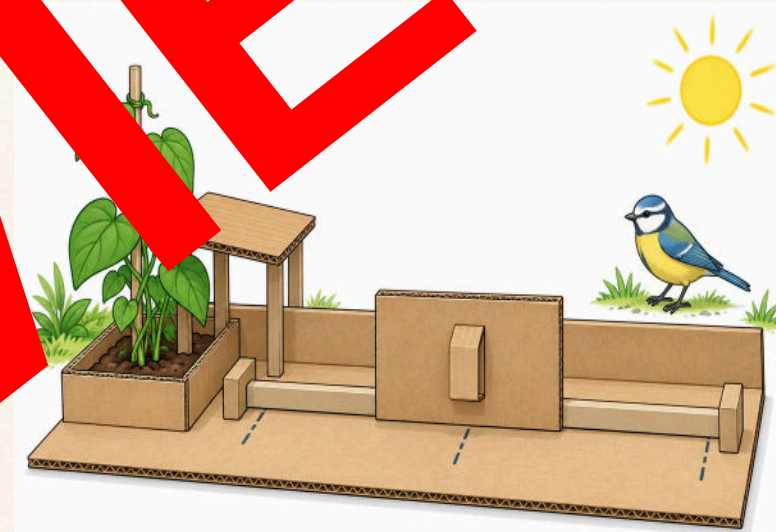
PREVIEW

A worked example

For the rainy example, choose a covered area or an adult-approved indoor alternative.

For the sunny, warmer example, plan shade, drinking water access and school sun-protection routine.

A forecast helps us plan. Record actual weather separately when it happens.



Fictional model

Try it together

Compare C03 and C04. Which record supports your choice?

Read the illustrative five-day example. Five days cannot establish a whole season or climate.

PREVIEW

Your practical task

Use W04 and explain a feature for Tuesday or Friday.

Start a class journal: record date, time, place, cloud and wind at a consistent time.

Use a teacher-provided thermometer; never stare at the Sun; follow school weather procedures.

PREVIEW

Record your evidence

Keep the weather value or observation and the choice it supports.

Ask a weather-pattern question and say a prediction. Later, compare it with what you actually observe.

PREVIEW

Check and reflect

Which supports changing a shelter: observed rain or a favourite colour?

What must be labelled differently from an actual weather observation?

PREVIEW

Well Done!



Lesson 5

Weather across seasons



Our learning

We can change a plan for a different supplied weather pattern.

We can show our thinking by talking, drawing, pointing or demonstrating.

Seasonal pattern: changes noticeably across a longer part of the year.

PREVIEW

Notice and wonder

Schematic scene A is warmer and sunnier; scene B is cooler and wetter.

These are invented teaching scenes. They are not observations of a named place.

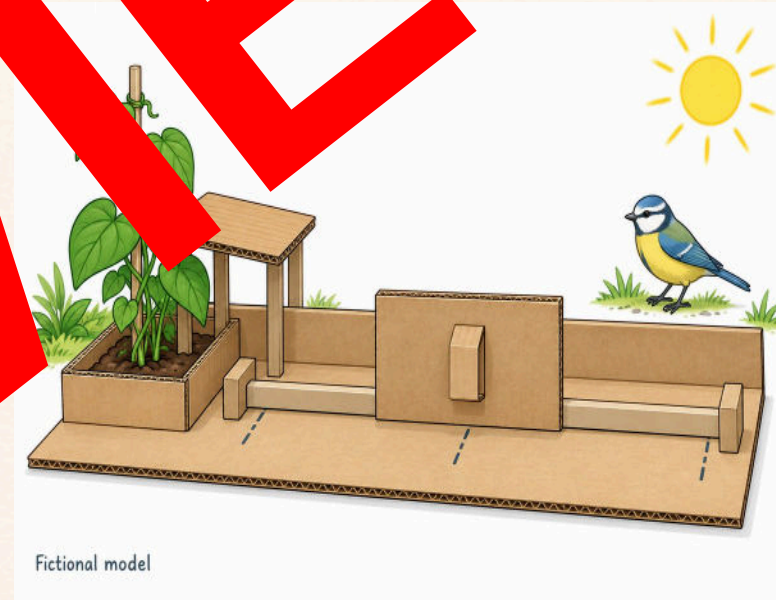
PREVIEW

A worked example

Use more visitor shade in scene A, while keeping plant light suitable.

In scene B, plan an adult-approved covered activity or indoor alternative.

Australia has different local seasonal patterns. A five-day example does not tell us a whole story.



Local seasonal knowledge

With your teacher, view the Yawuru seasonal calendar from Broome, Western Australia.

Use the official source and its credits. Different places and communities describe their own seasonal knowledge.

We do not copy the calendar or make up cultural knowledge.

For the following link: Bureau of Meteorology — Yawuru calendar (bom.gov.au)

Try it together

Compare C05 with your W03 plan. Choose one useful change.

Explain the condition and the feature together; do not claim every place has the same seasons.

PREVIEW

Your practical task

Use W05 to draw one change for each schematic scene.

With an adult, compare actual dated journal entries when available.

Leave class-result spaces blank until observations exist. Do not change plant care to create a result.

PREVIEW

Record your evidence

Say whether you used a schematic scene or an actual direct observation.

Note one limit: our model scene cannot predict whether for every place.

PREVIEW

Check and reflect

Can Friday's warm weather prove that a whole season is warm? Explain.

How might local knowledge and repeated observations help people plan?

PREVIEW

Well Done!



Lesson 6

Move a model gate



Our learning

We can safely test a push and a pull and describe the movement.

We can show our thinking by talking, drawing, pointing or demonstrating.

Push: press away. Pull: draw towards. Direction: where something moves.

Notice and wonder

A large cardboard gate sits at the middle starting mark.

Predict what might happen when you gently push it right or pull its large tab left.

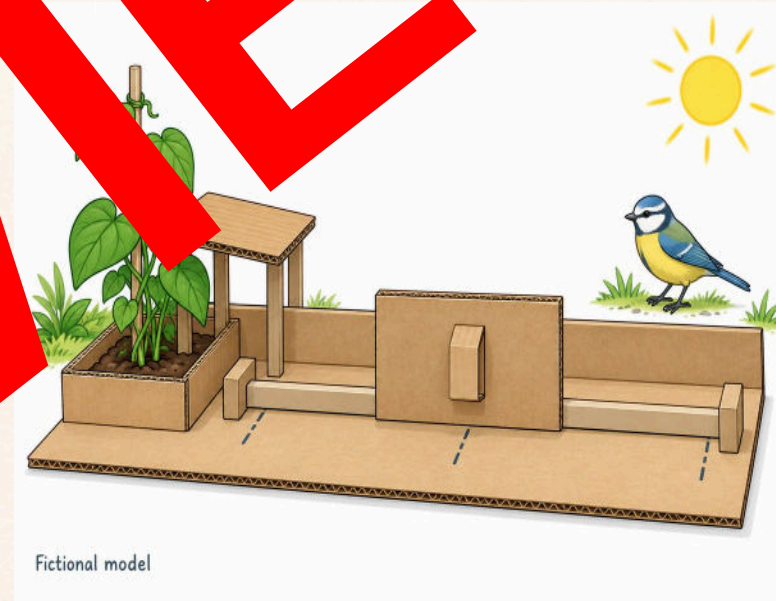
PREVIEW

A worked example

Place the model on a flat table with end stops. Keep hands clear of the track.

A rightward push may move the gate right. A leftward pull may move it left.

Test to find out. A gate may catch or move less than expected.



Try it together

The teacher demonstrates one gentle push and one gentle pull.

Reset to the middle mark each time. Keep the same gate, block and surface.

PREVIEW

Your practical task

Use a teacher-prepared large gate and tab. No long strings, elastic launchers or small parts.

In pairs, take turns testing gently; the observer stays outside the travel path.

Stop first, then use equal paper units across the track to describe how far it moved.

PREVIEW

Record your evidence

Use W06: prediction, action and actual direction or distance.

Say what you actually saw, even when it differs from your prediction.

PREVIEW

Check and reflect

How did the gate move after a push? After a pull?

What must stay alike to make the comparison useful?

Show one safe step. Never test for safety by pushing another person.

PREVIEW

Well Done!



PREVIEW

Lesson 7

Improve the comparison



Our learning

We can repeat a safe test and compare our actual results.

We can show our thinking by talking, drawing, pointing or demonstrating.

Repeat: try again. Fair comparisons keep important parts alike.

PREVIEW

Notice and wonder

Two gate tests used different starting marks. Can we compare them easily?

What could we keep alike before testing again?

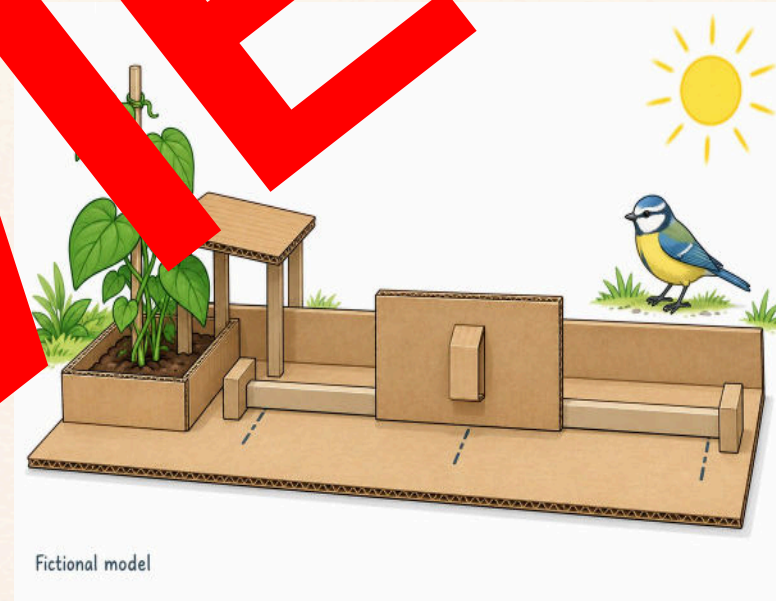
PREVIEW

A worked example

Choose direction as the change: push right and pull left. Use gentle actions.

Keep the same gate, track, flat surface and middle starting mark.

Repeat each action three times. Hand force may still vary; notice differences.



Try it together

Make a prediction before testing. The teacher checks the method.

Record each result honestly. Reset each time and keep observations clear.

PREVIEW

Your practical task

Use W07 with a partner: tester, then observer. Swap roles.

Do three rightward pushes and three leftward pulls. Stop before measuring with equal paper units.

Do not change the track between tests. Stop and ask the teacher if a piece jams or loosens.

Record your evidence

Compare your repeated results with your prediction and classmate's records.

Sort or point to outcomes: right, left, stayed still. A different result is evidence too.

PREVIEW

Check and reflect

Which parts stayed alike? What changed?

What could explain a different result? Hand force and a closing gate are possibilities to investigate.

How can repeated tests help a person choose a useful mechanism?

PREVIEW

Well Done!



Lesson 8

Assemble the explanation



Our learning

We can connect each design choice to one science concept.

We can show our thinking by talking, drawing, pointing or demonstrating.

Explain: tell how a claim connects to evidence.

PREVIEW

Notice and wonder

Look at your needs audit, weather choice and gate-test record

Which record supports which part of the model?

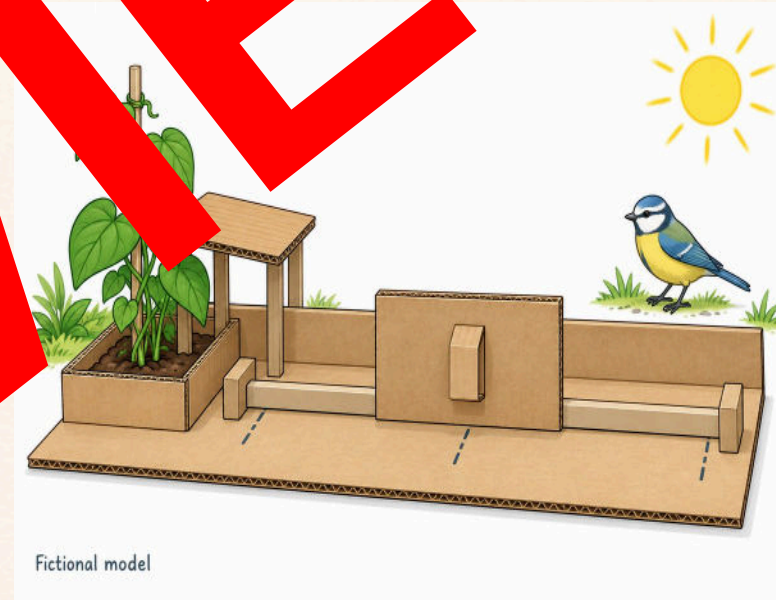
PREVIEW

A worked example

Needs: the plant-light space supports the bean plant.

Weather: a relevant record supports the visitor shade or cover choice.

Movement: an actual gate test tells us what happened after a push or pull.



Try it together

Use D2 and practise: “I chose ____ because my evidence shows ____.”

A supplied weather example is labelled illustrative. Your actual gate tests are labelled actual.

PREVIEW

Your practical task

Finish the existing model with large safe cardboard pieces.

Use W08 to prepare three evidence labels: living needs, weather and movement.

Keep records nearby. Do not rebuild anything or add untested claims.

PREVIEW

Record your evidence

Choose one specific record for every explanation.

Practise pointing, demonstrating, drawing, speaking or using a communication board/device.

PREVIEW

Check and reflect

Do you have all three strands and a safe tested mechanism?

Which claim is stronger with a record? Which uncertainty should you mention?

PREVIEW

Well Done!



Lesson 9

Client demonstration



Our learning

We can show how our model uses living-needs, weather and movement evidence.

We can show our thinking by talking, drawing, pointing or demonstrating.

Demonstration: show what works and explain why.

Notice and wonder

A visitor says: “The roof looks nice, so the whole habitat must be habitable.”

What question would help check that claim?

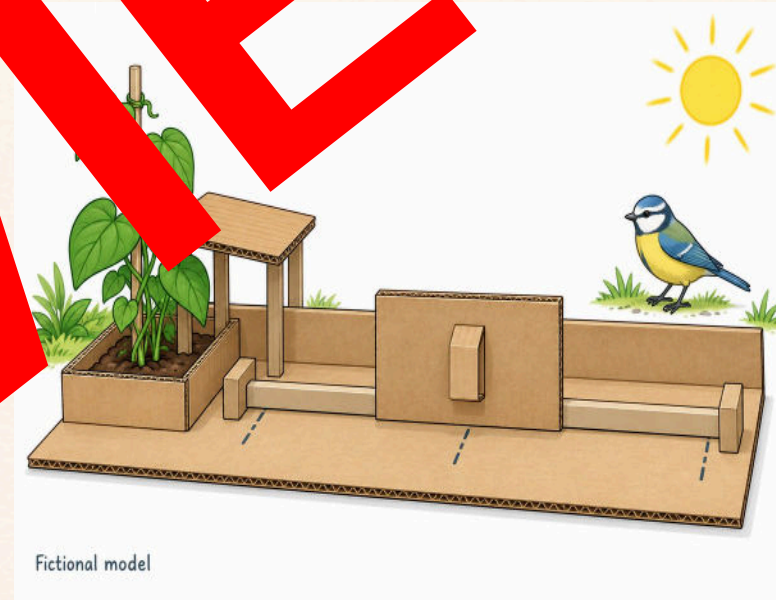
PREVIEW

A worked example

Ask how the plant still receives suitable light, water and air.

Ask which weather evidence supports the visitor roof.

Ask for an actual push/pull test, including a myth that did not work as predicted.



Try it together

Use W09 or A1 to practise a short client explanation with a partner.

A listener asks one respectful question about a weak choice.

PREVIEW

Your practical task

Show or direct a safe demonstration. Point to your three evidence labels.

Explain one useful feature, one weather decision and the actual movement result.

Your teacher may collect a short recorded, drawn, scribed or demonstrated explanation.

PREVIEW

Record your evidence

Keep your model/diagram, weather evidence and real time record.

Compare the result with your prediction and explain a limitation or next question.

PREVIEW

Check and reflect

Does each strand have evidence?

Listen to a partner's question and explain your reasoning.

Your communication method does not change the science expected.

PREVIEW

Well Done!



Lesson 10

Reflect and transfer



Our learning

We can explain one evidence-based change for a new condition.

We can show our thinking by talking, drawing, pointing or demonstrating.

Transfer: use our learning in a different case.

PREVIEW

Notice and wonder

New schematic case: visitors arrive during a cooler, wetter weather.

The bean plant still needs suitable water, light and air. The gate still needs a safe test.

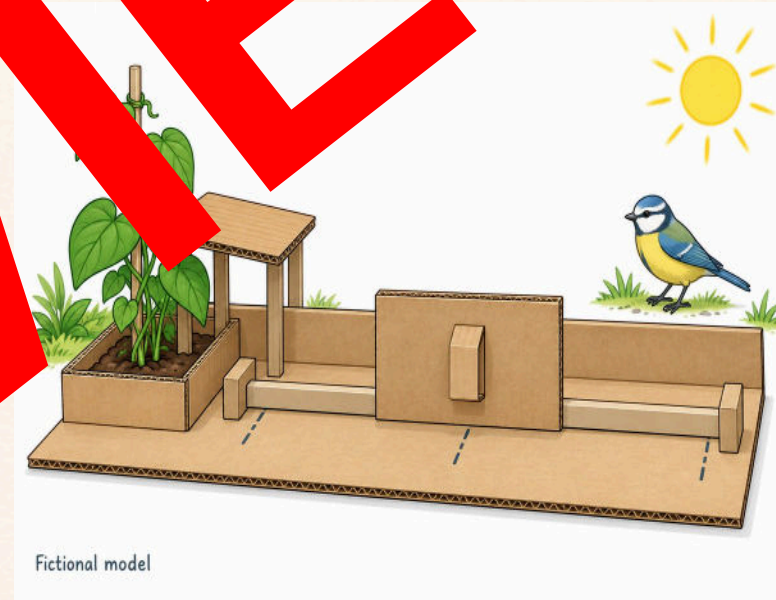
PREVIEW

A worked example

Choose one justified change: an adult-approved covered visitor activity or an indoor alternative.

Keep plant light suitable. Do not claim the schematic is a measured season.

Retest the mechanism only if a change affects its track or movement.



Try it together

Use C05 and C08. Say what changes and what stays the same.

Rehearse: “My evidence suggests ____; I still need to check ____.”

PREVIEW

Your practical task

Use W10 or tell/draw one change and a reason. No second model building cycle is needed.

Compare with your prediction and a classmate's idea.

Ask a further question that could be checked safely.

PREVIEW

Record your evidence

Keep one transfer explanation and one limitation or next question.

Explain how observation and prediction can help people make everyday choices.

PREVIEW

Check and reflect

What does the evidence support? What does it not prove?

Can you still explain all three science strands?

Share one improvement with a class member.

PREVIEW

Well Done!



**Design a Weather-wise
Habitat
Year 1 Science Quiz**



How to use this quiz

Think, then explain or demonstrate.

You may speak, draw, point to a choice, use a communication board/device or dictate to an adult.

Explain the evidence behind a choice. This quiz supports the practical assessment.

Question 1

Is a decorated model enough to show that needs are met?

- A. Yes, if it looks colourful.
- B. No, useful features need explanations.

PREVIEW

Answer I

B. No. Explain how each relevant feature supports a living thing's needs. A decoration alone is not evidence.

PREVIEW

Question 2

Which observation justifies changing the visitor shelter?

- A. Rain recorded at observation time.
- B. My favourite colour.
- C. A forecast labelled as an observation

PREVIEW

Answer 2

A. Recorded rain can support a covered visitor area or a consultant approved indoor alternative. A forecast must remain labelled a forecast.

PREVIEW

Question 3

A bean plant is under a roof that leaves too little suitable light. What could change?

Show or explain a useful change.

PREVIEW

Answer 3

Keep suitable light for the bean plant, as well as suitable water and air. Move visitor shade beside the plant area; do not deprive a real plant.

PREVIEW

Question 4

Can an illustrative five-day record prove a whole season's weather?

Explain what the example can and cannot tell us.

PREVIEW

Answer 4

No. It is an illustrative short example, not measured climate evidence. Longer local observations are needed for a seasonal pattern.

PREVIEW

Question 5

You gently push a gate right, then gently pull it left. What might change?

Name the movement feature and say how you would check it.

PREVIEW

Answer 5

Its direction may change. Reset and test safely, then repeat actual movement; a gate might catch or stay still.

PREVIEW

Question 6

How could we improve a gate comparison?

- A. Change the gate and the track each time
- B. Keep the gate, surface and start aligned, repeat

PREVIEW

Answer 6

B. Keep important parts alike and change the chosen action/direction. Repeat and record each result. Hand force can still vary.

PREVIEW

Question 7

Which is a safe way to learn about pond-edge organisms?

- A. Collect animals and shut them in our model.
- B. Use adult-chosen images and keep wildlife.

PREVIEW

Answer 7

B. Use images or ethical secondary evidence. The visitor education model is not an animal enclosure. Never stress animals to test a claim.

PREVIEW

Question 8

You predicted a farther movement, but it stopped at the same place. What do you record?

Say what belongs in the observation record.

PREVIEW

Answer 8

Record what actually happened. Keep the prediction separate. Compare them and ask a further question. Do not change data to match a question.

PREVIEW

Question 9

New case: a cooler, wetter schematic pattern arrives. What would you change?

Explain one visitor feature and how living needs stay protected.

PREVIEW

Answer 9

A covered visitor area or adult-approved indoor alternative may help. Keep suitable plant light/water/air and animal needs in the plan. Label the scene schematic; other justified choices are possible.

PREVIEW

Question 10

New case: you changed the gate's track and it now catches. Can you claim your old test proves it works?

Explain your next safe step and evidence.

PREVIEW

Answer 10

No. Ask the teacher to check it, then retest the changed model on a new object. Keep a consistent start/surface, record actual movement and compare with the old prediction. Do not force a jammed piece.

PREVIEW

Well Done!

