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Our School Science Museum - Foundation

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Teacher overview

Our School Science Museum – Foundation

Full route: ten 60-minute lessons. Compact route: eight 60-minute sessions using the mapping on page 4.

All ten separate editable lesson presentations are included; each has ten slides. Each child contributes evidence for three exhibits: a visible-feature group, a tested material choice and an observed shape/movement comparison.

Open the matching file for each lesson:

01. Museum questions

Our School Science Museum – Foundation – Lesson 01 – Presentation.pptx

02. Specimen detectives

Our School Science Museum – Foundation – Lesson 02 – Presentation.pptx

03. Explain the grouping

Our School Science Museum – Foundation – Lesson 03 – Presentation.pptx

04. Choose a display material

Our School Science Museum – Foundation – Lesson 04 – Presentation.pptx

05. Evidence changes choices

Our School Science Museum – Foundation – Lesson 05 – Presentation.pptx

06. Move the museum parcel

Our School Science Museum – Foundation – Lesson 06 – Presentation.pptx

07. Check the comparison

Our School Science Museum – Foundation – Lesson 07 – Presentation.pptx

08. Curate three exhibits

Our School Science Museum – Foundation – Lesson 08 – Presentation.pptx

09. Museum demonstration

Our School Science Museum – Foundation – Lesson 09 – Presentation.pptx

10. Scientists share ideas

Our School Science Museum – Foundation – Lesson 10 – Presentation.pptx

Use the separate 24-slide Quiz after practical evidence has been gathered. Read questions aloud and pause before revealing each answer. The ten questions supplement, rather than replace, the three-exhibit assessment.

Preparation, safety and access

Prepare D1–D2 displays; both Case and Source Card pages; the three–page Evidence Trail game; W01–W10 learner pages; A1 assessment pages and R1 rubric. Teacher sample answers follow each worksheet immediately. Keep samples separate until learners have recorded their own observations.

Living features: use the six organism pictures: cat, butterfly, duck, garden snail, bean plant and fern. A real plant may be used only under school procedures. Pictures represent living things; paper or screen images and plastic toys are not themselves living. Leave wildlife undisturbed. Do not collect or handle animals. Group by visible external features, not by speed or movement alone.

Materials: prepare equal–size safe paper and smooth plastic samples, identical dry cards, trays, a dropper, water and a one–minute timer. Card, fabric, folded–edge foil and large smooth wood may be used for an additional safe property comparison. Use no sharp edges, small choking pieces, heating, tasting or electrical equipment. An adult prepares equipment, supervises drops and checks spills are cleaned promptly.

Movement: use a stable low ramp, one large cylinder and one large block, a marked release line and a soft barrier. Place pupils beside the ramp lane. Keep the angle, surface and starting line the same; release without an extra push. Repeat three times and record each actual result. Stop if equipment becomes unstable. Do not use heavy, sharp or small objects.

Read prompts aloud, use large pictures, two choices, oral rehearsal, a communication board/device, pointing or gestures, adult scribing and drawing. Change the response method while retaining the same science thinking. Extend with a new rule, changed material job or test limitation, rather than extra handwriting.

Assess reasoning and evidence, not handwriting, confidence, neatness or public speaking. A partner, small–group, recorded, drawn, selected–picture or scribed explanation can provide equivalent evidence. Keep the teacher's inquiry observations and each child's three contributions together.

Compact eight-session route

Use each session for 60 minutes: 8 minutes retrieval, 12 minutes modelling, 25 minutes practical application, 10 minutes evidence explanation and 5 minutes exit/cleanup. For combined lessons, use one opening and one closing; select the relevant model/task slides from both decks. Do not run two complete lessons in the same hour.

1 — Lesson 01: Museum questions. Sort living-feature, material and movement questions using W01. Record a question and prediction.

2 — Lessons 02 + 03: Specimen detectives and Explain the grouping. Model the organism observation from 02, then the evidence caption from 03. Spend 15 minutes grouping and 10 minutes captioning during the practical stage. Use W02 as the feature record and W03 for one caption; other response spaces may be completed orally.

3 — Lesson 04: Choose a display material. Make a prediction, test equal paper/plastic samples over dry cards and record actual observations on W04.

4 — Lesson 05: Evidence changes choices. Revisit the test record, make a justified roof choice and compare prediction with observation on W05.

5 — Lesson 06: Move the museum parcel. Model the stable ramp and release line. Compare the large cylinder and block; record the movement actually observed on W06.

6 — Lesson 07: Check the comparison. Repeat each shape three times with the same setup. Use W07 to record a pattern or variation and identify what stayed the same.

7 — Lesson 08: Curate the exhibits. Select the living, material and movement evidence. Use W08 and A1 page 1; identify any missing child contribution before the final session.

8 — Lessons 09 + 10: Museum demonstration and Scientists share ideas. Model one evidence explanation and one revision. Use the 25-minute application stage for individual/paired conferences (A1 page 2 and R1), including the new firm-support material job. Use 10 minutes to revise/share one explanation with W09–W10 or an equivalent supported response. Gather all essential assessment by the end of this session. If a live conference is unavailable, accept a recorded, drawn or scribed response with a documented practical observation.

The quiz is an additional check and can be used in short retrieval segments or after the core assessment. It is not the only evidence of practical learning.



Lesson 1: Museum questions

Learning intention

We can ask a science question about living features, materials or movement. We can explain which group it belongs to.

Preparation and care

D1–D2, C1 cards, three question labels, large counters and W01. Read the labels aloud and distinguish pictures/toys from living things.

8 minutes — Retrieval

Ask pupils to recall the earlier idea and respond to: A toy dog looks like a dog. Is the toy living? Share an idea before we look for evidence.

12 minutes — Explicit teaching

Use the deck's worked example and model: Living features: What covers a duck?

Materials: Which roof sample keeps a card dry?

Movement: How does a cylinder move on a ramp? A prediction says what we think will happen.

"I think the plastic sample will keep the card dry."

A test will help us check.

25 minutes — Practical application

Use case cards, the three question labels and large counters. An adult reads each question. Choose by speaking, pointing or using a communication board. 1. Listen to a question.

2. Decide what we will observe.

3. Place it in a group.

4. Tell a partner your case.

10 minutes — Evidence explanation

On W01, match each question to a group. Draw a science question of your own. An adult may write your words. Listen to each child's link between the observation and the claim; note a specific example or follow-up question.

5 minutes — Exit and cleanup

"Will the block roll?" belongs with movement.

"What covers a cat?" belongs with living features.

Which observation could answer your question? Return materials safely, clean spills where relevant and save each child's record.

Support / core / extend

Support: read aloud, reduce to two clear choices, offer pictures/gestures/device or scribe the child's reasoning. Core: complete the guided comparison and explain using the actual evidence. Extend: change one context or ask what further evidence would help. Keep the same learning demand and accept equivalent response methods.

Lesson 2: Specimen detectives

Learning intention

We can look closely at living things in pictures and group them by a feature we can see.

Preparation and care

C1 organism cards 1–5, two group labels and W02. Use pictures; leave wildlife undisturbed. Check visible features, including six insect legs.

8 minutes — Retrieval

Ask pupils to recall the earlier idea and respond to: A real bean plant is living. A picture shows a plant. The picture itself is paper or a screen image. We can use it to study visible features.

12 minutes — Explicit teaching

Use the deck's worked example and model: A duck has feathers, a bill, two legs and wings.

A bean plant has roots, a stem and leaves.

Name one feature you can actually see. The duck and butterfly both have wings. The cat and snail do not have wings. Sharing a feature does not mean animals are close relatives.

25 minutes — Practical application

Use the six organism pictures and W02. Look at images of a school-approved plant. Leave wildlife undisturbed. Do not collect or handle animals. 1. Choose a visible feature.

2. Make two labelled groups.

3. Place the pictures.

4. Check each placement with a partner.

10 minutes — Evidence explanation

Draw or select one feature beside two organisms on W02. Point to the feature in the picture. Record what you see, rather than what you guess. Listen to each child's link between the observation and the claim; note a specific example or follow-up question.

5 minutes — Exit and cleanup

A snail has a shell and a muscular foot. A cat has fur and four legs. Could you group them as “has a shell” and “no shell”? Explain one placement. Return materials safely, clean spills where relevant and save each child's record.

Support / core / extend

Support: read aloud, reduce to two clear choices, offer pictures/gestures/device or scribe the child's reasoning. Core: complete the guided comparison and explain using the actual evidence. Extend: change one context or ask what further evidence would help. Keep the same learning demand and accept equivalent response methods.

Lesson 3: Explain the grouping

Learning intention

We can make an exhibit label with a grouping rule and the feature that supports it.

Preparation and care

C1 cards, the group labels and W03. Accept a selected picture, spoken or scribed caption. A grouping rule must match the visible feature.

8 minutes — Retrieval

Ask pupils to recall the earlier idea and respond to: We grouped duck and butterfly pictures under “has wings”. What visible feature helped us choose that label?

12 minutes — Explicit teaching

Use the deck's worked example and model: “The duck belongs here because I can see wings.” The caption names the organism, our rule and our evidence. “It goes here because it is nice” does not name a feature.

“The cat goes in no wings because I can see fur and legs, but no wings” links the placement to evidence.

25 minutes — Practical application

Use your organism pictures, group labels and W03. An adult can read or scribe. Use a picture choice or gesture to show the feature. Select one organism picture.

1. Name your grouping rule.
2. Name your grouping rule.
3. Point to the evidence.
4. Make and share a short caption.

10 minutes — Evidence explanation

Ask “Which feature helped you?” Listen to the answer. Check that the caption matches the picture. Change a label if the evidence calls for it. Listen to each child's link between the observation and the claim; note a specific example or follow-up question.

5 minutes — Exit and cleanup

A fern has fronds. It does not have flowers. Where would it go in “has flowers” and “no flowers”? What could you point to as evidence? Return materials safely, clean spills where relevant and save each child's record.

Support / core / extend

Support: read aloud, reduce to two clear choices, offer pictures/gestures/device or scribe the child's reasoning. Core: complete the guided comparison and explain using the actual evidence. Extend: change one context or ask what further evidence would help. Keep the same learning demand and accept equivalent response methods.



Lesson 4: Choose a display material

Learning intention

We can compare two material samples for a museum roof. We can connect a property to the job.

Preparation and care

Equal paper/plastic samples, identical dry cards, tray, dropper, water, timer and W04. Adult supervision; equal sample sizes, five drops, same area and one minute for each. Clean spills.

8 minutes — Retrieval

Ask pupils to recall the earlier idea and respond to: A roof is an object with a purpose. Paper and plastic are materials. Different samples may behave differently. Their names alone cannot tell us every test result.

12 minutes — Explicit teaching

Use the deck's worked example and model: Which sample keeps the card underneath dry?

"I predict ____ because ____."

We will test our actual paper and smooth plastic samples, put equal sized samples over two equal dry cards. Use the same number of drops on the same-sized card. Wait the same time, then check underneath.

25 minutes — Practical application

An adult prepares large safe samples, dry cards, droppers and a tray. Use five water drops on each sample. Keep water away from devices. Wipe spills and wash hands. 1. Label the samples.

2. Make a prediction.

3. Add five drops to each.

4. Wait one minute.

5. Look above and underneath.

10 minutes — Evidence explanation

Use W04 to draw what happened to each sample and its card. Say "dry" or "wet" only after checking. Unexpected results are useful evidence too. Listen to each child's link between the observation and the claim; note a specific example or follow-up question.

5 minutes — Exit and cleanup

Which actual sample kept its card drier? What did you observe? A water-shedding roof helps keep an exhibit dry. A pretty colour alone does not answer our question. Return materials safely, clean spills where relevant and save each child's record.

Support / core / extend

Support: read aloud, reduce to two clear choices, offer pictures/gestures/device or scribe the child's reasoning. Core: complete the guided comparison and explain using the actual evidence. Extend: change one context or ask what further evidence would help. Keep the same learning demand and accept equivalent response methods.



Lesson 5: Evidence changes choices

Learning intention

We can use our test record to choose a material. We can change a prediction when our evidence gives a different result.

Preparation and care

Keep W04 observations, safe tested samples, D1 and W05. Recheck uncertain evidence safely; do not treat a sample answer as the actual class result.

8 minutes — Retrieval

Ask pupils to recall the earlier idea and respond to: A prediction says what we expect. An observation records what happened. A result can surprise us. We keep the real result.

12 minutes — Explicit teaching

Use the deck's worked example and model: Illustrative example only: Lee predicted the paper sample would keep the card dry. After the test, that card was wet and the card under the plastic sample was dry. In the fictional example, Lee chooses that plastic sample for the roof because its card stayed dry in the test. This does not prove every plastic sheet works in every condition.

25 minutes — Practical application

Use your actual W04 records, samples and W05. Compare with another group using the same setup. Read their record without changing your own results to match. 1. Find your prediction.

2. Look at both results.

3. Choose a sample for the job.

4. Explain with an observation.

5. Name another test you might need.

10 minutes — Evidence explanation

Do your groups notice a similar water response? If results differ, check sample size, holes or drop placement with an adult. Record the difference honestly. Listen to each child's link between the observation and the claim; note a specific example or follow-up question.

5 minutes — Exit and cleanup

"I chose this because I saw ____."

What changed between your prediction and your choice? If neither sample worked, what could we investigate next? Return materials safely, clean spills where relevant and save each child's record.

Support / core / extend

Support: read aloud, reduce to two clear choices, offer pictures/gestures/device or scribe the child's reasoning. Core: complete the guided comparison and explain using the actual evidence. Extend: change one context or ask what further evidence would help. Keep the same learning demand and accept equivalent response methods.

Lesson 6: Move the museum parcel

Learning intention

We can predict and describe how shapes move on a low ramp. We can watch for rolling, sliding or staying still.

Preparation and care

Low stable ramp, large cylinder/block, release line, soft barrier and W06. People stay beside the lane; adult checks stability and removes unsafe objects.

8 minutes — Retrieval

Ask pupils to recall the earlier idea and respond to: A sphere has a curved surface. A block has flat faces. A cylinder has a curved side and flat ends. Which surface touches the ramp may change its movement.

12 minutes — Explicit teaching

Use the deck's worked example and model: "I think the cylinder on its curved side will roll."

We will check with our actual objects. Size, surface and position can matter too. Use one low ramp, one marked release line and the same ramp angle. Let each object go without an extra push.

Watch its movement and where it stops.

25 minutes — Practical application

Use large safe objects, a low ramp and a soft floor barrier. Keep people out of the travel lane. An adult checks the ramp. Never aim objects at anyone. 1. Predict the movement.

2. Place the object at the line.

3. Release it gently.

4. Watch it move.

5. Collect it only after it stops.

10 minutes — Evidence explanation

Use W06 to draw the cylinder and block at the start and finish. Circle or select roll, slide or stay. Record your real observation. Listen to each child's link between the observation and the claim; note a specific example or follow-up question.

5 minutes — Exit and cleanup

What did the cylinder do on its curved side? What did the block do? Which feature might help explain your observation? We need evidence before we decide. Return materials safely, clean spills where relevant and save each child's record.

Support / core / extend

Support: read aloud, reduce to two clear choices, offer pictures/gestures/device or scribe the child's reasoning. Core: complete the guided comparison and explain using the actual evidence. Extend: change one context or ask what further evidence would help. Keep the same learning demand and accept equivalent response methods.

Lesson 7: Check the comparison

Learning intention

We can repeat a movement test and keep the setup the same. We can compare each real result with our prediction.

Preparation and care

The same ramp equipment plus W07. Keep the ramp angle, surface and release line constant. Make three releases of each object without an extra push.

8 minutes — Retrieval

Ask pupils to recall the earlier idea and respond to: One child starts high on the ramp. Another starts lower. Can the two distances answer a shape question fairly? We need the same release line.

12 minutes — Explicit teaching

Use the deck's worked example and model: Use the same line, ramp angle, surface and object position. Release without pushing. Watch each object three times. Reset the equipment between turns. An object may stop in a different place. A small wobble or change in release can matter. A pattern can help, but one result does not prove what always happens.

25 minutes — Practical application

One person releases. One watches from beside the lane. One records after the object stops. An adult checks the setup. Swap roles without entering the travel lane. Use W07 to record three trials for each shape. Draw the movement's path onto a board. Keep the results blank until each test happens.

10 minutes — Evidence and conclusion

Which movement happened most often? Which results differed? Tell a partner "I predicted ____ and I observed ____." A different result is still valid. Listen to each child's link between the observation and the claim; note a specific example or follow-up question.

5 minutes — Exit and cleanup

People use questions and observations to learn about movement. Which part of our method helped us compare? What might we check again before choosing museum transport? Return materials safely, clean spills where relevant and save each child's record.

Support / core / extend

Support: read aloud, reduce to two clear choices, offer pictures/gestures/device or scribe the child's reasoning. Core: complete the guided comparison and explain using the actual evidence. Extend: change one context or ask what further evidence would help. Keep the same learning demand and accept equivalent response methods.

Lesson 8: Curate three exhibits

Learning intention

We can prepare one exhibit for living features, one for a material choice and one for movement. Each exhibit needs the matching evidence.

Preparation and care

Learner records W02–W07, case pictures, A1 page 1 and W08. Provide a tray/folder for each child. Use pictures and records; exhibits need not contain living specimens.

8 minutes — Retrieval

Ask pupils to recall the earlier idea and respond to: A wing picture supports a feature group. A water-test record supports a roof choice. A ramp record supports a movement description. Each observation answers its own question.

12 minutes — Explicit teaching

Use the deck's worked example and model: Use an organism group and a question. Name the visible feature and explain one placement. Keep the picture distinct from the real living thing. Materials: show your actual samples or pictures and water-test record. Movement: show your ramp record and a safe demonstration setup. Explain what you observed.

25 minutes — Practical application

Use your portfolio W02–W07, case records and W08. Keep wet samples contained and dry floors. Only an adult-approved low-ramp demonstration belongs in the museum. 1. Select the three records.

2. Match each to its exhibit.
3. Rehearse a short explanation.
4. Check a partner can find your evidence.

10 minutes — Evidence explanation

Does each exhibit answer its question? If a record is missing, use an adult-recorded observation from your actual practical work. A game answer alone cannot show practical skills. Listen to each child's link between the observation and the claim; note a specific example or follow-up question.

5 minutes — Exit and cleanup

Show each exhibit by speaking, drawing, pointing, using a device or demonstrating. What do you know? What evidence supports it? What are you still wondering? Return materials safely, clean spills where relevant and save each child's record.

Support / core / extend

Support: read aloud, reduce to two clear choices, offer pictures/gestures/device or scribe the child's reasoning. Core: complete the guided comparison and explain using the actual evidence. Extend: change one context or ask what further evidence would help. Keep the same learning demand and accept equivalent response methods.



Lesson 9: Museum demonstration

Learning intention

We can explain the evidence at all three exhibits and answer a visitor question. We can demonstrate movement safely.

Preparation and care

Three-exhibit portfolios, A1 page 2, R1 and W09. Prepare safe paper/card/plastic support samples for the new firm-support job; use the same small adult-approved supported load.

8 minutes — Retrieval

Ask pupils to recall the earlier idea and respond to: A visitor asks “How do you know?” Find the matching record before answering. Tell what you observed, rather than only naming an object.

12 minutes — Explicit teaching

Use the deck's worked example and model: “These have wings. I can point to the wings on each picture.”

“My roof choice uses the result on my water-test record.”

“My ramp record shows how the object moved.” A visitor sees a result that differs from your prediction. Say what happened. You may change your explanation. Do not erase evidence to make a prediction look right.

25 minutes — Practical application

Use a low ramp and soft barrier. Visitor stand beside the lane. Keep paper and water-test records clear of the floor. Show a recorded result if a live demonstration is unsuitable. Take turns at the three exhibits. Each learner explains a feature group, a tested material choice and a movement observation. Use W09 and the assessment organiser.

10 minutes — Evidence explanation

An adult offers a new display-support job using the safe material set. Which property would you test? Explain the test you need before making a final choice. Listen to each child's link between the observation and the claim; note a specific example or follow-up question.

5 minutes — Exit and cleanup

Which exhibit had the clearest evidence? Which part needed another check? Show your reasoning with your chosen response mode. Public speaking is optional. Return materials safely, clean spills where relevant and save each child's record.

Support / core / extend

Support: read aloud, reduce to two clear choices, offer pictures/gestures/device or scribe the child's reasoning. Core: complete the guided comparison and explain using the actual evidence. Extend: change one context or ask what further evidence would help. Keep the same learning demand and accept equivalent response methods.

Lesson 10: Scientists share ideas

Learning intention

We can improve an explanation with evidence and ask a useful next science question. People learn by sharing observations.

Preparation and care

Completed exhibit records, W10 and D1–D2. Keep original observations when revising a claim. Offer paired or recorded sharing instead of public performance.

8 minutes — Retrieval

Ask pupils to recall the earlier idea and respond to: A label says “This is best.” What is the job? What did the test show? A visitor needs enough information to understand the choice.

12 minutes — Explicit teaching

Use the deck's worked example and model: “This sample kept the card dry in our test, so I chose it for the roof.”

The revised label names the observation and the purpose. It describes this sample and this test. “Would it still keep the card dry with more drops?” is a testable next question. “Is it the nicest?” needs a different kind of answer.

25 minutes — Practical application

Use your completed exhibits and W10 to share with a partner or adult. Speak, point to a picture, use a communication device, dictate or make a short recording. 1. Choose one unclear explanation.

2. Add the missing evidence.

3. Keep the accepted explanation.

4. Ask one next question.

5. Share how observations helped.

10 minutes — Evidence explanation

A museum scientist looks closely, asks questions and shares what they find. Our careful records help another person understand our idea and decide what to check next. Listen to each child's link between the observation and the claim; note a specific example or follow-up question.

5 minutes — Exit and cleanup

Explain one living feature, one useful material property and one movement observation. How did evidence help you? What question would you investigate next? Return materials safely, clean spills where relevant and save each child's record.

Support / core / extend

Support: read aloud, reduce to two clear choices, offer pictures/gestures/device or scribe the child's reasoning. Core: complete the guided comparison and explain using the actual evidence. Extend: change one context or ask what further evidence would help. Keep the same learning demand and accept equivalent response methods.

Evidence Trail – teacher key I

Use the rules, board and eight challenge cards together. Groups of 2–4 take turns noticing, asking, comparing, explaining, applying and reflecting. Move one large counter or point along the continuous six-stop trail. No time limit or speed score. Read the card; give a supported response; ask one respectful question; check the criterion below. Revisit a card when the response needs evidence. Finish cooperatively after each learner has explained a choice.

Card 1 — Cat feature (case 1). Accept fur, four legs, ears or another clearly visible external feature, with a grouping rule that actually uses it. Ask the learner to point to the evidence. Do not require the printed feature alone when another visible feature is accurate.

Card 2 — Plant feature (case 5). Accept the bean plant's roots, stem or leaves; accept the fern's fronds. Ferns do not have flowers. The rule must match the shown external feature. Pictures represent plants; the paper is not living.

Card 3 — Shared feature (cases 2 and 3). Duck and butterfly both show wings. Accept a clear shared-wing explanation with a point to each picture. Shared wings do not prove close relatedness. Do not confuse their different numbers of legs.

Card 4 — Snail feature (case 4). Accept the clearly visible shell as evidence for a has-a-shell group; a muscular foot can support a different accurate rule. The snail does not have jointed legs. Observe wildlife without collecting or handling it.

Check reasoning, not reading speed or handwriting. An adult can read; pupils can speak, select a picture, point, draw, use a device or have their words scribed.

Evidence Trail – teacher key 2

Card 5 – Toy or real? A toy dog is a representation made from materials and is not living. A real dog is living. Looking like a living thing does not make the toy living. Accept a correct picture choice with an evidence explanation.

Card 6 – Dry roof (case 6). Ask for the class's tested material property and actual card-dryness observation. A favourite colour alone is not relevant water-test evidence. Either tested material may be valid when its actual result supports the purpose. Keep the prediction and actual observation distinct.

Card 7 – Cylinder position (case 7). On its curved side, a cylinder may roll; supported on a flat end, it may slide, remain still or tip. Make a shape-based prediction, then test safely and record the actual result. Use a stable low ramp, soft barrier and large safe object; keep pupils beside the lane.

Card 8 – Same release and repeats (case 8). The same release, ramp angle and surface make the comparison more useful. Release without an extra push and repeat each shape three times. Record every actual observation. A consistent pattern or variation is useful evidence; repeating does not guarantee identical results.

Assessment and records

Each learner needs a contribution to each exhibit. Use A1 page 1 to plan and collect the feature group, tested material choice and movement record. On A1 page 2, ask for evidence, compare a prediction result, check safe steps, repeat/record and use the firm-support transfer question. Record questioning, predicting, safe guided testing, observation, comparison and communication across the unit. Ask how a person's observation could help someone else.

Use R1's four dimensions and three anchored levels with the child's actual portfolio/conference. Support or an alternative response mode does not automatically mean lower achievement. Assess the accuracy of the reasoning, evidence and transfer. The quiz provides additional understanding checks; it cannot replace the practical records.

Source note

The butterfly feature illustration is independently created, informed by Australian Museum, "What are insects?" (australian.museum/learn/animals/insects/what-are-insects/). No source photograph or diagram is reproduced. Visible credit appears with the illustrated case page and affected lesson example.

Our School Science Museum

Key Ideas

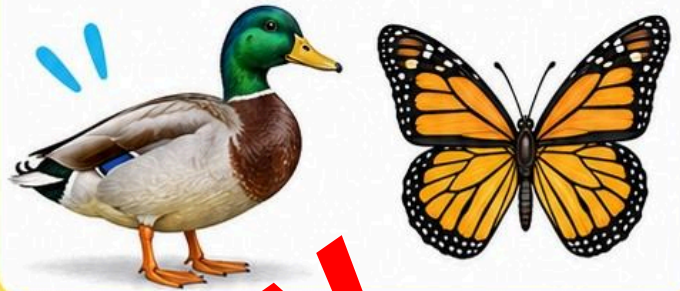
Observation

Look closely to notice what happens.



Grouping

Put things together by a shared feature.



Property

A feature of a material, such as being flexible.



Movement

How an object changes position.



Evidence

What we observe helps us check an idea.



Explain

Use evidence to tell why you think that.



How We Explain Our Evidence

We observe. We find evidence. We explain.

1 Question

Is a toy dog living because a real dog is living?



2 Evidence

The real dog needs food, water and air.

The toy dog is made from plastic.



3 Explanation

The real dog is living.

The toy represents a dog.
The toy is not living.



Case Cards 1-4

1 Cat



Fur. Four legs.

Which feature can you see?

2 Butterfly



Six legs. Wings. Antennae.

Which feature can you see?

3 Duck



Feathers. Two legs. Wings. A bill.

What do duck and butterfly share?

4 Garden snail



A shell. A muscular foot.

Which group could include this snail?

Case Cards 5-8

5

Plants

A bean plant has roots, a stem and leaves.
A fern has fronds. A fern has no flowers.
Which visible feature could you group by?



6

Roof test

Fictional setup

Paper and plastic samples cover dry cards.
Use five drops on each. Wait one minute.
Which card stays dry?

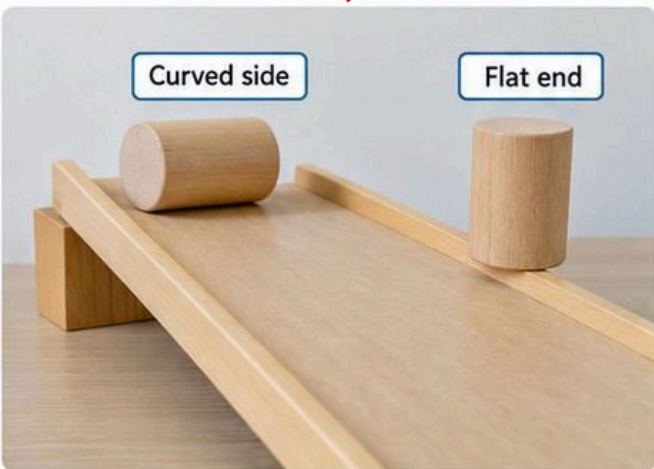


7

Cylinder

Fictional setup

Try its curved side and its flat end.
How does it move on the same ramp?

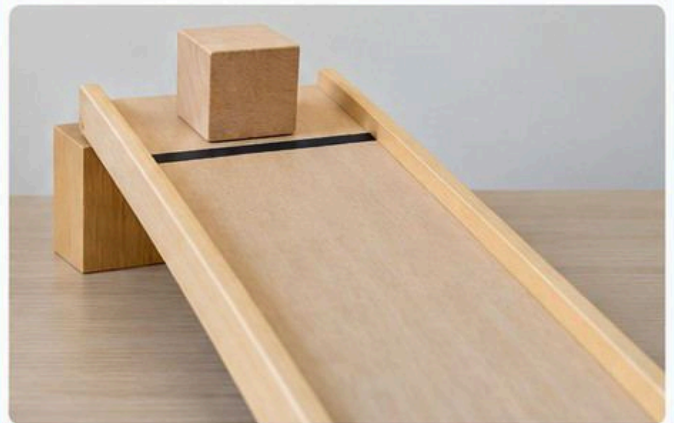


8

Repeat the test

Fictional setup

Use the same release line.
Release without pushing. Observe three times.
Do the results vary?



Evidence Trail

A cooperative science game

Players: 2-4. Use large counters or point.

- 1 Choose a challenge card.
- 2 Move along the six stops in order.
- 3 Share an idea at each stop.
- 4 Ask one respectful question.
- 5 Check the teacher key together.

Everyone helps. There is no speed race.



The six stops

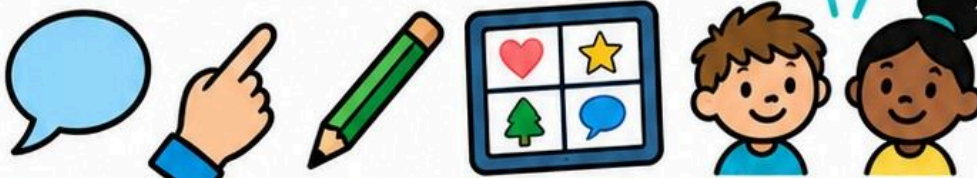
- 1 Notice
- 2 Ask
- 3 Compare
- 4 Explain
- 5 Apply
- 6 Reflect

A worked turn: card 3

- 1 **Notice:** The duck and butterfly have wings.
- 2 **Ask:** Which feature do they share?
- 3 **Compare:** Both show wings.
- 4 **Explain:** Wings support this grouping rule.
- 5 **Apply:** Check another picture using the same rule.
- 6 **Reflect:** Did I use visible evidence?

Ways to join in

Speak, point, draw, use a communication board or device, or dictate to an adult.



Evidence Trail

Follow the six steps in order.

Start

1

Notice

What can you see?



2

Ask

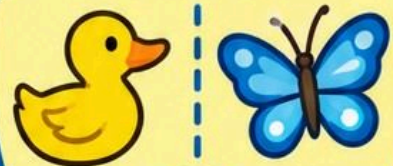
What could you find out?



3

Compare

What is the same or different?



6

Reflect

What might you check next?



5

Apply

Try your idea in a new case.



4

Explain

What evidence helps?



Finish

Speak, point, draw or show your idea.
Help each other.

Evidence Trail: Challenge Cards

1 Case card 1

Which feature helps you group the cat?



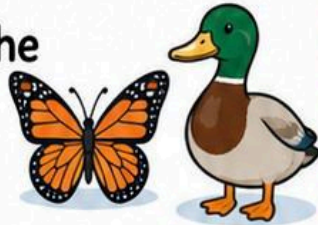
2 Case card 5

Name a feature of the bean plant or fern.



3 Case cards 2 and 3

What feature do the butterfly and duck share?



4 Case card 4

Which visible feature supports a snail group?



5 Toy or real?

Is a toy dog living?
Explain your evidence.



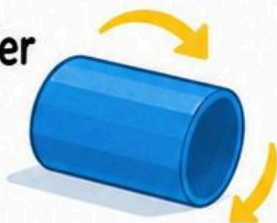
6 Case card 6

Which observation helps you choose a dry roof?



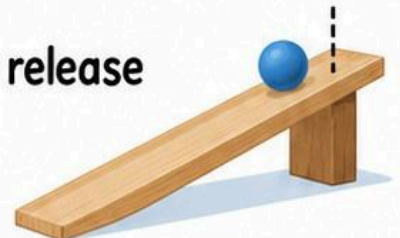
7 Case card 7

How could the cylinder position change its movement?



8 Case card 8

Why keep the release line the same and repeat?



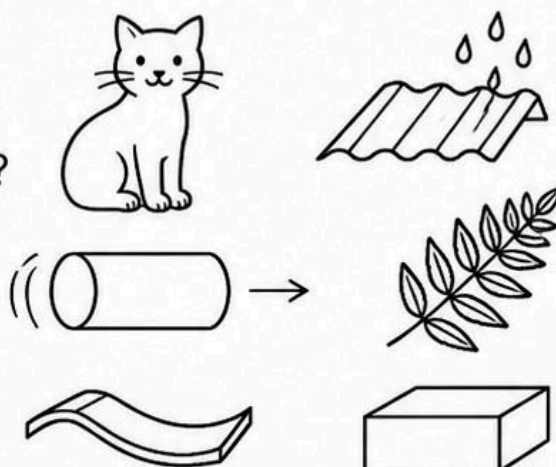
An adult reads. Share an idea and check the teacher key.

Name: _____

Museum questions

1 Notice and plan

- A What covers a cat?
- B Which roof sample keeps a card dry?
- C How does a cylinder move?
- D Does a fern have flowers?
- E Which sample bends easily?
- F Will the block roll?



2 Sort the questions

Living features

Materials

Movement

3 Explain and reflect

Draw or tell a science question of your own.

My question belongs with _____ because _____.

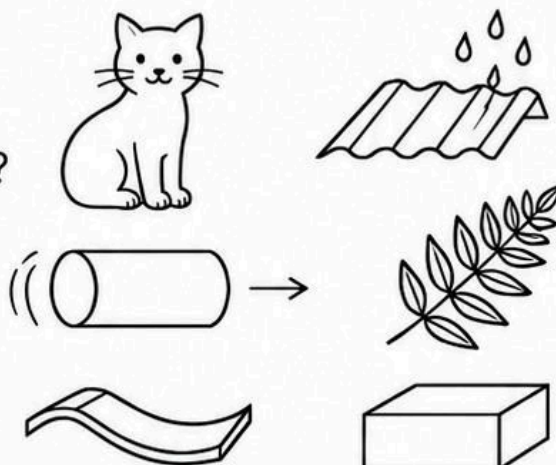
An adult can read and write your words.

Name: **ANSWERS**

Museum questions

1 Notice and plan

- A What covers a cat?
- B Which roof sample keeps a card dry?
- C How does a cylinder move?
- D Does a fern have flowers?
- E Which sample bends easily?
- F Will the block roll?



2 Sort the questions

Living features

A

D

Materials

B

E

Movement

C

F

3 Explain and reflect

Draw or tell a science question of your own.

Sample: Which sample bends easily?

My question belongs with materials because it asks about a property.

An adult can read and write your words.

Name: _____

Specimen detectives

1 Notice and plan

Look at case cards 1–5. Choose two living things in the pictures.

My first picture

My second picture

2 Record and compare

Choose one visible feature. Group by that feature.

My feature: _____

Has my feature

Does not have my feature

3 Explain and reflect

I placed _____ here because I can see _____.

The picture represents a living thing. The picture itself is not living.

Name: **ANSWERS**

Specimen detectives

1 Notice and plan

Look at case cards 1–5. Choose two living things in the pictures.

My first picture

Sample: cat

My second picture

Sample: duck

2 Record and compare

Choose one visible feature. Group by that feature.

My feature: **wings**

Has my feature

duck

Does not have my feature

cat

3 Explain and reflect

I placed **duck** here because I can see **wings**.

Other visible grouping rules can also be valid.

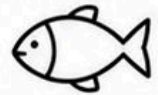
The picture represents a living thing. The picture itself is not living.

Name: _____

Explain the grouping

1 Notice and plan

Choose an organism picture and a grouping rule.



Organism: _____

Our rule: _____

2 Make an evidence label

Point to a feature or dictate your caption.



I can see _____.

It belongs in _____ because _____.

3 Explain and reflect

A partner asks: Which feature helped you?



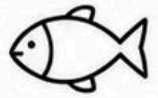
One label I checked or changed: _____

Name: **ANSWERS**

Explain the grouping

1 Notice and plan

Choose an organism picture and a grouping rule.



Sample: fern with fronds

Organism: **fern**

Our rule: **no flowers**

2 Make an evidence label

Point to a feature or dictate your caption.

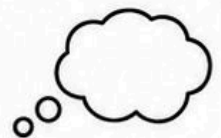


I can see **fronds and no flowers**.

It belongs in **no flowers** because **I can see fronds and no flowers**.

3 Explain and reflect

A partner asks: Which feature helped you?



Sample: I pointed to the fronds.

One label I checked or changed: **checked my visible feature rule**

Name: _____

Choose a display material

① Notice and plan

Which sample keeps the card underneath dry?

My prediction: _____ because _____.

② Record and compare

Same-sized paper and plastic samples. Five drops each. Wait one minute.



Sample	What I saw above	Card underneath
Paper		
Plastic		

③ Explain and reflect

The card under _____ was _____.

My observation helps because _____.

Name: **ANSWERS**

Choose a display material

① Notice and plan

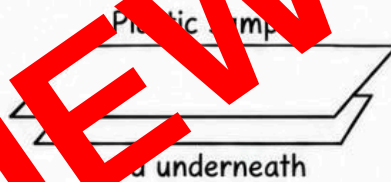
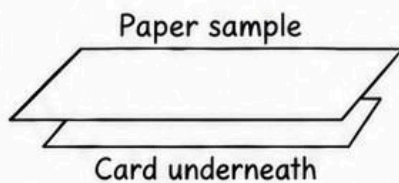
Which sample keeps the card underneath dry?

My prediction: **paper** because **it may stop drops**.

Illustrative example only. Use your actual observations.

② Record and compare

Same-sized paper and plastic samples. Five drops each. Wait one minute.



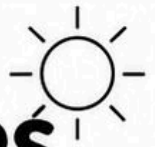
Sample	What I saw above	Card underneath
Paper	Water soaked in.	Wet
Plastic	Drops stayed above.	Dry

③ Explain and reflect

The card under **plastic** was **dry**.

My observation helps because **it helps me choose a roof sample**.

Name: _____

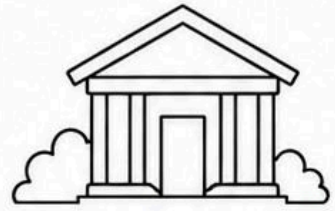


Evidence changes choices

1 Notice and plan

Read your real roof-test record on W04.

I predicted _____.



2 Record and choose

What did you observe?

Paper sample

Plastic sample

For my museum roof, I choose _____.

3 Explain and reflect

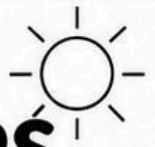
I choose it because I observed _____.

Did my result match my prediction? _____.

One more test I could try: _____.

Keep real results. Different samples may behave differently.

Name: **ANSWERS**

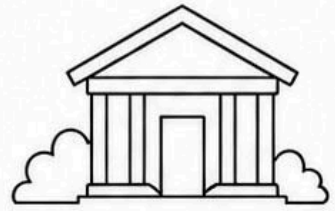


Evidence changes choices

1 Notice and plan

Read your real roof-test record on W04.

I predicted paper would keep the card dry.



Illustrative example, matching the W04 sample key.

2 Record and choose

What did you observe?

Paper sample

Card underneath was wet

Plastic sample

Card underneath was dry.

For my museum roof, I choose this plastic sample.

3 Explain and reflect

I choose it because I observed its card stayed dry.

Did my result match my prediction? No. I changed my choice using evidence.

One more test I could try: try more drops with the same setup.

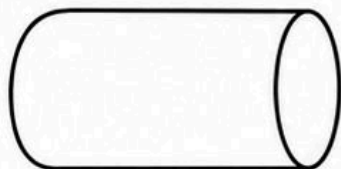
Keep real results. Different samples may behave differently.

Name: _____

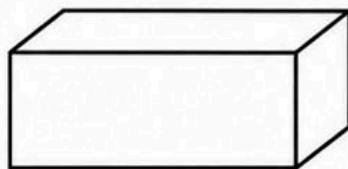
Move the museum parcel

① Notice and plan

Compare a cylinder on its curved side and a block.



cylinder



block

I predict _____ because _____.

② Record and compare

	Start and finish drawing	What happened?
Cylinder on curved side		roll / slide / stay
Block		roll / slide / stay

③ Explain and reflect

I observed _____.

A shape feature that might help explain it: _____.

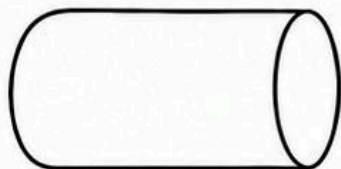
Same low ramp and release line. No extra push. Stand beside the lane.

Name: ANSWERS

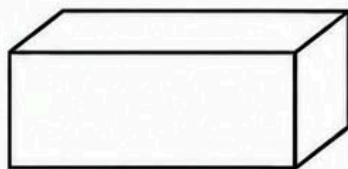
Move the museum parcel

① Notice and plan

Compare a cylinder on its curved side and a block.



cylinder



block

Illustrative example only.
Actual movement may differ.

I predict rolling because it is curved.

② Record and compare

	Start and finish drawing	What happened?
Cylinder on curved side	From release line to barrier.	<u>roll</u> / slide / stay
Block	A shorter slide.	roll / <u>slide</u> / stay

③ Explain and reflect

I observed rolling and sliding in this example.

A shape feature that might help explain it: a curved side or a flat face.

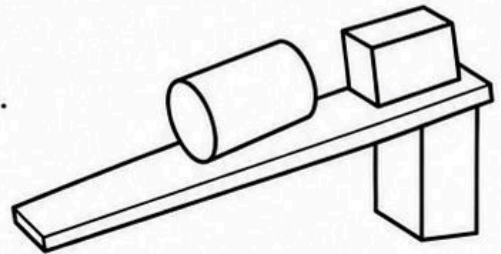
Same low ramp and release line. No extra push. Stand beside the lane.

Name: _____

Check the comparison

1 Notice and plan

Use the same ramp, line, surface and position.
Release without pushing.



My prediction: _____

2 Record three trials

Trial	Cylinder on curved side	Block
1		
2		
3		
Pattern		

3 Explain and reflect

I predicted _____ but observed _____.

The results were the same / different.

One thing to check again: _____.

Record each real result. Variation is useful evidence.

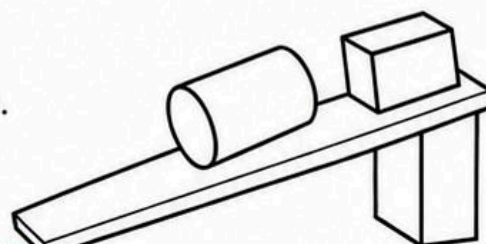
Name: **ANSWERS**

Illustrative example only.
Record your real trials.

Check the comparison

1 Notice and plan

Use the same ramp, line, surface and position.
Release without pushing.



My prediction: **cylinder rolls; block slides**

2 Record three trials

Trial	Cylinder on curved side	Block
1	roll	slide
2	roll	stay
3	roll	slide
Pattern	rolled three times	slid twice; stayed once

3 Explain and reflect

I predicted **block slides every time** but observed **one stay and two slides**.

The results were the same / **different**.

One thing to check again: **release and surface**.

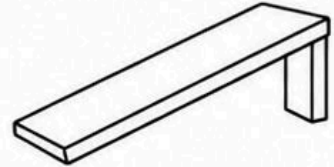
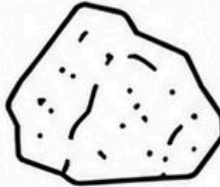
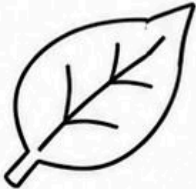
Record each real result. Variation is useful evidence.

Name: _____

Curate three exhibits

① Notice and plan

Find a record for each exhibit.



My museum question: _____.

② Match claims and evidence

Exhibit	What I can explain	evidence record
Living features		
Materials		
Movement		

③ Explain and reflect

I checked my _____ exhibit.

My evidence matches because _____.

One record I still need: _____.

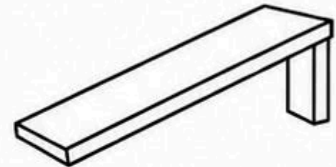
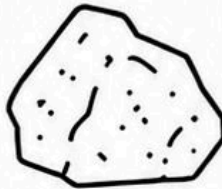
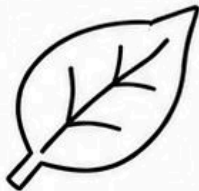
Speak, point, draw, use a device or dictate.

Name: **ANSWERS**

Curate three exhibits

① Notice and plan

Find a record for each exhibit.



My museum question: **How can evidence explain our exhibits?**
Sample organiser; use each learner's own evidence.

② Match claims and evidence

Exhibit	What I can explain	My evidence record
Living features	Group by wings.	W02–W03 pictures and captions.
Materials	Choose a rock sample.	Actual W04–W05 results.
Movement	Describe rolling or sliding.	Actual W06–W07 trials.

③ Explain and reflect

I checked my **materials** exhibit.

My evidence matches because **my record answers the roof question**.

One record I still need: **any missing actual observation**.

Speak, point, draw, use a device or dictate.

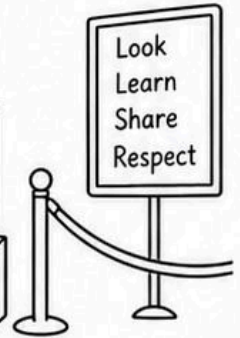
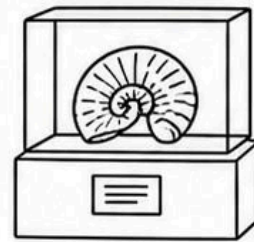
Name: _____

Museum demonstration

① Notice and plan

Show three prepared exhibits safely.

My chosen way to explain: _____



② Demonstrate and explain

Living features:

My rule and visible evidence

Materials:

My choice and test evidence

Movement:

My observation and safe method

③ Explain and reflect

A visitor asked _____.

My evidence helped me answer because _____

Show recorded movement if a live demonstration is unsuitable.

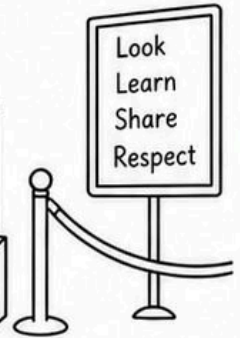
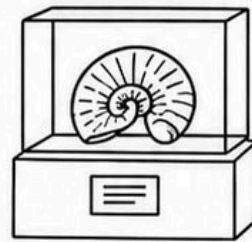
Name: **ANSWERS**

Museum demonstration

① Notice and plan

Show three prepared exhibits safely.

My chosen way to explain: **point and dictate**



Sample response criteria, not a single required product.

② Demonstrate and explain

Living features:

My rule and visible evidence

Name a visible rule and point to a feature that supports one placement.

Materials:

My choice and test evidence

Choose a sample and connect the choice to the known water-test result.

Movement:

My observation and safe method

Describe actual movement and explain the controlled, safe release.

③ Explain and reflect

A visitor asked **How do you know?**

My evidence helped me answer because **I showed the matching record**

Assess individual reasoning in any suitable response mode.

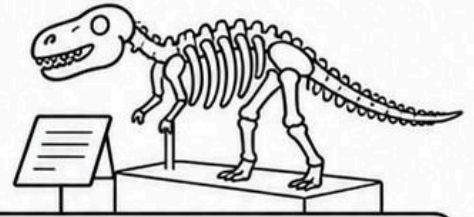
Show recorded movement if a live demonstration is unsuitable.

Name: _____

Scientists share ideas

1 Notice and plan

Choose one museum explanation to improve.



My earlier words

2 Explain with evidence

Add what you actually observed and the job it helped with.

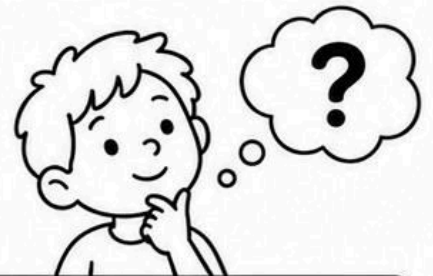


My clearer words

3 Reflect and ask

Observations helped me _____.

My next science question: _____.



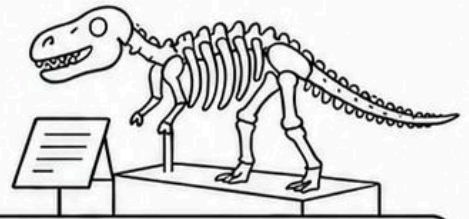
Keep your accepted exhibits. Speak, draw, point, use a device or dictate.

Name: ANSWERS

Scientists share ideas

1 Notice and plan

Choose one museum explanation to improve.



My earlier words

Illustrative example: This is best. _____

2 Explain with evidence

Add what you actually observed and the job it helped with.



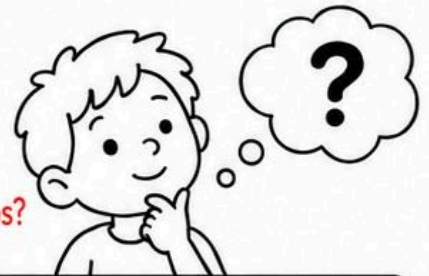
My clearer words

This sample kept the card dry in our test, so I chose it for the roof. _____

3 Reflect and ask

Observations helped me choose a roof sample.

My next science question: Would it still work with more drops?



Other clear revisions and testable next questions are valid. Keep actual evidence.

Keep your accepted exhibits. Speak, draw, point, use a device or dictate.

Quiz – classroom use

Open “Our School Science Museum – Foundation – Quiz.pptx”. The 24-slide editable file contains a cover, accessible instructions, ten questions each followed by its answer, a reflection and a closing slide.

An adult reads each question. Pause on the question slide before revealing the next slide. Pupils may speak, point, draw, select a picture, use a communication device or have their words scribed. Ask which observation supports the answer. Accept accurate alternatives and actual class observations where results depend on testing.

Questions cover toy versus living representation; relevant water-test evidence; visible-feature grouping; safe observation; keeping a movement comparison the same; honest observations; repeat results; a new firm-support property test; a new shell rule; and sharing observations to help another person.

The two anchor checks are the toy-dog explanation and roof-choice evidence. The new firm-support job and changed shell rule check to assist. Use responses alongside A1, R1 and each child's practical records. Record a follow-up prompt when a child needs more evidence. Reading, handwriting, confidence and public-speaking performance are not the science assessment.

The full ten-lesson route uses ten separate presentation files. The compact eight-session route combines 02-03 and 04-10 using selected model/task slides and one opening/closing per session. All essential three-exhibit assessment must be completed by the end of compact session 8.

Name: _____

Assessment: Our Science Museum

Three exhibits and their evidence

Prepare a living-feature group, a tested material choice and a movement demonstration.
Use your existing records. Speak, point, draw, use a communication device or dictate.



- My question and prediction: _____

1 Living features

My grouping rule: _____

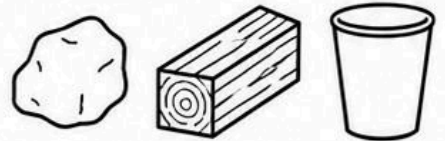
Show one placement and its visible evidence.



2 Materials

My museum job and sample choice: _____

Show the actual property test and what happened.



3 Movement

My object and observed movement: _____

Show a safe comparison or its real record.



Name: _____

Assessment: Evidence Conference

Teacher record for each learner

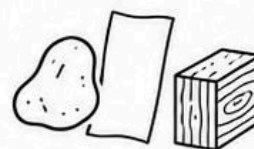
Living features

Names a visible rule and explains one placement.



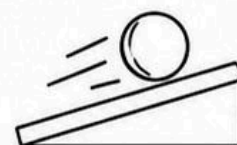
Materials

Connects a sample property, test result and purpose.



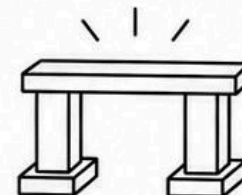
Movement

Describes observed movement and the same-release comparison.



New transfer task

A new exhibit needs a firm support. Which property would you test? How?



Inquiry and reflection evidence

- ☐ Question and prediction
- ☐ Safe guided observation
- ☐ Real record and pattern
- ☐ Prediction compared with result
- ☐ Observation helped a choice
- ☐ Evidence shared and a next question

How do people use questions and observations to learn?

Combine portfolio evidence with this response. Access supports do not lower achievement.

Name: _____



Our School Science Museum: Rubric

Dimension	Supported / incomplete	Independent / sound	Justified / transfer
Understanding	Confuses a representation, material or movement idea.	Groups by a visible feature, identifies a tested property and describes actual movement.	Uses these ideas in a new case and names a relevant limit.
Evidence and process	Records are missing or results are assumed.	Keeps real records, uses a safe same-release method and compares prediction with result.	Uses repeated observations and explains a variation or a method limit.
Explanation and application	Claims do not yet connect to evidence.	Matches each of the three exhibit claims its own relevant evidence.	Justifies a new choice or grouping rule with appropriate evidence.
Reflection and responsibility	Needs help to identify how evidence helped for a next question.	Explains how observations helped a choice, asks a next question and follows safe care.	Proposes a useful next check and explains how it could improve the idea.

Judge demonstrated learning, not handwriting, neatness or public-speaking confidence.

Communication boards, voices, picture choices, gestures and scribing can show the same achievement.

Supported response modes do not automatically mean a lower level.

Evidence and next teaching step:





PREVIEW

Lesson 1 Museum questions

Our learning

We can ask a science question about living organisms, materials or movement. We can explain which group it belongs to.

PREVIEW

A museum mystery

A toy dog looks like a dog. Is the toy living? Share an idea before we look for evidence.

PREVIEW

Three questions

Living features: What covers a duck?

Materials: Which roof sample keeps a card dry?

Movement: How does a windmill move a card?

How We Learn Our Science

We observe. We find evidence. We explain.

1 Question

What is a toy dog made of?
Why does a real dog need food, water, and air?

2 Evidence

The real dog needs food, water, and air.
The toy dog is made from plastic.

food water air

This toy is made from plastic.

3 Explanation

The real dog is living.
The toy represents a dog.
The toy is not living.

A toy dog is a representation of a dog.

A prediction

A prediction says what we think will happen.
“I think the plastic sample will keep the card dry.”
A test will help us check.

PREVIEW

Our equipment

Use case cards, the three question labels and large counters. An adult reads each question. Choose by speaking, pointing or using a communication board.

PREVIEW

Our question sort

1. Listen to a question.
2. Decide what we will observe.
3. Place it in a group.
4. Tell a partner your reason.

PREVIEW

Our learning record

On W01, match each question to a group. Draw a science question of your own. An adult may write your words.

PREVIEW

Our check

“Will the block roll?” belongs with movement.

“What covers a cat?” belongs with living creatures.

Which observation could answer your question?

PREVIEW

Well Done!



Lesson 2

Specimen Detectives



Our learning

We can look closely at living things in pictures and group them by a feature we can see.

PREVIEW

Living things and pictures

A real bean plant is living. A picture shows a plant. The picture itself is paper or a screen image. We can use it to study visible features.

PREVIEW

A close look

A duck has feathers, a bill, two legs and wings.

A bean plant has roots, a stem and leaves.

Name one feature you can actually see.

Based on: Australian Museum, What are insects? (australian.museum)



A grouping rule

The duck and butterfly both have wings. The cat and snake do not have wings. Sharing a feature does not mean animals are close relatives.

Based on [australian.museum](https://australian.museum/learn/animals/insects/what-are-insects/)

Our equipment and care

Use the six organism pictures and W02. Look at images of a school-approved plant. Leave wildlife undisturbed. Do not collect or handle animals.

PREVIEW

Our feature groups

1. Choose a visible feature.
2. Make two labelled groups.
3. Place the pictures.
4. Check each placement with a pointer.

PREVIEW

Our evidence record

Draw or select one feature beside two organisms in Web
Point to the feature in the picture. Record what you see,
rather than what you guess.

PREVIEW

Our check

A snail has a shell and a muscular foot. A caterpillar has four legs. Could you group them as “has shell” and “no shell”? Explain one placement.

PREVIEW

Well Done!



Lesson 3

Explain the grouping



Our learning

We can make an exhibit label with a grouping rule and a feature that supports it.

PREVIEW

Our earlier grouping

We grouped duck and butterfly pictures under “has wings”. What visible feature helped us choose that label?

PREVIEW

An evidence caption

“The duck belongs here because I can see wings.”

The caption names the organism, our rule and our evidence.

Name: _____

Form the group

1 Name and plan
Choose an organism picture and write a rule.  

Organism: _____

2 Make an evidence label
Point to a feature or dictate your caption. 

I can see _____.

It belongs in _____ because _____.

3 Explain and reflect
A partner asks: Which feature helped you? 

One label I checked or changed: _____

A clearer explanation

“It goes here because it is nice” does not name a feature.
“The cat goes in no wings because I can see it and legs,
but no wings” links the placement to evidence.

PREVIEW

Our materials

Use your organism pictures, group labels and words. An adult can read or scribe. Use a picture choice or gesture to show the feature.

PREVIEW

Our exhibit caption

1. Select one organism picture.
2. Name your grouping rule.
3. Point to the evidence.
4. Make and share a short caption.

PREVIEW

A partner question

Ask “Which feature helped you?” Listen to the answer. Check that the caption matches the picture. Change a label if the evidence calls for it.

PREVIEW

Our check

A fern has fronds. It does not have flowers. Where would it go in “has flowers” and “no flowers”? What could you point to as evidence?

PREVIEW

Well Done!



Lesson 4

Choose a display material



Our learning

We can compare two material samples for museum work
We can connect a property to the job

PREVIEW

Object and material

A roof is an object with a purpose. Paper and plastic are materials. Different samples may behave differently. Their names alone cannot tell us everything. Test results

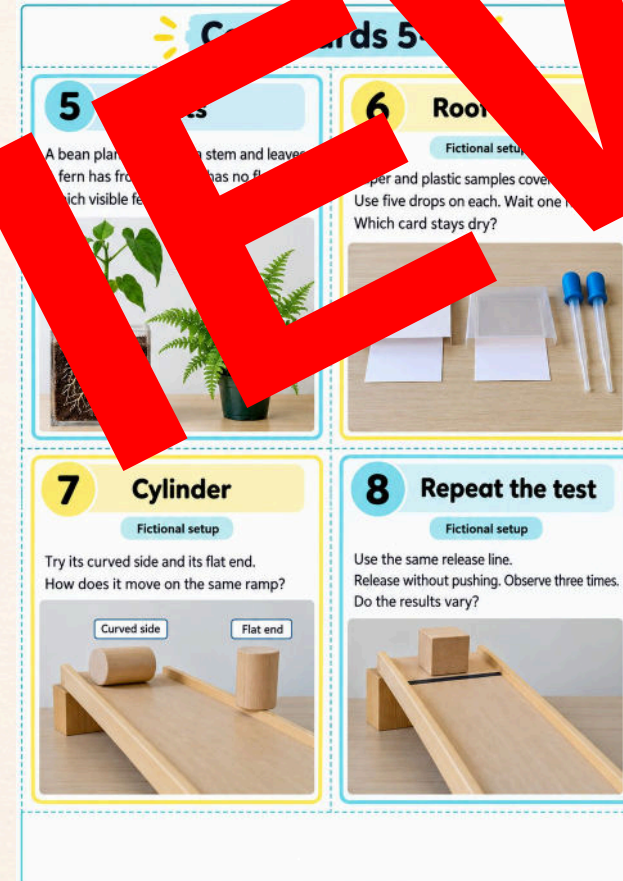
PREVIEW

Our question and prediction

Which sample keeps the card underneath dry?

"I predict ____ because ____."

We will test our actual paper and smooth plastic samples.



A careful comparison

Put equal-sized samples over two equal dry cards. Use the same number of drops on the same-sized area. Wait the same time, then check underneath.

PREVIEW

Our safe equipment

An adult prepares large safe samples on a covered dropper and a tray. Use five water drops on each sample. Keep water away from devices. Wipe spills and wash hands.

PREVIEW

Our test

1. Label the samples.
2. Make a prediction.
3. Add five drops to each
4. Wait one minute.
5. Look above and under each.

PREVIEW

Our evidence record

Use W04 to draw what happened to each sample and record it on the card. Say “dry” or “wet” only after clicking. Unexpected results are useful evidence too.

PREVIEW

Our check

Which actual sample kept its card drier? What did you observe? A water-shedding roof helps keep an exhibit dry. A pretty colour alone does not answer our question.

PREVIEW

Well Done!



Lesson 5

Evidence changes choices



Our learning

We can use our test record to choose a material. We can change a prediction when our evidence gives a different result.

PREVIEW

Prediction and observation

A prediction says what we expect. An observation records what happened. A result can surprise us. We keep the real result.

PREVIEW

A fictional example

Illustrative example only: Lee predicted the paper sample would keep the card dry. After the test, the card was wet and the paper under the plastic sample was dry.

Name: _____

Evidence changes choices

① **Make a prediction and plan**
Read the background information and make a prediction.
I predict _____.

② **Test and observe**
You observe _____.

Paper	Plastic sample

For my museum roof, I choose _____.

③ **Explain and reflect**
I choose it because I observed _____.

Did my result match my prediction? _____.

One more test I could try: _____.

Keep real results. Different samples may behave differently.

A choice with evidence

In the fictional example, Lee chooses the plastic sample for the roof because its card stayed dry in the test. This does not prove every plastic sheet works in every condition.

PREVIEW

Our evidence station

Use your actual W04 records, samples and W05. Compare with another group using the same setup. Review their record without changing your own results to match.

PREVIEW

Our reasoned choice

1. Find your prediction.
2. Look at both results.
3. Choose a sample for the job.
4. Explain with an observation.
5. Name another use you might need.

PREVIEW

Our pattern

Do your groups notice a similar water response? If results differ, check sample size, holes or drop placement with an adult. Record the difference honestly.

PREVIEW

Our check

“I chose this because I saw ____.”

What changed between your prediction and your choice?

If neither sample worked, what could we investigate next?

PREVIEW

Well Done!



Lesson 6

Move the museum parcel



Our learning

We can predict and describe how shapes move on a low ramp. We can watch for rolling, sliding and staying still.

PREVIEW

Shapes and surfaces

A sphere has a curved surface. A block has flat faces. A cylinder has a curved side and flat ends. Which surface touches the ramp may change its movement.

PREVIEW

A movement prediction

“I think the cylinder on its curved side will roll.”

We will check with our actual objects.

Size, surface and position can matter too.

Name: _____

Measure museum pencil

① **Make a plan**
Compare a cylinder and a block on a curved side.

Cylinder Block

② **Observe and compare**

	Start and finish drawing	What happened?
Cylinder on curved side		roll / slide / stay
Block		roll / slide / stay

③ **Explain and reflect**

I observed _____.

A shape feature that might help explain it: _____.

Same low ramp and release line. No extra push. Stand beside the lane.

A controlled release

Use one low ramp, one marked release line and the same ramp angle. Let each object go without an extra push. Watch its movement and when it stops.

PREVIEW

Our safe equipment

Use large safe objects, a low ramp and a soft floor barrier.
Keep people out of the travel lane. An adult checks the
ramp. Never aim objects at anyone.

PREVIEW

Our investigation

1. Predict the movement.
2. Place the object at the line.
3. Release it gently.
4. Watch it move.
5. Collect it only when it stops.

PREVIEW

Our movement record

Use W06 to draw the cylinder and block at the start and finish. Circle or select roll, slide or stop. Record your real observation.

PREVIEW

Our check

What did the cylinder do on its curved side? What did the block do? Which feature might help explain your observation? We need evidence before we decide.

PREVIEW

Well Done!



Lesson 7

Check the comparison



Our learning

We can repeat a movement test and keep the setup the same. We can compare each real result with our prediction.

PREVIEW

A comparison to check

One child starts high on the ramp. Another starts lower.
Can the two distances answer a shared question fairly? We
need the same release line.

PREVIEW

Our repeated method

Use the same line, ramp angle, surface and object position. Release without pushing. Watch each object three times. Record equipment between runs.

Name: _____

Compare the comparison

① **Plan and predict**
Use the same line, ramp angle, surface and object position.
Release without pushing.
Prediction: _____

② **Record the results**

	Cylinder on smooth side	Block
1		
2		
3		
Pattern		

③ **Explain and reflect**
I predicted _____ but observed _____.
The results were the same / different.
One thing to check again: _____.

Record each real result. Variation is useful evidence.

Results can vary

An object may stop in a different place. A small wobble or change in release can matter. A pattern can emerge, but one result does not prove what always happens.

PREVIEW

Our safe roles

One person releases. One watches from beside the plane.
One records after the object stops. An adult checks the
setup. Swap roles without entering the travel lane.

PREVIEW

Our test record

Use W07 to record three trials for each shape. Draw the movement or point to a word. Keep the result blank until each test happens.

PREVIEW

Our comparison

Which movement happened most often? Which results differed? Tell a partner “I predicted ____ and I observed ____.” A different result is still valid.

PREVIEW

Our check

People use questions and observations to learn about movement. Which part of our method the heads compare? What might we check again before composing a museum transport?

PREVIEW

Well Done!



Lesson 8

Curate three exhibits



Our learning

We can prepare one exhibit for living features, one for a material choice and one for movement. Each exhibit needs the matching evidence.

PREVIEW

Evidence belongs with its claim

A wing picture supports a feature group. A water test record supports a roof choice. A ram record supports a movement description. Each observation answers its own question.

PREVIEW

Our living-feature exhibit

Use an organism group and a caption. Name the visible feature and explain one placement. Keep the picture distinct from the actual living thing.

Name: _____

Choose three exhibits

① **Make a plan**
Find evidence for each exhibit.

Museum question: _____

② **Match claim to evidence**

	What can explain	My evidence record
Living		
Materials		
Movement		

③ **Explain and reflect**

I checked my _____ exhibit.

My evidence matches because _____.

One record I still need: _____.

Speak, point, draw, use a device or dictate.

Our tested exhibits

Materials: show your actual samples or pictures and water-test record.

Movement: show your ram record and a life demonstration setup.

Explain what you see.

PREVIEW

Our museum materials

Use your portfolio W02–W07, case cards and W08. Keep wet samples contained and dry floors. Only an adult approved low ramp demonstration belongs in the museum.

PREVIEW

Our curation task

1. Select the three records.
2. Match each to its exhibit.
3. Rehearse a short explanation.
4. Check a partner can find your evidence.

PREVIEW

Our evidence check

Does each exhibit answer its question? If a report is missing, use an adult-recorded observation from your actual practical work. A game answer alone cannot show practical skills.

PREVIEW

Our readiness check

Show each exhibit by speaking, drawing, painting, using a device or demonstrating. What do you know? What evidence supports it? What are you still wondering?

PREVIEW

Well Done!



Lesson 9

Museum demonstration



Our learning

We can explain the evidence at all three exhibits and answer a visitor question. We can demonstrate movement safely.

PREVIEW

A visitor question

A visitor asks “How do you know?” Find the matching record before answering. Tell what you observed, rather than only naming an object

PREVIEW

An evidence explanation

“These have wings. I can point to the wings on each picture.”

“My roof choice uses the results from my water-test record.”

DE

Name: _____

Assessing Our Science Museum

Exhibits and their evidence

Prepare a museum group, a tested material choice and a movement choice.

Use your own words. Speak, point, draw, or use a communication device.

 **My question is:** _____

Living features

Grouping rule: _____

Placement and evidence.  

2 Materials

My museum job and sample choice: _____

Show the actual property test and what happened.   

3 Movement

My object and observed movement: _____  

Show a safe comparison or its real record.

Bring your own records. Pictures represent living things. Real test results may differ.

A changed result

A visitor sees a result that differs from your prediction. See what happened. You may change your explanation. Do not erase evidence to make a prediction look more likely.

PREVIEW

Our safe demonstration

Use a low ramp and soft barrier. Visitors stand beside the lane. Keep paper and water-test records clear of the door. Show a recorded result if a live demonstration is unsuitable.

PREVIEW

Our evidence conference

Take turns at the three exhibits. Each learner explains a feature group, a tested material choice and a movement observation. Use W09 and the assessment organizer.

PREVIEW

An unfamiliar case

An adult offers a new display-support job using the same material set. Which property would you test? Explain the test you need before making a final choice.

PREVIEW

Our reflection

Which exhibit had the clearest evidence? Which part needed another check? Show your reasoning with your chosen response mode. Public speaking is optional.

PREVIEW

Well Done!



Lesson 10

Scientists share ideas



Our learning

We can improve an explanation with evidence and ask a useful next science question. People learn by comparing observations.

PREVIEW

A clearer museum label

A label says “This is best.” What is the job? What did the test show? A visitor needs enough information to understand the choice.

PREVIEW

A useful revision

“This sample kept the card dry in our test, so I chose it for the roof.”

The revised label names the observation and the purpose. It describes this sample and this test.

Name: _____

Scientists share ideas

① **Make a plan**
Choose a museum exhibit that you think is interesting. Write down what you earlier with it.

② **Learn with it**
You actually observed and the job it helps with.

My class _____

③ **Reflect and ask**
Observations helped me _____
My next science question: _____

Keep your accepted exhibits. Speak, draw, point, use a device or dictate.

A next question

“Would it still keep the card dry with more clippings?” is a testable next question. “Is it the nicest?” needs a different kind of answer.

PREVIEW

Our sharing choices

Use your completed exhibits and W10. Share with partner or adult. Speak, point to a picture, use a communication device, dictate or make a drawing recording.

PREVIEW

Our revision task

1. Choose one unclear explanation.
2. Add the missing evidence.
3. Keep the accepted exhibits.
4. Ask one next question.
5. Share how observation helped.

PREVIEW

Our scientist connection

A museum scientist looks closely, asks questions, and shares what they find. Our careful record helps another person understand our ideas and decide what to check next.

PREVIEW

Our final check

Explain one living feature, one useful material property and one movement observation. How did evidence help you? What question would you investigate next?

PREVIEW

Well Done!



Our School Science Museum Science Quiz



How to join in

An adult reads each question. Think first, then speak, point, draw, use a device or show your idea. Explain with evidence. This quiz accompanies practical assessment.

PREVIEW

Question 1: Toy dog

Is a toy dog living because a real dog is living?

PREVIEW

Answer I

No. A toy represents a dog. The toy is made from materials. A real dog is living.

PREVIEW

Question 2: Roof evidence

What evidence belongs beside our museum roof choice?

PREVIEW

Answer 2

Use the tested material property and the observation that shows whether the card stayed dry. The colour alone is not water-test evidence.

PREVIEW

Question 3: Feature group

Duck and butterfly pictures share a visible feature. What is it?

PREVIEW

Answer 3

They both show wings. Shared wings do not prove they are close relatives. The pictures represent living things.

PREVIEW

Question 4: Safe observation

How can we study a wild snail safely?

PREVIEW

Answer 4

Observe without collecting or handling it. Use a suitable picture instead. Follow the school-approved procedure and leave wildlife undisturbed.

PREVIEW

Question 5: Same setup

One block starts high and another starts low on the ramp.
What must we change before comparing shelves?

PREVIEW

Answer 5

Use the same release line, ramp angle and surface.
Release without an extra push. Different starting places
change the test.

PREVIEW

Question 6: Honest record

Your object slides even though you predicted it was rolling.
What should your record show?

PREVIEW

Answer 6

Record the sliding you actually observed. Keep the prediction too and compare it with the result. Unexpected results are useful.

PREVIEW

Question 7: Repeat and compare

Why do we observe each shape three times

PREVIEW

Answer 7

Repeating can show a pattern or variation. Keep the set up the same and record every real result. It does not guarantee identical results.

PREVIEW

Question 8: New display job

We need a firm support for an exhibit. Which property could we compare using safe samples?

PREVIEW

Answer 8

Compare how the samples bend under the same small, adult-approved supported load. A sample that bends less may suit the job. Test before choosing.

PREVIEW

Question 9: New grouping rule

We change our label to “has a shell”. Which case picture fits, and what evidence helps?

PREVIEW

Answer 9

The garden snail fits because its shell is visible. The cat, duck, butterfly and plants do not show a shell. A clear visible rule supports the placement.

PREVIEW

Question 10: Science sharing

How can your observations help another person?

PREVIEW

Answer 10

Share a clear record and explanation. Another person can understand the evidence, ask a question or decide what to check next. Accept an accurate learner example.

PREVIEW

Our reflection

Which observation helped your answer? What would you check next? Show a safe practical method using your own records.

PREVIEW

Well Done!

