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## Move It! - Foundation

| Table of Contents                      |  |
|----------------------------------------|--|
| Presentations: Move It! – Lessons 1-10 |  |
| Display: Move It! – Key Ideas          |  |
| Display: How We Explain Our Evidence   |  |
| Motion Case Cards                      |  |
| Game: Evidence Trail                   |  |
| Worksheet 01: Movement words           |  |
| Worksheet 02: Shapes we can see        |  |
| Worksheet 03: Will it roll             |  |
| Worksheet 04: Different orientations   |  |
| Worksheet 05: Size comparison          |  |
| Worksheet 06: Make the test alike      |  |
| Worksheet 07: Sort the evidence        |  |
| Worksheet 08: Choose for a track       |  |
| Worksheet 09: Motion demonstration     |  |
| Worksheet 10: Questions still open     |  |
| Quiz: Move It!                         |  |
| Assessment: Movement                   |  |
| Rubric: Movement                       |  |



# Move It! - Teacher Overview

## Foundation Science

How do size, shape and material affect the way objects move? Children explore roll, slide and bounce, notice flat and curved parts, and compare actual outcomes. The full route has ten 60-minute lessons. The eight-session route integrates compatible tasks while retaining every learning contribution.

## Learning and evidence

Children predict, observe safely, record results, compare them with their ideas and share a supported explanation. Assess the relationship shown in the assigned unit rather than handwriting, confidence or an entire year of Science. A quiz supports review. Practical records and a short explanation provide the main evidence.

## What is included

Ten separate editable 12-slide lesson presentations and one editable 24-slide quiz. This guide contains full lesson plans, two displays, eight case cards on two pages, a three-page cooperative game, ten learning records with ten matched answer or sample pages, a two-page assessment and a specific rubric.

## Words in context

Roll: turn as you move. Slide: move along without turning over. Bounce: hit a surface and come up again. Shape describes an object's form. Curved parts bend. Flat parts are not curved. Demonstrate with real objects and invite children to point to the part touching the surface.

# Preparation, Safety and Participation

## Prepare a safe space

Use large balls, a broad cylinder, a block and a toy trolley. Avoid small loose parts, sharp edges and fragile objects. Secure a broad, low ramp on the floor, mark one release point and place a tray or soft barrier at the end. Keep the travel lane clear and dry. Children wait until objects stop before collecting them.

## Comparisons and honest records

Release without an extra push. Keep the ramp height, release point and surface alike. Repeat comparisons and preserve different results. Where balls differ in material as well as size, name that limitation. A shape or size feature alone does not determine every outcome. Never fill a classroom record with invented measured results.

## Ways to show the same learning

Read prompts aloud and model an example. Offer two picture choices, large cards or a practical demonstration. Children may prefer to use a communication board or device, gesture, talk, draw or state to an adult. Assess the reasoning shown. Extra support with communication does not automatically lower a rubric level.

## Illustration and official reference

Case pictures and worked responses are illustrative examples. The worksheets record actual classroom observations. General rolling-shape facts informed the original Lesson 08 explanation. Teacher reference: Questacon, Cardboard Train Wheels, <https://www.questacon.edu.au/learn-and-play/activities/train-wheels>. No official image or screenshot is reproduced.

# The Ten Separate Lesson Files

## Full route

Teach one complete presentation per lesson. Each has its own cover, explicit example, safe practical task, record, discussion, further question and closing slide. The lesson plans on the following pages give preparation, timings and checks.

## File names and topics

01. Movement words

Move It! – Foundation – Lesson 01 – Presentation.pptx

02. Shapes we can see

Move It! – Foundation – Lesson 02 – Presentation.pptx

03. Will it roll

Move It! – Foundation – Lesson 03 – Presentation.pptx

04. Different orientations

Move It! – Foundation – Lesson 04 – Presentation.pptx

05. Size comparison

Move It! – Foundation – Lesson 05 – Presentation.pptx

06. Make the test alike

Move It! – Foundation – Lesson 06 – Presentation.pptx

07. Sort the evidence

Move It! – Foundation – Lesson 07 – Presentation.pptx

08. Choose for a truck

Move It! – Foundation – Lesson 08 – Presentation.pptx

09. Motion demonstration

Move It! – Foundation – Lesson 09 – Presentation.pptx

10. Questions still open

Move It! – Foundation – Lesson 10 – Presentation.pptx

## Resources and answers

W01–W10 link to the matching lesson. Fixed answers for movement words and shape features follow W01 and W02. Other red answer pages show illustrative responses only. Compare them with real observations and accept defensible different outcomes.

# Eight-Session Completion Route

## Every session is 60 minutes

5 minutes retrieve, 10 minutes model, 30 minutes practical or application, 10 minutes explanation and 5 minutes cleanup. Prepare equipment before class. Use the ten supplied decks in the integrated order below. Do not teach two entire decks end to end in a combined session.

### Sessions 1-4

- 1: Lessons 01 and 02. Observe one safe set, label movement and group flat/curved parts. Use Lesson 01 slides 1–4, Lesson 02 slides 3–5, then the shared tasks and records. Use one opening and closing.
- 2: Lesson 03. Predict and observe two ramp objects.
- 3: Lesson 04. Compare the same cylinder on its side and end.
- 4: Lesson 05. Record repeated size comparisons.

### Sessions 5-8

- 5: Lesson 06. Keep setup alike, open and record.
- 6: Lesson 07. Sort actual evidence and notice a bounded pattern.
- 7: Lesson 08. Test a task choice and prepare the existing portfolio.
- 8: Lessons 09 and 10. Use Lesson 09 slides 3–10, then Lesson 10 slides 3–5 and 9–11. Complete the demonstration, explanation, limit and next question. Use one closing.

## Assessment complete by session 8

Use observations collected in sessions 1–7 plus A1 and a concise conference in session 8. During the 30-minute task block collect short paired, adult-supported, drawn or recorded explanations for large classes. The final ten minutes can sample and confirm evidence. No child loses assessment because public speaking is inaccessible.

# Lesson 1: Movement words

## Success and preparation

I can show and name roll, slide and bounce. A large soft ball, broad block, low tray and movement display. Inspect items for choking, sharp-edge and trip hazards. Secure a broad ramp at a low height, mark the release point and use a tray or soft end barrier.

## 8 minutes - retrieve

What changes when this ball moves? Watch before choosing a word. Accept tentative ideas and record a diagnostic response without correcting it immediately.

## 12 minutes - model

A ball rolls when it turns as it travels. Watch its turning. A block slides when it moves along without turning over. A soft ball bounces when it hits the floor and comes up again. Show each action slowly using the actual objects. Ask learners to point to the relevant feature and explain what they noticed.

## 25 minutes - investigate

Watch the teacher model one object at a time. Say, point to or act out the matching movement word. With a partner, try a gentle roll and slide in the clear lane. Work in pairs with one releasing and one observing, then swap. Teacher supervises handling. Stop if the lane becomes crowded. Keep real outcomes, including no movement.

## 10 minutes - explain

Use W01 to match each pictured action. Show one movement with an object. How can you tell a roll from a slide? Show the turning part. Ask for the observation supporting the claim. Retain a drawing, dictated sentence, picture selection or brief oral record.

# Lesson 1: Movement words (continued)

## 5 minutes - exit

I can show and name roll, slide and bounce. Check each child with one concise demonstration or supported response. Allow cleanup within transitions and the exit block.

## Support and challenge

Offer two picture choices and a large object to demonstrate with. Read prompts aloud. A child may point, gesture, use a communication board or device, or dictate. Judge the science reasoning using the same success check. Can you bounce and roll at different times? Explain what you saw.

PREVIEW

# Lesson 2: Shapes we can see

## Success and preparation

I can find flat and curved parts of an object. A large ball, cylinder, block and D1 display. Inspect items for choking, sharp-edge and trip hazards. Secure a broad ramp at a low height, mark the release point and use a tray or soft end barrier.

## 8 minutes - retrieve

Which movement words did we use? What parts touch the floor? Accept tentative ideas and record a diagnostic response without correcting it immediately.

## 12 minutes - model

A ball has a curved surface. A block has flat faces. A cylinder has a curved side and two flat ends. Look at the part touching the surface before predicting movement. Show each action slowly using the actual objects. Ask learners to point to the relevant feature and explain what they notice.

## 25 minutes - investigate

Look at and feel each safe, large object. Group objects with a flat part and objects with a curved part. The cylinder may belong in both groups. Explain why. Work in pairs with one releasing and one observing, then swap. Teacher supervises handling. Stop if the lane becomes crowded. Keep real outcomes, including no movement.

## 10 minutes - explain

Use W02 to notice flat and curved parts. Ask one question we can test. Point to a curved part and a flat part. Which part could you try on a ramp? Ask for the observation supporting the claim. Retain a drawing, dictated sentence, picture selection or brief oral record.

# Lesson 2: Shapes we can see (continued)

## 5 minutes - exit

I can find flat and curved parts of an object. Check each child with one concise demonstration or supported response. Allow cleanup within transitions and the exit block.

## Support and challenge

Offer two picture choices and a large object to demonstrate with. Read prompts aloud. A child may point, gesture, use a communication board or device, or dictate. Judge the science reasoning using the same success check. Find an object that belongs in both groups and explain your choice.

PREVIEW

# Lesson 3: Will it roll

## Success and preparation

I can make a prediction and compare it with what happens. A large ball, block, low fixed ramp, release mark and soft end barrier. Inspect items for choking, sharp-edge and trip hazards. Secure a broad ramp at a low height, mark the release point and use a tray or soft end barrier.

## 8 minutes - retrieve

What do you notice about the ball and block? Which part will touch the ramp? Accept tentative ideas and record a diagnostic response without correcting it immediately.

## 12 minutes - model

A prediction is an idea about what might happen. I think this ball may roll because its surface is curved. I will release it at the mark and watch. The result may surprise me. Show each action slowly using the actual objects. Ask learners to point to the relevant feature and explain what they noticed.

## 25 minutes - investigate

Choose a ball and a block. Tell your prediction first. Release one from the mark with no extra push. Keep the lane clear. Watch how it moves. Try the other with the same setup. Work in pairs with one releasing and one observing, then swap. Teacher supervises handling. Stop if the lane becomes crowded. Keep real outcomes, including no movement.

## 10 minutes - explain

Draw or choose the movement in W03. Keep your prediction and observation separate. Did your observation match your prediction? An unexpected result still helps us learn. Ask for the observation supporting the claim. Retain a drawing, dictated sentence, picture selection or brief oral record.

# Lesson 3: Will it roll (continued)

## 5 minutes - exit

I can make a prediction and compare it with what happens. Check each child with one concise demonstration or supported response. Allow cleanup within transitions and the exit block.

## Support and challenge

Offer two picture choices and a large object to demonstrate with. Read prompts aloud. A child may point, gesture, use a communication board or device, or dictate. Judge the science reasoning using the same success check. Repeat your test. What stayed the same and what changed?

PREVIEW

# Lesson 4: Different orientations

## Success and preparation

I can explain how turning the same object changes its movement. A broad cylinder, low ramp, marked start and soft end barrier. Inspect items for choking, sharp-edge and trip hazards. Secure a broad ramp at a low height, mark the release point and use a tray or soft end barrier.

## 8 minutes - retrieve

A cylinder has a curved side and flat ends. Which part is touching the ramp now? Accept tentative ideas and record a diagnostic response without correcting it immediately.

## 12 minutes - model

On its side, the cylinder rests on a curved part. If it rolls on its end, the cylinder rests on a flat part. It may slide or stay still. Turning it changes the part that touches the ramp. It is still the same object. Show each action slowly using the actual objects. Ask learners to point to the relevant feature and explain what they noticed.

## 25 minutes - investigate

Ask: Will our cylinder move the same way on its side and end? Predict, then release it gently on its side. Watch. Repeat on its end with the same ramp and release point. Work in pairs with one releasing and one observing, then swap. Teacher supervises handling. Stop if the lane becomes crowded. Keep real outcomes, including no movement.

## 10 minutes - explain

Use W04 to draw or select the two results. Describe the touching part. Can the same cylinder roll and slide? Explain with your two observations. Ask for the observation supporting the claim. Retain a drawing, dictated sentence, picture selection or brief oral record.

# Lesson 4: Different orientations (continued)

**5 minutes - exit**

I can explain how turning the same object changes its movement. Check each child with one concise demonstration or supported response. Allow cleanup within transitions and the exit block.

## Support and challenge

Offer two picture choices and a large object to demonstrate with. Read prompts aloud. A child may point, gesture, use a communication board or device, or dictate. Judge the science reasoning using the same success check. When you ask about a different surface? Change one thing at a time.

**PREVIEW**

# Lesson 5: Size comparison

## Success and preparation

I can compare two sizes and explain what our test shows. Two similarly made large balls of different sizes, low ramp and distance markers. Inspect items for choking, sharp-edge and trip hazards. Secure a broad ramp at a low height, mark the release point and use a tray or soft end barrier.

## 8 minutes - retrieve

Will the bigger ball always go farther? What could we watch? Accept tentative ideas and record a diagnostic response without correcting it immediately.

## 12 minutes - model

These balls differ in size. We will also notice material and surface. Use the same ramp and release mark. Release without an extra push. Record where each stops. One comparison cannot tell us what always happens. Show each action slowly using the actual objects. Ask learners to point to the relevant feature and explain what they noticed.

## 25 minutes - investigate

Predict how the two balls will move. Release each ball separately in the clear lane. Put a picture marker where each stops. Repeat safely. Work in pairs with one releasing and one observing, then swap. Teacher supervises handling. Stop if the lane becomes crowded. Keep real outcomes, including no movement.

## 10 minutes - explain

W05 has a blank trial record. Draw the actual stopping points. No result is pre-filled. What happened in your trials? Did both results support the same idea? Ask for the observation supporting the claim. Retain a drawing, dictated sentence, picture selection or brief oral record.

# Lesson 5: Size comparison (continued)

## 5 minutes - exit

I can compare two sizes and explain what our test shows. Check each child with one concise demonstration or supported response. Allow cleanup within transitions and the exit block.

## Support and challenge

Offer two picture choices and a large object to demonstrate with. Read prompts aloud. A child may point, gesture, use a communication board or device, or dictate. Judge the science reasoning using the same success check. Explain why balls of different materials would make a size claim harder to support.

PREVIEW

# Lesson 6: Make the test alike

## Success and preparation

I can keep parts of a comparison the same and repeat it safely. Same ball or paired objects, secured low ramp, release tape and barrier. Inspect items for choking, sharp-edge and trip hazards. Secure a broad ramp at a low height, mark the release point and use a tray or soft end barrier.

## 8 minutes - retrieve

A higher start and an extra push changed our test. Could we compare fairly? Accept tentative ideas and record a diagnostic response without correcting it immediately.

## 12 minutes - model

Mark one release point. Keep the ramp at the same low height. Keep the surface and barrier in the same places. Let go without a push. Repeat and record each result. Our hands may still introduce small differences. Show each action slowly using the actual objects. Ask learners to point to the relevant feature and explain what they noticed.

## 25 minutes - investigate

Check the ramp, start mark and clear lane with the teacher. Release object A, collect it only when it stops, then B. Repeat three times with the same setup. Keep all results. Work in pairs with one releasing and one observing, then swap. Teacher supervises handling. Stop when the lane becomes crowded. Keep real outcomes, including no movement.

## 10 minutes - explain

Use W06 to check the setup and record trials. Tell one thing kept the same. Why keep the release point the same? Explain what a different start could change. Ask for the observation supporting the claim. Retain a drawing, dictated sentence, picture selection or brief oral record.

# Lesson 6: Make the test alike (continued)

## 5 minutes - exit

I can keep parts of a comparison the same and repeat it safely. Check each child with one concise demonstration or supported response. Allow cleanup within transitions and the exit block.

## Support and challenge

Offer two picture choices and a large object to demonstrate with. Read prompts aloud. A child may point, gesture, use a communication board or device, or dictate. Judge the science reasoning using the same success check. Choose one planned change for a later test. Name what you would keep alike.

PREVIEW

# Lesson 7: Sort the evidence

## Success and preparation

I can find a pattern using observations. Class W03–W06 records, movement picture cards and W07. Inspect items for choking, sharp-edge and trip hazards. Secure a broad ramp at a low height, mark the release point and use a tray or soft end barrier.

## 8 minutes - retrieve

What happened in our tests? Which records help us answer our question? Accept tentative ideas and record a diagnostic response without correcting immediately.

## 12 minutes - model

Sort by the movement we actually saw. Do not sort by our favourite toy. An object may show more than one movement in different trials. A pattern is something that happens in several records. Say how many you see. Sort each action slowly using the actual objects. Ask learners to point to the relevant feature and explain what they noticed.

## 25 minutes - investigate

Place each record under roll, slide, bounce or stayed still. Compare records from the same setup before making a claim. Point to the evidence for one pattern. Keep any different results visible. Work in pairs with one releasing and one observing, then swap. Teacher supervises handling. Stop if the lane becomes crowded. Keep real outcomes, including no movement.

## 10 minutes - explain

Use W07 for a class or personal record. Compare one prediction with one observation. Does our chart show that every curved object always rolls? What limits our claim? Ask for the observation supporting the claim. Retain a drawing, dictated sentence, picture selection or brief oral record.

# Lesson 7: Sort the evidence (continued)

## 5 minutes - exit

I can find a pattern using observations. Check each child with one concise demonstration or supported response. Allow cleanup within transitions and the exit block.

## Support and challenge

Offer two picture choices and a large object to demonstrate with. Read prompts aloud. A child may point, gesture, use a communication board or device, or dictate. Judge the science reasoning using the same success check. Find a result that differs. What new question could we ask?

PREVIEW

# Lesson 8: Choose for a track

## Success and preparation

I can choose an object and use evidence to improve its movement. Low broad toy delivery lane, ball, cylinder, block and soft collection tray. Inspect items for choking, sharp-edge and trip hazards. Secure a broad ramp at a low height, mark the release point and use a tray or soft end barrier.

## 8 minutes - retrieve

Our toy lane needs an object to reach the tray. Which shape or orientation might help? Accept tentative ideas and record a diagnostic response without correcting it immediately.

## 12 minutes - model

I choose a curved surface for a rolling journey. I can explain the reason. I will test the object in this lane. My choice is a prediction. If it stops or leaves the lane, I can turn it and test again safely. Show each action slowly using the actual objects. Ask learners to point to the relevant feature and explain what they noticed.

## 25 minutes - investigate

Choose a large object and the part to rest on the lane. Say why, then release at the marked start. Watch carefully. Change its orientation if useful. Repeat and explain your choice. Work in pairs with one releasing and one observing, then swap. Teacher supervises handling. Stop if the lane becomes crowded. Keep real outcomes, including no movement.

## 10 minutes - explain

Use W08 to draw your choice, actual movement and any change you made. Which observation supports your choice? What might happen on a different track? Ask for the observation supporting the claim. Retain a drawing, dictated sentence, picture selection or brief oral record.

# Lesson 8: Choose for a track (continued)

## 5 minutes - exit

I can choose an object and use evidence to improve its movement. Check each child with one concise demonstration or supported response. Allow cleanup within transitions and the exit block.

## Support and challenge

Offer two picture choices and a large object to demonstrate with. Read prompts aloud. A child may point, gesture, use a communication board or device, or dictate. Judge the science reasoning using the same success check. Connect our test to a toy trolley wheel. Explain why a wheel can roll.

PREVIEW

# Lesson 9: Motion demonstration

## Success and preparation

I can predict, test and explain two different shapes. Two differently shaped large objects, low ramp, records and A1 assessment. Inspect items for choking, sharp-edge and trip hazards. Secure a broad ramp at a low height, mark the release point and use a tray or soft end barrier.

## 8 minutes - retrieve

Which two records could help explain your choice? Revisit a prediction that changed. Accept tentative ideas and record a diagnostic response without correcting it immediately.

## 12 minutes - model

My first object moved this way. My second object moved that way. I describe their touching parts and the setup. My evidence supports my claim. I compare my prediction with the observation. Allow for a different result. Show each action slowly using the actual objects. Ask learners to point to the relevant feature and explain what they noticed.

## 25 minutes - investigate

Choose two differently shaped objects. Make a prediction for each. Demonstrate safely, or show an already-observed test to the teacher. Explain the size or shape relationship using two observations. Work in pairs with one releasing and one observing, then swap. Teacher supervises handling. Stop if the lane becomes crowded. Keep real outcomes, including no movement.

## 10 minutes - explain

Use W09 and A1. Speak, draw, gesture, choose pictures or dictate to show the same learning. What do your observations support? What can they not tell us about every object? Ask for the observation supporting the claim. Retain a drawing, dictated sentence, picture selection or brief oral record.

# Lesson 9: Motion demonstration (continued)

**5 minutes - exit**

I can predict, test and explain two different shapes. Check each child with one concise demonstration or supported response. Allow cleanup within transitions and the exit block.

## Support and challenge

Offer two picture choices and a large object to demonstrate with. Read prompts aloud. A child may point, gesture, use a communication board or device, or dictate. Judge the science reasoning using the same success check. Predict how a cylinder might behave if you turn it before release.

**PREVIEW**

# Lesson 10: Questions still open

## Success and preparation

I can share a supported pattern and ask a new question. Saved records, C1 cases, W10 and completed A1 evidence. Inspect items for choking, sharp-edge and trip hazards. Secure a broad ramp at a low height, mark the release point and use a tray or soft end barrier.

## 8 minutes - retrieve

Which result surprised you? What did observing help you learn? Accept tentative ideas and record a diagnostic response without correcting it immediately.

## 12 minutes - model

I saw this in our test. I say what happened without saying it always happens. A different result gives us a new question. We keep it in our record. Scientists use observations and questions. We can share evidence and listen to ideas. Show each action slowly using the actual objects. Ask learners to point to the relevant feature and explain what they notice.

## 25 minutes - investigate

Share one pattern and point to its record. Name one limit, such as a different material or surface. Ask a question we could answer with a safe test. Explain what to compare. Work in pairs with one releasing and one observing, then swap. Teacher supervises handling. Stop if the lane becomes crowded. Keep real outcomes, including no movement.

## 10 minutes - explain

Use W10 to record your claim, evidence and next question. Finish the A1 conference. How does your new question connect to your observation? What would you keep the same? Ask for the observation supporting the claim. Retain a drawing, dictated sentence, picture selection or brief oral record.

# Lesson 10: Questions still open (continued)

## 5 minutes - exit

I can share a supported pattern and ask a new question. Check each child with one concise demonstration or supported response. Allow cleanup within transitions and the exit block.

## Support and challenge

Offer two picture choices and a large object to demonstrate with. Read prompts aloud. A child may point, gesture, use a communication board or device, or dictate. Judge the science reasoning using the same success check. Explore a possible different result and how it would change your idea.

**PREVIEW**

# Evidence Trail - Teacher Response Guide

## A cooperative turn

Read the card aloud. Accept a supported response that meets its criterion. Ask one respectful question, check evidence together, then move one numbered stop. The six-stop path has a clear finish. Continue with unused cards or replay when useful. Use large counters or point. There is no speed or chance requirement.

## Challenge criteria

- 1: A ball may roll because a curved surface can turn as it travels. Testing checks the prediction.
- 2: A cylinder can roll on its curved side and may slide or stay still on a curved end. Surface and setup matter.
- 3: Bigger does not always mean farther. Size, material, surface and release can differ.
- 4: Same ramp height, release point and surface, release with or without an extra push.
- 5: Collect only after the object stops, with people clear of the travel lane.
- 6: Record stayed still. Keep the unexpected result.
- 7: Trolley wheels turn as they roll. Explain from the curved surface and observed rotation.
- 8: Accept a safe observed question, such as comparing the same cylinder in two orientations. Name what to keep the same.

## Case-card links

C01–C08 are original illustrative decision cases, not photographs or measured records. Challenge 2 uses C03 and C04 together. Extend by asking what actual classroom record supports the idea or what might change a result.

Explore  
Observe  
Talk  
Discover

# Move It!

## Key Ideas

Move,  
notice,  
learn!

**Roll:** turn as you move.



**Slide:** move along without turning over.



**Bounce:** hit a surface and come up again.



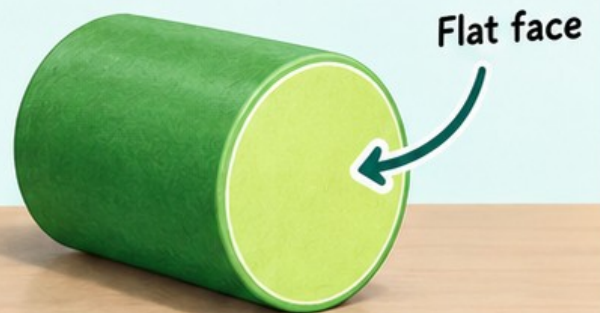
**Shape:** the form of an object.



**Curved:** surface that bends.



**Flat:** a level face.



Watch the object and the part touching the surface.

# How We Explain Our Evidence

Same object.  
Different result.  
A good explanation  
helps us understand  
why.

Scientists ask questions, collect evidence and use their evidence to explain what happens.

## 1 Question

Can the same cylinder roll and slide?

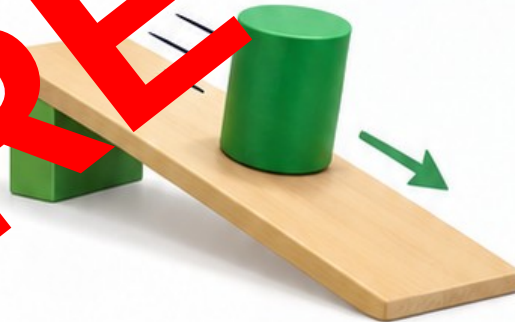


This is the cylinder we will test.

## 2 Example evidence



On its side: **roll**d.



On its end: **slid**.

## 3 Explanation

Turning the cylinder changed the part touching the ramp.



Curved surface touches the ramp (rolls).



Flat surface touches the ramp (slides).

**This is an example.**

Test your own cylinder. Its surface and setup matter.

# Motion Case Cards

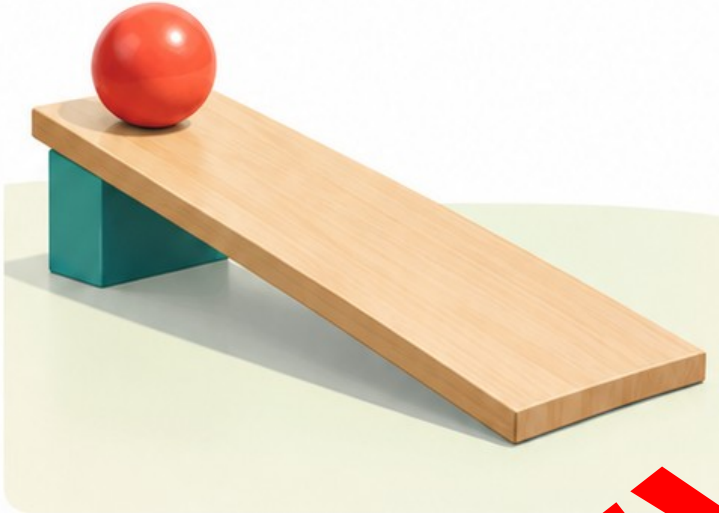
Illustrative cases: predict, test and explain.

What do you notice?  
What will it do?  
Try it and find out!



## C01 Round ball

A curved surface may help it roll.  
What will you predict?



## C02 Flat block

A flat face may slide or stay still.  
What will you watch?



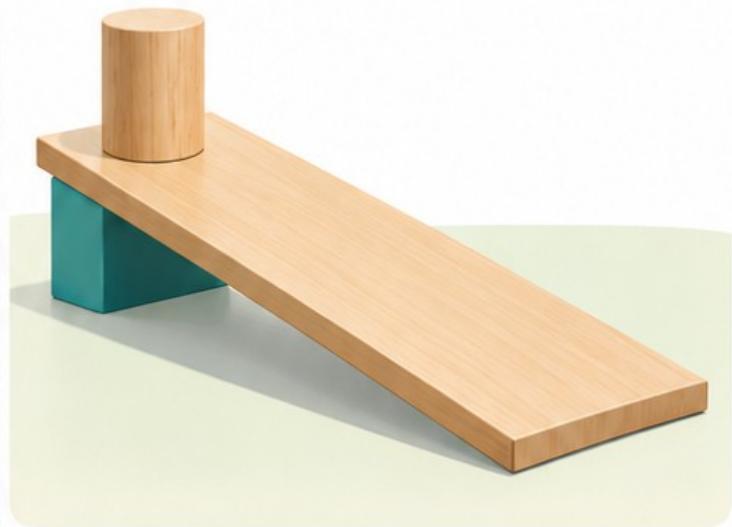
## C03 Cylinder on its side

The curved side touches the ramp.  
How could it move?



## C04 Cylinder on its end

A flat end touches the ramp.  
How could it move?



Objects can move in different ways.  
Notice. Predict. Test. Explain.

# Motion Case Cards

Illustrative cases: predict, test and explain.

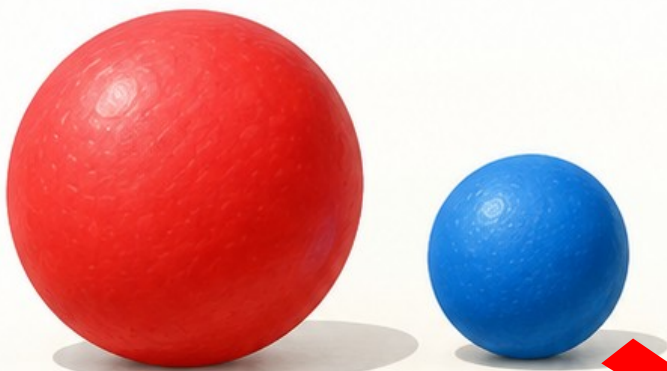
Small questions lead to big discoveries!

Ask  
Test  
Think  
Explain

## C05 Two sizes

Compare two similarly made balls of different size.

Will bigger always go farther?



## C06 Same start

Keep the ramp height and release mark the same.

Why?



## C07 Clear lane

Wait until an object stops before collecting it.

Why?

Stop  
then  
collect



## C08 Toy trolley

The wheels have curved surfaces.

How do the wheels move?



Explore motion all around you!



# Evidence Trail

Listen and help.  
There is no race.

## Cooperative movement game

2–4 players. Use the board, challenge cards and large counters, or point.

- 1 Start at Notice.
- 2 Choose a challenge card.
- 3 Show or explain your idea.
- 4 Ask one kind question.
- 5 Check the teacher guide together.
- 6 Move one stop. At Reflect, share a pattern.



### Example turn

Card 1: A ball may roll because it is curved. We test to find out.



You may talk, point, gesture, draw or ask a partner to help.



# Evidence Trail Board

Look • Think • Explore • Share

Be  
curious!

Small  
steps  
big  
discoveries!

## 1 Notice

What do you see?

A large empty rectangular box for writing observations.

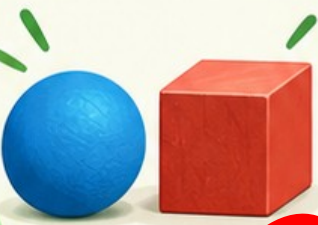
## 2 Ask

What question could you ask?

A large empty rectangular box for writing questions.

## 3 Compare

How are these the same or different?

A large empty rectangular box for writing comparisons.

## 4 Explain

What could be happening? Why?

A large empty rectangular box for writing explanations.

## 5 Apply

How could you use what you know?

A large empty rectangular box for writing applications.

## 6 Reflect

What did you learn?

A large empty rectangular box for writing reflections.

Answer a card at each stop.  
Move together and listen.

## Evidence Trail Challenge Cards

Look  
Think  
Explore  
Find out!

Cut out the cards. Use them to explore movement and find evidence.

1.

**C01: How might the ball move? Why?**



2.

**C03 and C04: Can the same cylinder roll and slide?**



3.

**C05: Does bigger always mean farther?**



4.

**C06: What stays the same in our test?**



5.

**C07: When may we collect the object?**



6.

**C02: A block stays still. What do we record?**



7.

**C08: How do the trolley wheels move?**



8.

**Ask a safe question we could test.**



Small tests. Big discoveries!

Name: \_\_\_\_\_

# Movement words

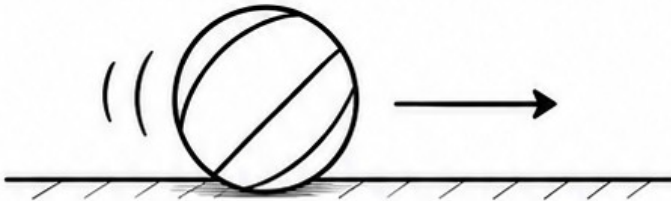
Write or point to a word.

roll

slide

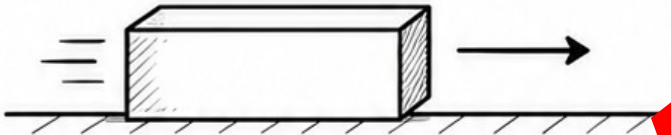
bounce

1.



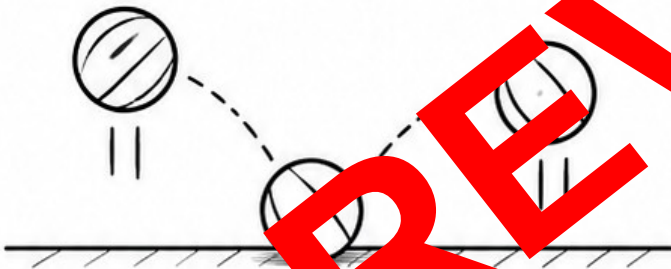
\_\_\_\_\_

2.



\_\_\_\_\_

3.



\_\_\_\_\_

Draw or show one movement.

Tell what you noticed. \_\_\_\_\_

\_\_\_\_\_

Name: **ANSWERS**

# Movement words

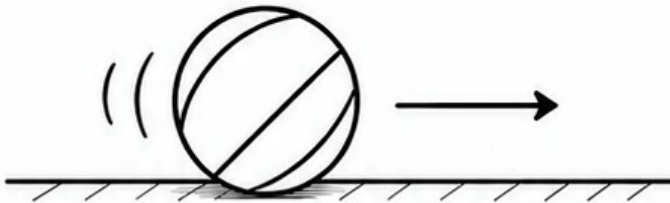
Write or point to a word.

roll

slide

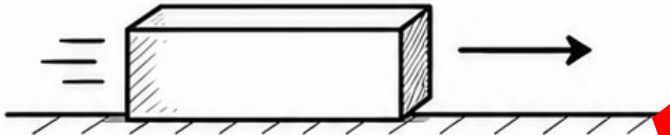
bounce

1.



roll

2.



slide

3.



bounce

Draw or show one movement.



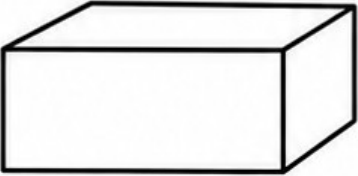
A block slides without turning over.

Tell what you noticed. The ball turned as it travelled.

Name: \_\_\_\_\_

# Shapes we can see

Tick the parts you can find.

| Object                                                                                          | Flat part | Curved part |
|-------------------------------------------------------------------------------------------------|-----------|-------------|
| <br>Ball       |           |             |
| <br>Block     |           |             |
| <br>Cylinder |           |             |

Draw an object with both kinds of parts.

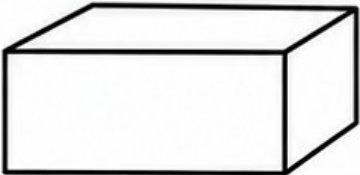


Point to a part you could test on a ramp.

Name: **ANSWERS**

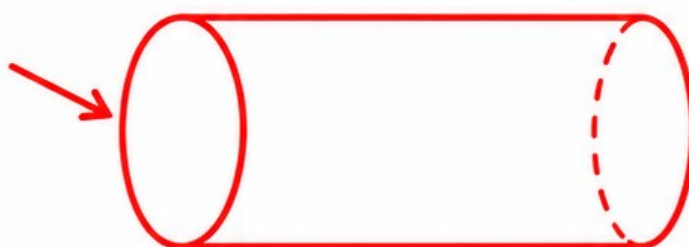
# Shapes we can see

Tick the parts you can find.

| Object                                                                                          | Flat part | Curved part |
|-------------------------------------------------------------------------------------------------|-----------|-------------|
| <br>Ball       |           |             |
| <br>Block     |           |             |
| <br>Cylinder |           |             |

Draw an object with both kinds of parts.

Flat end



Curved side

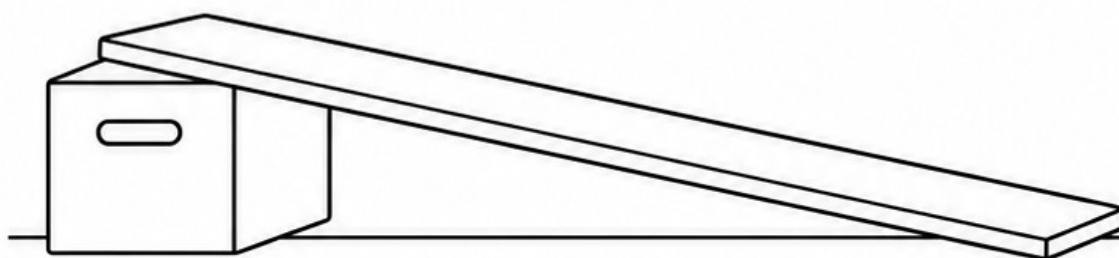


Point to a part you could test on a ramp.

Name: \_\_\_\_\_

# Will it roll?

Choose two objects. Predict, then test.



Same ramp.  
Same start.  
No extra push.

## Object 1

My object

I predict

I saw

## Object 2

My object

I predict

I saw

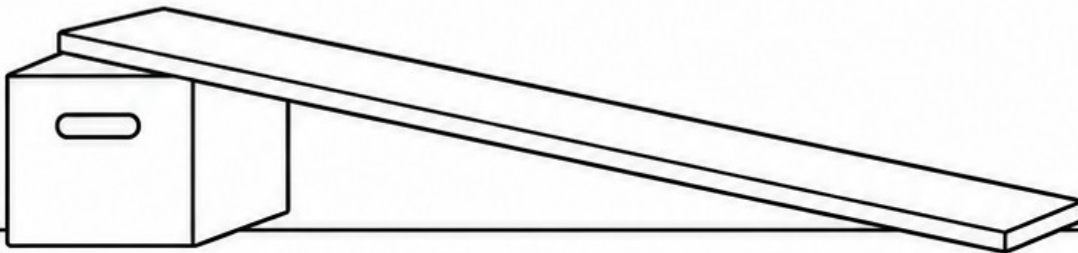
## My prediction and observation

Did they match? Tell or draw.

Name: **ANSWERS**

# Will it roll?

Choose two objects. Predict, then test.



Same ramp.  
Same start.  
No extra push.

## Object 1



My object

roll

I predict

rolled down  
the ramp.

I saw

## Object 2



My object

slide

I predict

slid a short  
way.

I saw

## My prediction and observation

Did they match? Tell or draw.

My predictions matched in this example.

The ball turned as it travelled.

The block moved without turning over.

Sample only. Actual class results may differ.

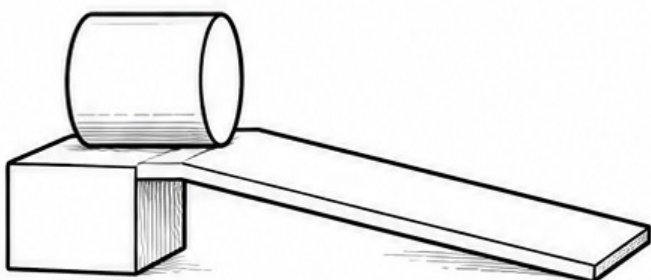
Name: \_\_\_\_\_

# Different orientations

Try the same cylinder two ways.

Same object.  
A different  
position.

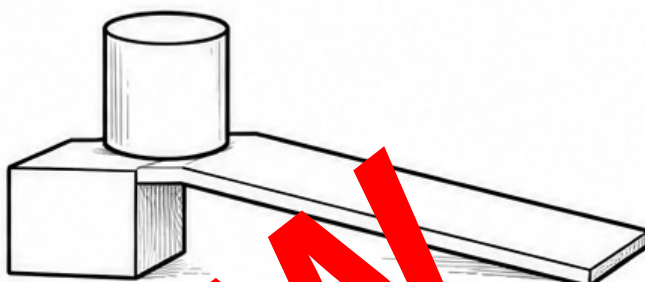
**On its side**



I predict:

I saw:

**On its end**



I predict:

I saw:

**The part touching the ramp**

What changed when I turned it?

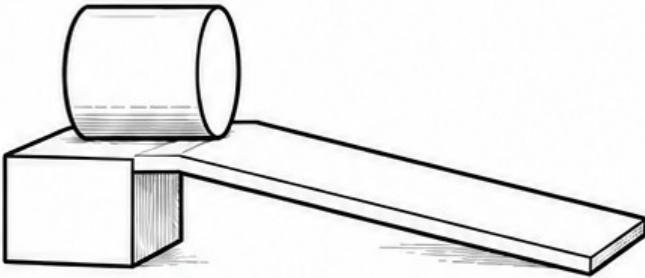
Name: **ANSWERS**

# Different orientations

Try the same cylinder two ways.

Same object.  
A different  
position.

**On its side**



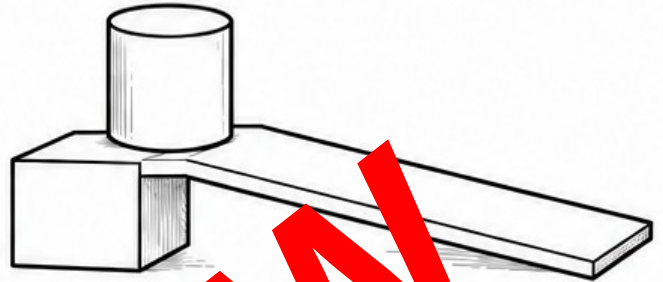
I predict:

**roll**

I saw:

**rolled**

**On its end**



I predict:

**slide**

I saw:

**slid a short way**

**The part touching the ramp**

What changed when I turned it?

**The curved side touched the ramp first.  
After turning the cylinder, its flat end  
touched the ramp.**

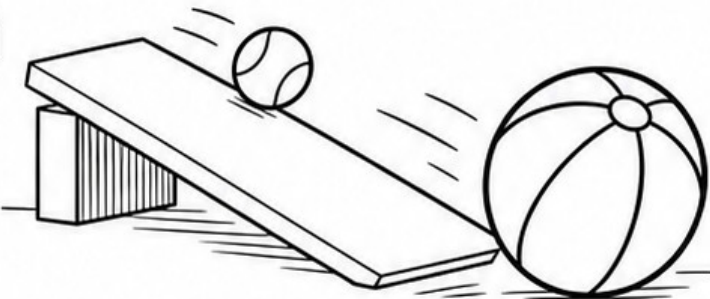
**Sample only. Actual class results may differ.**

Name: \_\_\_\_\_

# Size comparison

Test two similarly made balls  
of different sizes.

Same low ramp. Same start. No extra push.



| Trial | <br>Smaller ball | <br>Larger ball |
|-------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| 1     |                                                                                                   |                                                                                                    |
| 2     |                                                                                                   |                                                                                                    |
| 3     |                                                                                                   |                                                                                                    |

## What did our trials show?

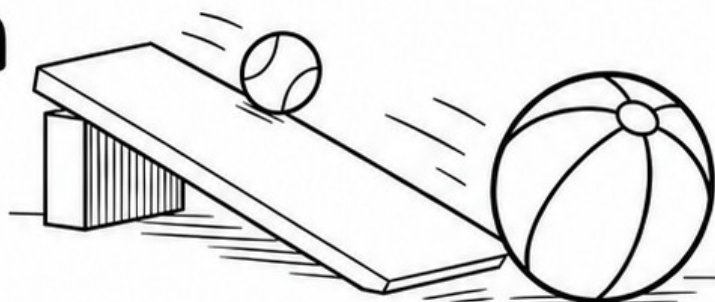
Draw or tell. Bigger does not always mean farther.

Name: **ANSWERS**

# Size comparison

Test two similarly made balls  
of different sizes.

Same low ramp. Same start. No extra push.



| Trial | <br>Smaller ball | <br>Larger ball |
|-------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| 1     | farther                                                                                           | nearer                                                                                             |
| 2     | same stopping point                                                                               | same stopping point                                                                                |
| 3     | farther                                                                                           | nearer                                                                                             |

## What did our trials show?

Draw or tell. Bigger does not always mean farther.

The larger ball did not always go farther.  
The ramp, start and surface stayed the same.

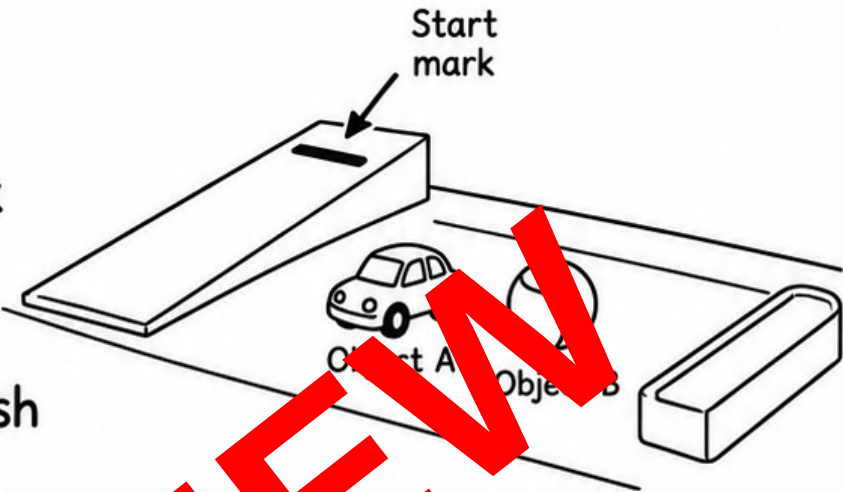
Sample only. Actual class results may differ.  
Accept a comparison backed by real records.

Name: \_\_\_\_\_

# Make the test alike

Check our setup. Then repeat.

- ☐ Same ramp height
- ☐ Same release mark
- ☐ Same surface
- ☐ Let go without a push



| Trial | Object A: I saw | Object B: I saw |
|-------|-----------------|-----------------|
| 1     |                 |                 |
| 2     |                 |                 |
| 3     |                 |                 |

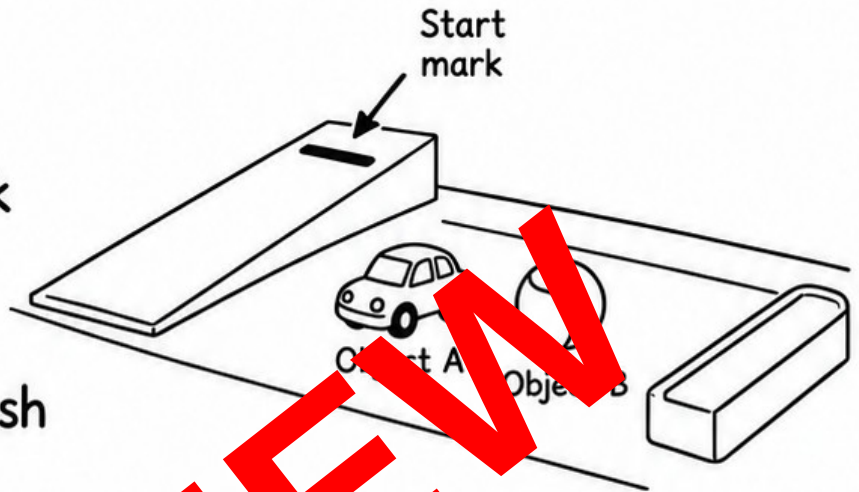
One thing we kept the same

Name: **ANSWERS**

# Make the test alike

Check our setup. Then repeat.

- ☒ Same ramp height
- ☒ Same release mark
- ☒ Same surface
- ☒ Let go without a push



| Trial | Object A: I saw   | Object B: I saw |
|-------|-------------------|-----------------|
| 1     | car wheels rolled | ball rolled     |
| 2     | car wheels rolled | ball rolled     |
| 3     | car wheels rolled | ball rolled     |

One thing we kept the same

**We kept the ramp height the same.**

**Sample only. Actual class results may differ.**

Name: \_\_\_\_\_

# Sort the evidence

Use what you saw in our tests.



Look closely  
and think about  
what happened.

**Roll**

**Slide**

**Bounce**

**Stayed still**

**A pattern noticed**

**A different result or a question**

An object may appear in more than one group.

Name: **ANSWERS**

# Sort the evidence

Use what you saw in our tests.



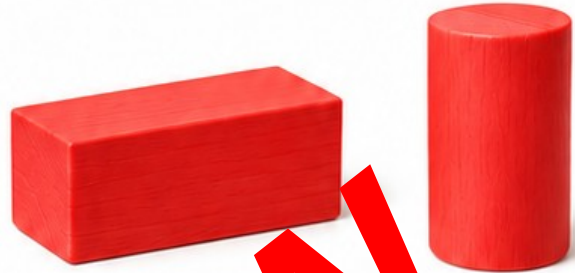
Look closely  
and think about  
what happened.

## Roll



ball; cylinder on its side

## Slide



block; cylinder on its end

## Bounce



soft ball

## Stayed still



block on a flat floor

## A pattern noticed

Curved parts can turn as an object travels.

## A different result or a question

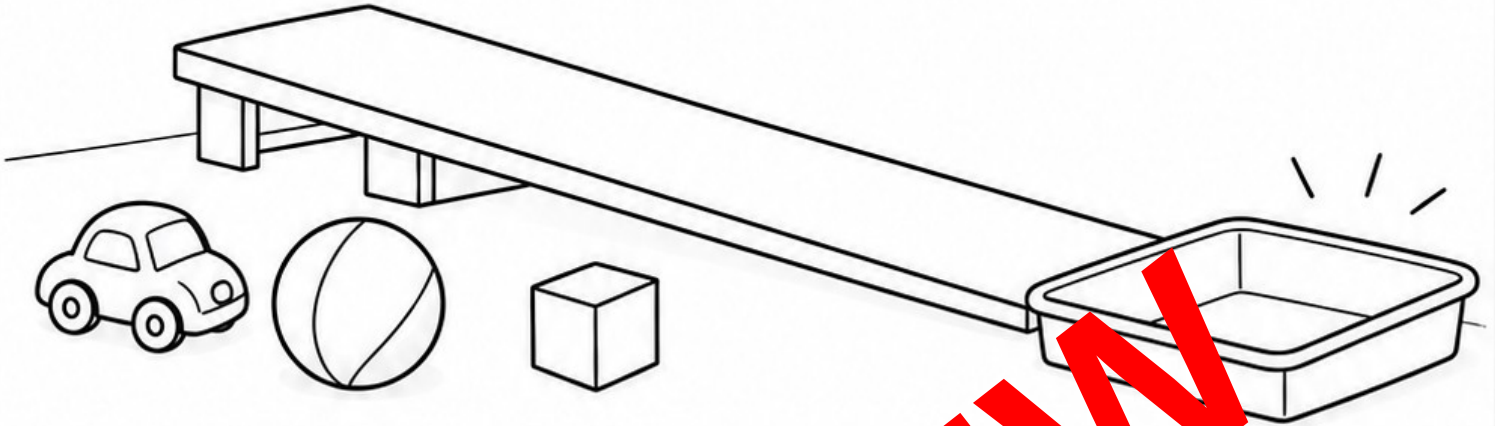
Our block stayed still on the floor but slid on the ramp.  
Sample only. Actual class results may differ.

An object may appear in more than one group.

Name: \_\_\_\_\_

# Choose for a track

Choose an object for our toy delivery lane.



**My choice and reason**

**What happened in our test**

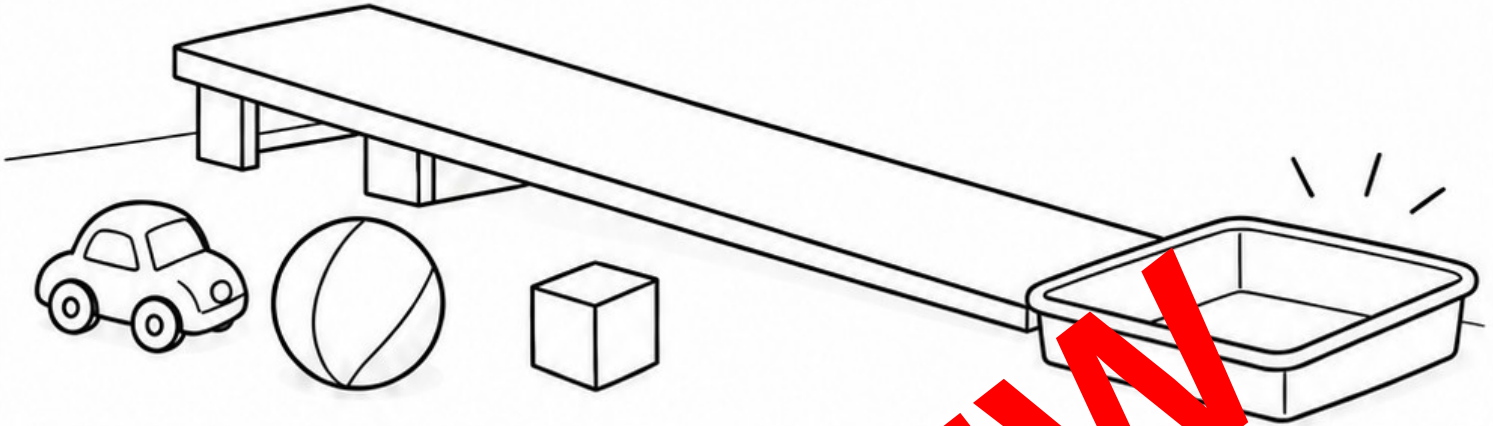
**A change I could try**

Keep the lane clear. Test one change at a time.

Name: **ANSWERS**

# Choose for a track

Choose an object for our toy delivery lane.



## My choice and reason

A cylinder on its side. Its curved side can turn as it travels.

## What happened in our test

It rolled along our clear lane into the tray.

## A change I could try

Turn the same cylinder onto its end. Keep the ramp and start the same.

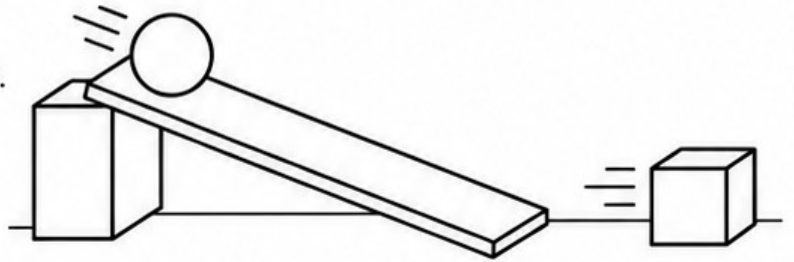
Sample only. Actual class results may differ.

Name: \_\_\_\_\_

# Motion demonstration

Use two differently shaped objects.

Place each object at the top of the ramp.  
Let it go and watch it move.  
What happens?



| Object                                                                                                 | I predict | I observed |
|--------------------------------------------------------------------------------------------------------|-----------|------------|
| <b>Object A</b><br>  |           |            |
| <b>Object B</b><br> |           |            |

**My shape or size explanation**

**What I kept the same**

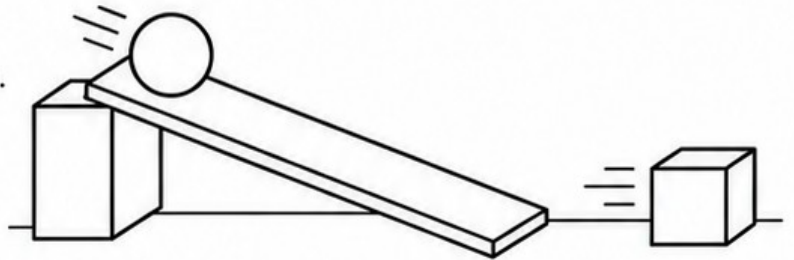
Show, point, talk, draw or ask an adult to write.

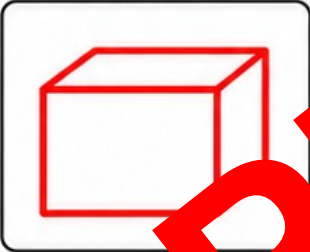
Name: **ANSWERS**

# Motion demonstration

Use two differently shaped objects.

Place each object at the top of the ramp.  
Let it go and watch it move.  
What happens?



| Object                                                                                                 | I predict | I observed |
|--------------------------------------------------------------------------------------------------------|-----------|------------|
| <b>Object A</b><br>  | roll      | rolled     |
| <b>Object B</b><br> | slide     | slid       |

## My shape or size explanation

The ball had a curved surface and turned.  
The block had a flat face and slid.

## What I kept the same

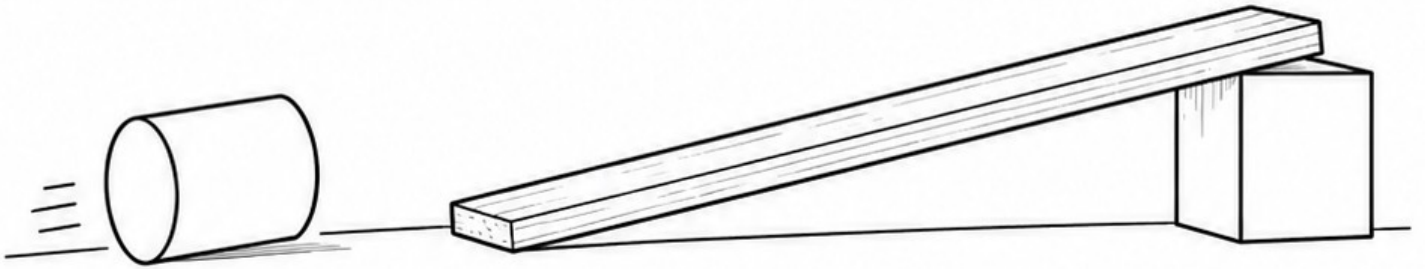
Ramp height, start mark and surface.  
No extra push.

Sample only.  
Actual class results may differ.

Show, point, talk, draw or ask an adult to write.

Name: \_\_\_\_\_

# Questions still open



Use your records. Tell what you know so far.

A pattern from our test

The observation that supports it

My next life question

**PREVIEW**

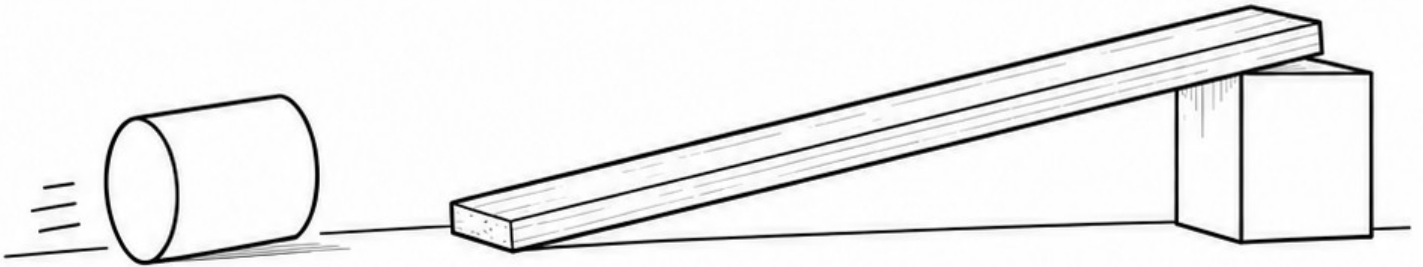
What might change the result?



One test does not tell us what always happens.

Name: **ANSWERS**

# Questions still open



Use your records. Tell what you know so far.

A pattern from our test

The cylinder  
rolled on its  
curved side.

The observation that  
supports it

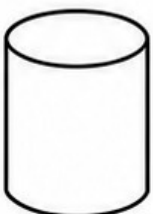
It turned as  
it travelled  
in two trials.

My next life question

Will the same  
cylinder slide  
on its flat end?

What might change the result?

The touching part or surface.



Sample only. Use real observations.

# Quiz Review and Final Assessment

## Editable quiz

Open Move It! – Foundation – Quiz.pptx. It has ten questions, each followed by an explanation slide, plus instructions, reflection and closing. Read questions aloud and accept words, pictures, gestures or drawings. Use the same movement and comparison language taught in the lessons.

## Practical evidence

Use the two-page Movement Assessment during Lessons 09–10 or compact session 8. Each child predicts and demonstrates two differently shaped objects, records actual observations, explains a size/shape relationship and describes the comparison setup. Use W03–W10 and teacher observations as supporting evidence.

## A short conference

Ask what happened, which two observations support the explanation, whether the prediction matched and what might change with the result. Offer the new cylinder-orientation case on page 2. Finish with one safe, observable question and a plan for what to keep alive.

## Rubric use

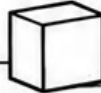
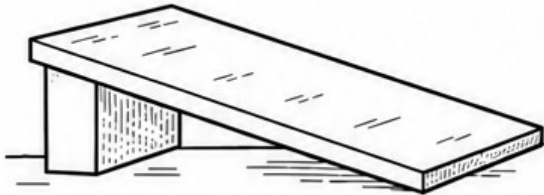
Record the evidence supporting each dimension: understanding, evidence/process, explanation and reflection. Developing means the scientific contribution is incomplete. Sound shows the correct contribution with relevant observations. Extending applies and justifies a new case or meaningful limit. Judge the reasoning, not writing neatness or the response mode.

Name: \_\_\_\_\_

# Movement Assessment

## 1. Predict and demonstrate

Choose two differently shaped objects. Predict how they will move, then test safely.



Different shapes  
can move in  
different ways!

### Object A

My object and shape:

I predict:

I observed:

### Object B

My object and shape:

I predict:

I observed:

**Safety checklist** (tick when ready):

☐

Low ramp

☐

Clear lane

☐

Same start

☐

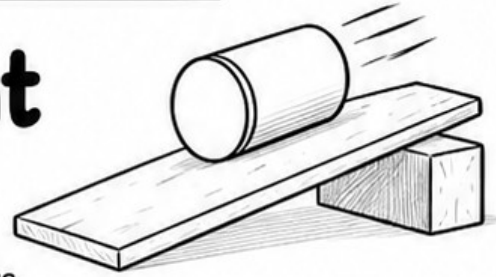
No extra push

Response shown by: talking / pictures / drawing / gesture / demonstration / scribing

Name: \_\_\_\_\_

# Movement Assessment

## 2. Explain and ask



Think about what you found out. Write or draw your answers.

How did shape or size relate to movement? Use two observations.

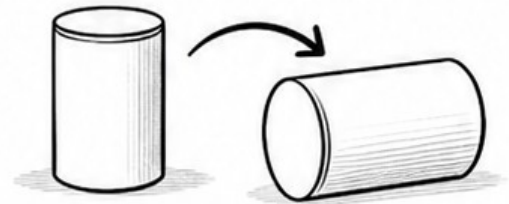
Did your prediction match?  
What stayed the same in the test?

What might change the result?

What safe question could we test next?

**PREVIEW**

**New case:** our cylinder rests on a flat end.  
What could happen if we turn it onto its side? Why?



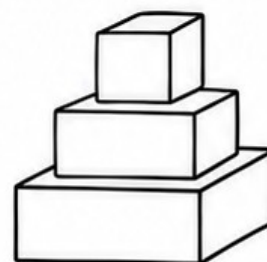
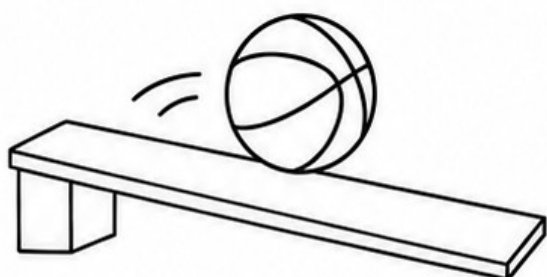
Adult evidence notes:

Name: \_\_\_\_\_

# Movement Assessment Rubric

Judge the science shown, whatever the response mode.

| Dimension                   | Developing                                      | Sound                                                                    | Extending                                                       |
|-----------------------------|-------------------------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------|
| <b>Understanding</b>        | Names a movement with help; shape link unclear. | Explains a movement using the touching shape or size and an observation. | Applies the idea to a new object and names a limit.             |
| <b>Evidence and process</b> | Evidence or safe method is incomplete.          | Predicts tests safely and records actual results with setup link.        | Uses repeated results and explains why a setup choice matters.  |
| <b>Explanation</b>          | Claim and observation are not connected.        | Uses two observations and compares prediction with result.               | Explains an unexpected result or a useful alternative.          |
| <b>Reflection</b>           | Next question or limit is unclear.              | Names a possible change and asks a safe testable question.               | Plans a sensible comparison and explains what to keep the same. |



Support with communication does not lower a level. Use the evidence shown.

# Lesson 1

## Movement words



# Our learning

I can show and name roll, slide and bounce.

I can show my answer with words, pictures, gestures or objects.

PREVIEW

# What do you notice?

What changes when this ball moves? Watch before choosing a word.

Watch and think before we explain.

PREVIEW

# Our example

A ball rolls when it turns as it travels. Watch its mark turn.

A block slides when it moves along without turning over.

PREVIEW

# What our example shows

A soft ball bounces when it hits the floor and comes up again.

We will check with the objects in our classroom.

PREVIEW

# A safe investigation

Use large objects and a low, secured ramp.

Keep the travel lane clear of people.

Wait until an object stops before collecting it.

PREVIEW

# Our shared task

Watch the teacher move one object at a time

Say, point to or act out the matching movement word.

PREVIEW

# Your turn

With a partner, try a gentle roll and slide in the clear lane.  
Point, talk, draw or ask an adult to write your explanation.

PREVIEW

# Our record

Use W01 to match each pictured article with one movement with an object.

Show what you actually saw.

PREVIEW

# A question to discuss

How can you tell a roll from a slide? Show the turning part.  
Use an observation to explain your answer.

PREVIEW

# Thinking further

Can one ball roll and bounce at different times? Explain what you saw.

Share one idea you changed or want to test.

PREVIEW

**Well Done!**



# Lesson 2

## Shapes we can see



# Our learning

I can find flat and curved parts of an object.

I can show my answer with words, pictures, gestures or objects.

PREVIEW

# What do you notice?

Which movement words did we use? What parts touch the floor?

Watch and think before we explain.

PREVIEW

# Our example

A ball has a curved surface. A block has flat faces.

A cylinder has a curved side and two flat ends.

PREVIEW

# What our example shows

Look at the part touching the surface before predicting movement.

We will check with the objects in our classroom.

PREVIEW

# A safe investigation

Use large objects and a low, secured ramp.

Keep the travel lane clear of people.

Wait until an object stops before collecting it.

PREVIEW

# Our shared task

Look at and feel each safe, large object.

Group objects with a flat part and objects with a curved part.

PREVIEW

# Your turn

The cylinder may belong in both groups. Explain why.

Point, talk, draw or ask an adult to write your explanation.

PREVIEW

# Our record

Use W02 to notice flat and curved parts. Ask one question we can test.

Show what you actually saw.

PREVIEW

# A question to discuss

Point to a curved part and a flat part. Which part could you try on a ramp?

Use an observation to explain your answer.

PREVIEW

# Thinking further

Find an object that belongs in both groups and explain your choice.

Share one idea you changed or want to test.

PREVIEW

**Well Done!**



# Lesson 3

## Will it roll



# Our learning

I can make a prediction and compare it with what happens.

I can show my answer with words, pictures, gestures or objects.

PREVIEW

# What do you notice?

What do you notice about the ball and block? Which part will touch the ramp?

Watch and think before we experiment.

PREVIEW

# Our example

A prediction is an idea about what might happen.

I think this ball may roll because its surface is curved.

PREVIEW

# What our example shows

I will release it at the mark and watch. The result may surprise me.

We will check with the objects in our classroom.

PREVIEW

# A safe investigation

Use large objects and a low, secured ramp.

Keep the travel lane clear of people.

Wait until an object stops before collecting it.

PREVIEW

# Our shared task

Choose a ball and a block. Tell your prediction first.

Release one from the mark with no extra push. Keep the lane clear.

PREVIEW

# Your turn

Watch how it moves. Try the other with the same setup.

Point, talk, draw or ask an adult to write your explanation.

PREVIEW

# Our record

Draw or choose the movement in 1903. Keep your prediction and observation separate.

Show what you actually saw.

PREVIEW

# A question to discuss

Did your observation match your prediction? An unexpected result still helps us learn.

Use an observation to explain your answer.

PREVIEW

# Thinking further

Repeat your test. What stayed the same and what changed?

Share one idea you changed or want to test.

PREVIEW

**Well Done!**



# Lesson 4

## Different orientations



# Our learning

I can explain how turning the same object changes its movement.

I can show my answer with words, pictures, gestures or objects.

PREVIEW

# What do you notice?

A cylinder has a curved side and flat ends. Which part is touching the ramp now?

Watch and think before we explain.

PREVIEW

# Our example

On its side, the cylinder rests on a curved part. It may roll.

On its end, the cylinder rests on a flat part. It may slide or stay still.

PREVIEW

# What our example shows

Turning it changes the part that touches the ramp. It is still the same object.

We will check with the objects in our classroom.

PREVIEW

# A safe investigation

Use large objects and a low, secured ramp.

Keep the travel lane clear of people.

Wait until an object stops before collecting it.

PREVIEW

# Our shared task

Ask: Will our cylinder move the same way on its side and end?

Predict, then release it gently on its side. Watch.

PREVIEW

# Your turn

Repeat on its end with the same ramp and release point.

Point, talk, draw or ask an adult to write your explanation.

PREVIEW

# Our record

Use W04 to draw or select the two results. Describe the touching part.

Show what you actually saw.

PREVIEW

# A question to discuss

Can the same cylinder roll and slide? Explain with your two observations.

Use an observation to explain your answer.

PREVIEW

# Thinking further

What would you ask about a different surface? Change one thing at a time.

Share one idea you changed or want to test.

PREVIEW

**Well Done!**



# Lesson 3

## Size comparison



# Our learning

I can compare two sizes and explain what our test shows.

I can show my answer with words, pictures, gestures or objects.

PREVIEW

# What do you notice?

Will the bigger ball always go farther? What could we watch?

Watch and think before we experiment.

PREVIEW

# Our example

These balls differ in size. We will also notice material and surface.

Use the same ramp and release mark. Release without an extra push.

PREVIEW

# What our example shows

Record where each stops. One composition cannot tell us what always happens.

We will check with the objects in our classroom.

PREVIEW

# A safe investigation

Use large objects and a low, secured ramp.

Keep the travel lane clear of people.

Wait until an object stops before collecting it.

PREVIEW

# Our shared task

Predict how the two balls will move.

Release each ball separately in the clear lane.

PREVIEW

# Your turn

Put a picture marker where each stop. Repeat safely.

Point, talk, draw or ask an adult to write your explanation.

PREVIEW

# Our record

W05 has a blank trial record. Draw the actual stopping points. No result is pre-filled.

Show what you actually saw.

PREVIEW

# A question to discuss

What happened in your trials? Did both results support the same idea?

Use an observation to explain your answer.

PREVIEW

# Thinking further

Explain why balls of different materials could make a size claim harder to support.

Share one idea you changed or want to test.

PREVIEW

**Well Done!**



# Lesson 6

## Make the test alike



# Our learning

I can keep parts of a comparison the same and repeat it safely.

I can show my answer with words, pictures, gestures or objects.

PREVIEW

# What do you notice?

A higher start and an extra push changed our test. Could we compare fairly?

Watch and think before we experiment.

PREVIEW

# Our example

Mark one release point. Keep the ramp at the same low height.

Keep the surface and barrier in the same places. Let go without a push.

PREVIEW

# What our example shows

Repeat and record each result. Our homes may still introduce small differences.

We will check with the objects in our classroom.

PREVIEW

# A safe investigation

Use large objects and a low, secured ramp.

Keep the travel lane clear of people.

Wait until an object stops before collecting it.

PREVIEW

# Our shared task

Check the ramp, start mark and clear lane with the teacher.

Release object A, collect it only when it stops, then try B.

PREVIEW

# Your turn

Repeat three times with the same set. Keep all results.

Point, talk, draw or ask an adult to write your explanation.

PREVIEW

# Our record

Use W06 to check the setup and record materials. Tell one thing kept the same.

Show what you actually saw.

PREVIEW

# A question to discuss

Why keep the release point the same? Explain what a different start could change.

Use an observation to explain your answer.

PREVIEW

# Thinking further

Choose one planned change for a later test. Name what you would keep alike.

Share one idea you changed or want to test.

PREVIEW

**Well Done!**



# Lesson 7

## Sort the evidence



# Our learning

I can find a pattern using observation

I can show my answer with words, pictures, gestures or objects.

PREVIEW

# What do you notice?

What happened in our tests? Which records help us answer our question?

Watch and think before we explain

PREVIEW

# Our example

Sort by the movement we actually saw. Do not sort by our favourite toy.

An object may show more than one movement in different trials.

PREVIEW

# What our example shows

A pattern is something that happens in several records. Say how many you saw.

We will check with the objects in our classroom.

PREVIEW

# A safe investigation

Use large objects and a low, secured ramp.

Keep the travel lane clear of people.

Wait until an object stops before collecting it.

PREVIEW

# Our shared task

Place each record under roll, slide, bounce or stayed still.  
Compare records from the same set up before making a claim.

PREVIEW

# Your turn

Point to the evidence for one pattern. Keep any different result visible.

Point, talk, draw or ask an adult to write your explanation.

PREVIEW

# Our record

Use W07 for a class or personal record. Compare one prediction with one observation.

Show what you actually saw.

PREVIEW

# A question to discuss

Does our chart show that every curved object always rolls?

What limits our claim?

Use an observation to explain your answer.

PREVIEW

# Thinking further

Find a result that differs. What new question could we ask?

Share one idea you changed or want to test.

PREVIEW

**Well Done!**



# Lesson 1

## Choose for a track



# Our learning

I can choose an object and use evidence to improve its movement.

I can show my answer with words, pictures, gestures or objects.

PREVIEW

# What do you notice?

Our toy lane needs an object to reach the train. Which shape or orientation might help?

Watch and think before we experiment.

PREVIEW

# Our example

I choose a curved surface for a rolling experiment. I can explain the reason.

I will test the object in this lane. My choice is a prediction.

PREVIEW

# What our example shows

An object with a curved surface can roll. Wheels use this feature.

Our track test helps us choose an object for our own lane.

Based on: Questacon Core Board Train Wheels ([questacon.edu.au](http://questacon.edu.au))

# A safe investigation

Use large objects and a low, secured ramp.

Keep the travel lane clear of people.

Wait until an object stops before collecting it.

PREVIEW

# Our shared task

Choose a large object and the part to rest on the lane.

Say why, then release at the marked start. Watch carefully.

PREVIEW

# Your turn

Change its orientation if useful. Remember to explain your choice.

Point, talk, draw or ask an adult to write your explanation.

PREVIEW

# Our record

Use W08 to draw your choice, actual movement and any change you made.

Show what you actually saw.

PREVIEW

# A question to discuss

Which observation supports your choice? What might happen on a different track?

Use an observation to explain your answer.

PREVIEW

# Thinking further

Connect our test to a toy trolley wheel. Explain why a wheel can roll.

Share one idea you changed or want to test.

PREVIEW

**Well Done!**



# Lesson 4

## Motion demonstration



# Our learning

I can predict, test and explain two different shapes.

I can show my answer with words, pictures, gestures or objects.

PREVIEW

# What do you notice?

Which two records could help explain your choice? Revisit a prediction that changed.

Watch and think before we explain.

PREVIEW

# Our example

My first object moved this way. My second object moved that way.

I describe their touching parts on the setup. My evidence supports my claim.

PREVIEW

# What our example shows

I compare my prediction with the observation. I allow for a different result.

We will check with the objects in our classroom.

PREVIEW

# A safe investigation

Use large objects and a low, secured ramp.

Keep the travel lane clear of people.

Wait until an object stops before collecting it.

PREVIEW

# Our shared task

Choose two differently shaped objects. Make a prediction for each.

Demonstrate safely, or show an already-observed test to the teacher.

PREVIEW

# Your turn

Explain the size or shape relationship using two observations.

Point, talk, draw or ask an adult to write your explanation.

PREVIEW

# Our record

Use W09 and A1. Speak, draw, gesture, choose pictures or dictate to show the same learning.

Show what you actually saw.

PREVIEW

# A question to discuss

What do your observations support? What can they not tell us about every object?

Use an observation to explain your answer.

PREVIEW

# Thinking further

Predict how a cylinder might behave if you turn it before release.

Share one idea you changed or want to test.

PREVIEW

**Well Done!**



# Lesson 10

## Questions still open



# Our learning

I can share a supported pattern and ask a new question.

I can show my answer with words, pictures, gestures or objects.

PREVIEW

# What do you notice?

Which result surprised you? What did observing help you learn?

Watch and think before we explain

PREVIEW

# Our example

I saw this in our test. I say what happened without saying it always happens.

A different result gives us a new question. We keep it in our record.

PREVIEW

# What our example shows

Scientists use observations and questions. We can share evidence and listen to ideas.

We will check with the objects in our classroom.

PREVIEW

# A safe investigation

Use large objects and a low, secured ramp.

Keep the travel lane clear of people.

Wait until an object stops before collecting it.

PREVIEW

# Our shared task

Share one pattern and point to its recorder.

Name one limit, such as a different material or surface.

PREVIEW

# Your turn

Ask a question we could answer with a sure test. Explain what to compare.

Point, talk, draw or ask an adult to write your explanation.

PREVIEW

# Our record

Use W10 to record your claim, evidence and next question.

Finish the A1 conference.

Show what you actually saw.

PREVIEW

# A question to discuss

How does your new question connect to your observation?

What would you keep the same?

Use an observation to explain your answer.

PREVIEW

# Thinking further

Explain a possible different result and how it would change your idea.

Share one idea you changed or want to test.

PREVIEW

**Well Done!**



# Move In Unit Quiz



# How to show your answer

Listen while an adult reads each question.

Speak, draw, gesture or choose a picture.

Explain with what you noticed in our tests.

PREVIEW

# Question 1

Can the same cylinder roll and slide?

PREVIEW

# Answer 1

Yes. On its curved side it may roll. On a flat end it may slide or stay still. The surface and setup matter.

PREVIEW

## Question 2

Does a bigger ball always go farther?

PREVIEW

## Answer 2

No. Size alone cannot tell us. Material, surface release and the ramp also affect the comparison.

PREVIEW

# Question 3

What is a prediction?

PREVIEW

# Answer 3

An idea about what might happen before we test. A different result is useful evidence

PREVIEW

# Question 4

Which part of a cylinder is curved?

PREVIEW

# Answer 4

Its side is curved. Its two ends are flat. Pointing to the correct parts is an acceptable answer.

PREVIEW

# Question 5

How can we keep a ramp comparison like?

PREVIEW

# Answer 5

Keep the same ramp height, release point and surface. Let go without an extra push and read.

PREVIEW

# Question 6

When can you collect an object from a plane?

PREVIEW

# Answer 6

Wait until it has stopped. Keep people out of the travel lane while an object moves.

PREVIEW

# Question 7

An example chart says ball: roll, block slide. What can we say?

PREVIEW

# Answer 7

These two objects moved this way in the example. We need more tests before making a wide claim.

PREVIEW

# Question 8

Your prediction says roll, but the object says still. What do you record?

PREVIEW

# Answer 8

Record stayed still. Compare it with the prediction and ask what could have affected movement.

PREVIEW

# Question 9

A cylinder stops on its flat end. How could you test a different idea?

PREVIEW

# Answer 9

Predict what it might do on its current time. Turn it, keep the setup alike, then test and record the result.

PREVIEW

# Question 10

Two balls roll differently on a new surface. What question could you ask?

PREVIEW

# Answer 10

For example: Will the same ball move differently on these two surfaces? Keep the ramp and release alike. Other safe, testable questions are acceptable.

PREVIEW

# Our next question

What did observing help you learn?

Which safe movement question would you like to test next?

PREVIEW

**Well Done!**

