

Homework without the hassle

Sukindi is an Australian learning platform that supports Teachers, Parents and Students with an interactive homework app and downloadable resources.



Scan to start your
free 7-day trial

www.sukindi.com.au



Change It, Keep It? - Year 2

Table of Contents	
Presentations: Change It, Keep It? - Lessons 1-10	
Display: Key Ideas	
Display: How We Explain Our Evidence	
Activity: Material Change Cards	
Game: Evidence Trail	
Worksheet 1: Before and after	
Worksheet 2: Shape changes	
Worksheet 3: Size changes	
Worksheet 4: Plan a comparison	
Worksheet 5: Investigate actions	
Worksheet 6: What stays the same	
Worksheet 7: Can we undo it?	
Worksheet 8: Material-change portfolio	
Worksheet 9: Explain a new example	
Worksheet 10: Useful physical changes	
Quiz: Change It, Keep It?	
Assessment: Change It, Keep It?	
Rubric: Change It, Keep It?	



Change It, Keep It? – teaching overview

Learning focus

Year 2 Science: investigate how gentle actions change the shape or size of familiar materials while the samples remain the same material. Children ask questions, predict, use safe steps, observe, record, compare evidence and explain useful applications.

Important science

Folded, rolled or torn paper remains paper. Smooth foil remains foil after bending; soft cloth remains fabric after twisting. A physical change may be hard to undo exactly. Reversibility alone does not identify a physical change. Shape, size, texture or flexibility may change: do not claim that every property stays the same.

Teaching choices

Use ten complete 60-minute lessons, or the included eight-session route. The shorter route combines selected teaching from lessons 1–2 and 9–10; it keeps all essential inquiry and assessment. It does not require showing two whole decks back to back.

Prepare once

Large paper sheets and matched strips of card, teacher prepared smooth foil with folded edges, soft cloth samples, trays and optional equal-sized counting blocks. Blunt scissors are optional and require explicit teacher supervision. Check every sample provides a safe replacement or adult demonstration if handling is unsuitable.

Safety and violence

No heating, burning, casting, chemical reactions, sharp fracture or powders. Keep cloth away from bodies and scraps in trays. Stop for sharp edges. Leave observation fields blank until children test. Red answer pages show illustrative sample responses, not expected classroom results.

Source and reuse

Factual curriculum basis: ACARA, Year 2 Science, australiancurriculum.edu.au. Illustrations and examples are original for this unit; no ACARA or competitor images are reproduced. This focused unit contributes to Year 2 Science; it does not claim to cover the whole annual curriculum.

Files and classroom resources

Separate editable lesson decks

Ten independent PPTX files share the prefix “Change It, Keep It? – Year 2 – Lesson NN – Presentation”. Lesson 01 Before and after; 02 Shape changes; 03 Size changes; 04 Plan a comparison; 05 Investigate actions; 06 What stays the same; 07 Can we undo it?; 08 Material-change portfolio; 09 Explain a new example; 10 Useful physical changes. Each has 11 slides: cover, nine teaching slides and closing.

Quiz and PDFs

The separate “Change It, Keep It? – Year 2 – Quiz.pptx” contains 24 slides, including ten questions and ten explanation slides. Use it as supporting evidence alongside practical work. The Unit Plan PDF contains this guide, resources and sample answers. The combined Preview PDF shows the guide, all ten lesson decks in numerical order, then the quiz.

Resources within this guide

D1 and D2: two colour displays. C1: eight colour material-change cards on two pages. G1: Evidence Trail rules, six-stop path and eight challenge cards on three pages. W1-W10: ten one-page black-and-white learning records, each immediately followed by its red sample answer page. A1: two-page assessment/conference record. R1: one-page rules.

Useful response choices

Children may draw, speak, or use selected pictures, use their usual communication support or dictate to an adult. An adult may handle a sample while the child directs and observes. Keep the science demand the same and record as prompted. Do not assess handwriting speed or public speaking.

Where to look

Worksheet numbers, case-card IDs and game challenge numbers match the guide and decks. Display the cards whole, or the teacher may cut them beforehand. No child cutting is required for the game. Keep this teacher guide and answer pages separate from blank student copies.

Lesson 1: Before and after

Goal and preparation

I can describe what changed and name the material before and after. Use one large paper sheet and W01. Keep edges away from eyes. Work on a clear table. Prepare the matching lesson deck, W01 and its case cards.

8 min – retrieve and question

Look at a paper sheet. What is it made of? Predict what will change when we fold it. Invite a reason or question before supplying a model answer.

12 min – model and vocabulary

An object is a thing. A material is what it is made of. A paper fan is an object made of paper. Name the material: paper. Fold the sheet once. Compare the outline before and after. It is still paper.

25 min – practical work and safe cleanup

Model a single fold, then reopen it to reveal a crease. Keep an unchanged sheet beside it. Ask children to name the material before naming the new shape. On W01, do not do a labelled drawing or dictated observation. Reserve the last three minutes of the block to collect samples and clear tables.

10 min – evidence and explanation

Draw the sheet before and after. Label paper in both pictures. Say or write what changed. A folded sheet looks different. Has it become a new material? Use your observation to explain. Look for: Names paper before and after, distinguishes appearance from material identity, asks an observation-based question.

5 min – reflection and next step

Ask a question about another action we could try. Predict what might change and give a reason. Note a misconception or next question for the next lesson.

Access and extension

Offer fewer samples with the same comparison, an adult demonstration, oral/drawn/picture responses or scribing. Extend by asking for an evidence-linked reason, a new context or a limit of the conclusion. Keep observations honest and avoid extra copying.

Lesson 2: Shape changes

Goal and preparation

I can use action words to explain a change in shape. Use paper, teacher-prepared smooth foil and soft fabric. Keep actions gentle. Stop if an edge becomes sharp. Prepare the matching lesson deck, W02 and its case cards.

8 min – retrieve and question

A folded sheet remains paper. What could bending or rolling do to its shape? Invite a reason or question before supplying a model answer.

12 min – model and vocabulary

Bend means make a curve. Twist means turn parts in different directions. Stretch means gently pull longer. Gently bend folded-edge foil. Roll a paper strip. Twist a soft cloth. Laminate the material each time.

25 min – practical work and safe cleanup

Demonstrate bending smooth foil, rolling paper and twisting cloth. Partners select two actions and take turns handling and observing. Use W02. Connect an observed pattern to a practical prediction: a rolled strip may suit a curved shape; a designer would not test it. Reserve the last three minutes of this block to collect samples and clear tables.

10 min – evidence and explanation

Use W02 to show two actions. Choose precise words: folded, bent, rolled, twisted or stretched. Which sample changed most easily? Your partner may find something different. What did each of you observe? Look for: Uses precise shape-change words and connects an observed pattern to a practical prediction.

5 min – reflection and next step

How might a designer use bending or rolling? Explain a prediction from a change you actually observed. Note a misconception or next question for the next lesson.

Access and extension

Offer fewer samples with the same comparison, an adult demonstration, oral/drawn/picture responses or scribing. Extend by asking for an evidence-linked reason, a new context or a limit of the conclusion. Keep observations honest and avoid extra copying.



Lesson 3: Size changes

Goal and preparation

I can explain how smaller pieces can stay the same material. Use large paper samples and W03. Tear gently. Only use blunt scissors after the teacher demonstrates safe handling. Prepare the matching lesson deck, W03 and its case cards.

8 min – retrieve and question

A paper strip can change shape. What might happen if we tear it into two pieces? Invite a reason or question before supplying a model answer.

12 min – model and vocabulary

Size tells us how big a piece is. A tear changes the sheet into smaller pieces. If you tear a sheet. Place both pieces beside the original-sized outline. Both pieces are still paper.

25 min – practical work and safe cleanup

Keep every piece after one safe tear or supervised cut. Compare each piece with the original outline and count the pieces on W03. Ask why the smaller pieces are still paper even though the tear is hard to undo exactly. Reserve the last three minutes of this block to collect samples and clear tables.

10 min – evidence and explanation

Draw before and after. Count the pieces. Label the material. Explain what changed and what stayed the same. Can we easily put the sheet back exactly as it was? Does that answer tell us a new material formed? Look for: Evidence of change without claiming a new substance or equating reversibility with physical change.

5 min – reflection and next step

Explain: the pieces are smaller, but they are still paper. A hard-to-undo change can be a physical change. Note a misconception or next question for the next lesson.

Access and extension

Offer fewer samples with the same comparison, an adult demonstration, oral/drawn/picture responses or scribing. Extend by asking for an evidence-linked reason, a new context or a limit of the conclusion. Keep observations honest and avoid extra copying.



Lesson 4: Plan a comparison

Goal and preparation

I can ask a question, predict and plan safe steps. Prepare two equal-sized strips from the same paper. Use the same starting shape. Choose gentle actions approved by the teacher. Prepare the matching lesson deck, W04 and its case cards.

8 min – retrieve and question

We changed paper by folding and tearing. How could we compare two actions on the same kind of paper? Invite a reason or question before supplying a model answer.

12 min – model and vocabulary

A prediction is what we think will happen and why. An observation is what we notice during a test. Question: How does this paper change when folded or rolled? Predict the result using something you have already observed.

25 min – practical work and safe cleanup

Approve each W04 plan before testing. Require a question, an observation-based prediction, two gentle actions and one matched starting feature. Compare equal-sized strips of the same paper, one folded and one rolled. Do not fill result fields in advance. Reserve at least three minutes of this block to collect samples and clear tables.

10 min – evidence and explanation

Use W04. Draw the test actions and your prediction. Record one thing to keep alike and one observation to look for. What different starting sizes make our comparison harder to interpret? Explain how you will keep the comparison useful. Look for: Identifies the action being compared, a controlled starting feature, observations and safe steps.

5 min – reflection and next step

Say your question, prediction and a safe step. A prediction can change after we collect evidence. Note a misconception or next question for the next lesson.

Access and extension

Offer fewer samples with the same comparison, an adult demonstration, oral/drawn/picture responses or scribing. Extend by asking for an evidence-linked reason, a new context or a limit of the conclusion. Keep observations honest and avoid extra copying.



Lesson 5: Investigate actions

Goal and preparation

I can follow a plan and record what actually happens. Use the approved paper samples, W04 and W05. A partner can handle a sample while you observe. Stop if a tool or action feels unsafe. Prepare the matching lesson deck, W05 and its case cards.

8 min – retrieve and question

What was our question? What did we predict? Which starting feature did we keep alike? Invite a reason or question before supplying a model answer.

12 min – model and vocabulary

Evidence is information from what we observe. Record evidence even when it differs from your prediction. Before changing either strip, mark its material and compare the starting sizes. Use the approved models recording immediately after an action.

25 min – practical work and safe cleanup

Use the approved W04 plan and W05 record. Observe immediately after each action. If comparing length, use equal-sized blocks with no gaps and state the stage measured. Repeat with fresh matched samples if useful; retain differences rather than erasing them. Reserve the last three minutes of this block to collect samples and clear tables.

10 min – evidence and explanation

On W05, record the starting size, the action and the observed result. Repeat with fresh matched samples if time allows. Compare your observations with a partner. Which starting sizes or actions were alike? What might explain a difference? Look for: Follows safe steps, observes at a stated stage, makes appropriate informal comparisons and records honest results.

5 min – reflection and next step

Did evidence match your prediction? Tell what you saw, not what you hoped would happen. Tidy samples and tools safely. Note a misconception or next question for the next lesson.

Access and extension

Offer fewer samples with the same comparison, an adult demonstration, oral/drawn/picture responses or scribing. Extend by asking for an evidence-linked reason, a new context or a limit of the conclusion. Keep observations honest and avoid extra copying.



Lesson 6: What stays the same

Goal and preparation

I can sort observations into changed and stayed the same. Use your safe samples and W06. Compare dry surfaces by looking and gentle touch. Keep every observation linked to its sample. Prepare the matching lesson deck, W06 and its case cards.

8 min – retrieve and question

Choose a fold, roll or tear from your evidence. What changed? What can you still name? Invite a reason or question before supplying a model answer.

12 min – model and vocabulary

A physical change alters a material's form. In our examples, what the sample is made of stays the same. Compare a whole paper sheet and a torn piece. Their sizes differ. Both are made of paper. Do not assume every property is unchanged.

25 min – practical work and safe cleanup

Use W06 to record two tested actions in the provided table. Sort changed features and material identity separately. Count the actions recorded and describe a pattern supported by those examples. A crease can alter flexibility while the material stays paper. Reserve the last three minutes of this block to collect samples and clear tables.

10 min – evidence and explanation

Make a provided table on W06. Add two tested actions. Count the actions you tried and describe a pattern in the table. If a crease changes how paper bends, does it stop being paper? Explain the difference between a property and material identity. Look for: Uses a table or model, represents a pattern and distinguishes material identity from properties that may change.

5 min – reflection and next step

Use one observation to finish: The ____ changed, while the sample remained _____. Show the evidence you used. Note a misconception or next question for the next lesson.

Access and extension

Offer fewer samples with the same comparison, an adult demonstration, oral/drawn/picture responses or scribing. Extend by asking for an evidence-linked reason, a new context or a limit of the conclusion. Keep observations honest and avoid extra copying.



Lesson 7: Can we undo it?

Goal and preparation

I can use evidence to judge how easily a change can be undone. Use rolled and torn paper, C1-01, C1-02 and W07. Use fresh samples for a repeat. Keep scraps in a tray. Prepare the matching lesson deck, W07 and its case cards.

8 min – retrieve and question

Compare rolled paper with torn paper. Predict which might return more easily to its earlier shape. Invite a reason or question before supplying a model answer.

12 min – model and vocabulary

Reversible means a change can be undone. Some physical changes are easy to undo. Others are difficult to undo exactly. Unroll a paper strip and compare it with its earlier shape. Compare torn pieces. Both examples still use paper.

25 min – practical work and safe cleanup

Use W07 with rolled paper, torn paper and a gently twisted strip of paper. Try to undo each action and compare the remaining curve, tear or twist. Sort from actual evidence, not a fixed yes/no rule. Different samples may behave differently. Reserve the last three minutes of this block to collect samples and clear tables.

10 min – evidence and explanation

Record evidence for each sample in W07. Compare with a partner. Accept a different result when the evidence explains it. Is every physical change easy to reverse? Explain with one example. A torn sheet can be hard to restore but still be paper. Look for: Sorts using evidence, compares predictions and results, notices fairness or variation and asks a further question.

5 min – reflection and next step

Pose a further question about another safe sample. How could observations help someone choose an action for a useful purpose? Note a misconception or next question for the next lesson.

Access and extension

Offer fewer samples with the same comparison, an adult demonstration, oral/drawn/picture responses or scribing. Extend by asking for an evidence-linked reason, a new context or a limit of the conclusion. Keep observations honest and avoid extra copying.



Lesson 8: Material-change portfolio

Goal and preparation

I can show three changes and explain my evidence. Gather three safe classroom examples or clear existing records, including a size change. Use W08 and your earlier learning records. Prepare the matching lesson deck, W08 and its case cards.

8 min – retrieve and question

Which record clearly shows changed shape? Which shows smaller pieces? Which names the material before and after? Invite a reason or question before supplying a model answer.

12 min – model and vocabulary

A portfolio is a collection of evidence. Choose examples that help another person understand your observations. Model example: paper before and after folding. Caption the changed and unchanged material. Label any supplied sample as an example.

25 min – practical work and safe cleanup

Assemble three distinct examples on W08, using earlier evidence rather than repeating every test. Include at least one shape change and one size change. Check that all before/after pairs name the material and link the explanation to an observation. Reserve the last five minutes of this block to collect samples and clear tables.

10 min – evidence and explanation

Add captions, labels and observation-linked explanation. Practise explaining using the real evidence rather than memorising a sentence. Can a partner identify the starting material in every example? Does your evidence show both shape and size changes? Look for: Portfolio has three distinct examples, shape/size coverage, material identity and observation-linked explanations.

5 min – reflection and next step

Prepare your question, prediction and method evidence for the conference. A drawing, gesture, picture choice or oral response can show learning. Note a misconception or next question for the next lesson.

Access and extension

Offer fewer samples with the same comparison, an adult demonstration, oral/drawn/picture responses or scribing. Extend by asking for an evidence-linked reason, a new context or a limit of the conclusion. Keep observations honest and avoid extra copying.



Lesson 9: Explain a new example

Goal and preparation

I can use evidence to explain a new physical change. Use W09, your portfolio and a teacher-selected soft cloth. Keep the cloth away from bodies. A partner or adult may demonstrate. Prepare the matching lesson deck, W09 and its case cards.

8 min – retrieve and question

Use your portfolio to explain one change without reading a memorised answer. Invite a reason or question before supplying a model answer.

12 min – model and vocabulary

A claim is your idea. Evidence shows why it makes sense. Explain the link using material, shape, size or action words. The teacher gently twists a different safe cloth. First name the material. Then ask what changed and what information is still needed.

25 min – practical work and safe cleanup

Demonstrate a different safe soft cloth and use W09 for training. Ask children to explain what changed, what remained and how they know. Compare with a previous sample. Accept a limitation or further question rather than a claim about all fabrics. Reserve the last three minutes of this block to collect samples and clear tables.

10 min – evidence and explanation

Draw, speak, dictate or select pictures to explain your claim and supporting observation. Record the response on W09 or the conference sheet. Could two different fabrics respond differently? Explain a limit of what one sample tells us. Do not claim every material behaves alike. Look for: Communicates a supported explanation, transfers the concept, recognises a limitation and asks a further question.

5 min – reflection and next step

Choose accurate words for your audience. Tell what you observed and one question you would investigate next. Note a misconception or next question for the next lesson.

Access and extension

Offer fewer samples with the same comparison, an adult demonstration, oral/drawn/picture responses or scribing. Extend by asking for an evidence-linked reason, a new context or a limit of the conclusion. Keep observations honest and avoid extra copying.



Lesson 10: Useful physical changes

Goal and preparation

I can explain how an observed change can help people. Use large paper or card, W10 and a clear tabletop. No throwing or flying objects. Use only teacher-approved gentle changes. Prepare the matching lesson deck, W10 and its case cards.

8 min – retrieve and question

What pattern did we notice about folding this paper? What could we predict for another matched strip? Invite a reason or question before supplying a model answer.

12 min – model and vocabulary

People who design and make things use observations of materials. A useful choice depends on the material, action and purpose. Model folding a paper strip into a simple standing card label. Test whether it stands. It remains paper even though its shape helps it use.

25 min – practical work and safe cleanup

Use W10 to predict and test a practical purpose, such as a folded standing card label. Compare the result with the prediction and a peer's evidence. Ask what a different starting size or material would require us to test again. No throwing or flying objects. Reserve the last three minutes of this block to collect samples and clear tables.

10 min – evidence and explanation

Use W10 to show the group changed shape and unchanged material. Compare a classmate's result and suggest an improvement or new question. How did an observed pattern help your prediction? What would need a new test if we changed the material or starting size? Look for: Connects observations and patterns to daily decisions, evaluates results and communicates a useful application.

5 min – reflection and next step

Share an evidence-based explanation for another class. Use your observations to explain a useful choice rather than promising a result. Note a misconception or next question for the next lesson.

Access and extension

Offer fewer samples with the same comparison, an adult demonstration, oral/drawn/picture responses or scribing. Extend by asking for an evidence-linked reason, a new context or a limit of the conclusion. Keep observations honest and avoid extra copying.



Eight-session route – sessions 1-4

Use one lesson structure

Each session totals 60 minutes: 5 retrieve, 10 model, 30 practical/recording, 10 conference, 5 cleanup/reflection. Use one opening, one focus and one closing. Select relevant slides from the named decks; do not show both whole decks during a combined session.

Session 1 – lessons 1 and 2

Model one paper fold and one safe second action. Teach object/material and precise action words together. During the 30-minute block, use W01 for the before/after pair and one W02 row or oral caption for the second action. Compare starting material with changed shape. Fold/bend/roll/twist language and a practical prediction remain essential.

Session 2 – lesson 3

Use W03 for a safe tear or supervised cut, retain all pieces, count them and compare with the starting outline. Explain that a size change can remain paper and be used to do exactly. Ask an observation-based question for the next comparison.

Session 3 – lesson 4

Use W04 to plan the folding/rolling comparison. Approve question, prediction/reason, safe steps, matched paper type and starting size and the feature to observe. Plans can be spoken and adult-recorded. Testing occurs in the next session for an invented result.

Session 4 – lesson 5

Test approved plans and compare W05 from actual evidence. State observation stage, use informal units if comparing length and compare with a peer and the prediction. Record a reason for differences or a fairness issue. Gather method evidence for the final conference.



Eight-session route – sessions 5-8

Session 5 – lesson 6

Use W06 to organise two tested actions into changed/stayed-the-same observations. Read the table, count recorded actions and identify a supported pattern. Distinguish changed properties from unchanged material identity. Reuse existing evidence rather than running every test again.

Session 6 – lesson 7

Use W07 to test undoing rolling, tearing and gentle cloth twisting. Compare predictions and observations, explain any remaining marks, compare peer results and pose a further question. Connect a pattern to a practical choice. Physical does not mean always easy to reverse.

Session 7 – lesson 8

Build W08's three-example portfolio from earlier drawings, samples, photos or audio-recorded explanations. Include shape and size, name material before/after and support each explanation with observations. Check readiness for the conference; fill evidence cards fully.

Session 8 – lessons 9 and 10

Use a teacher demonstration of a new safe cloth plus an existing or demonstrated standing card label. In the 30-minute block, run paired explanations/short recordings while the teacher checks selected children; use W09/W10 selectively or record equivalent oral evidence on A1. No new construction task is required. Evaluate a practical prediction from an observed pattern and communicate a limit or next question.

Assessment completed by session 8

Use W04–W08 and the A1 conference to gather all essential understanding and inquiry evidence. In a large class, gather evidence across sessions 4–8 and use short paired recordings or adult responses within the practical block. The quiz is optional supporting evidence; it is not an extra mandatory session.

Keep the focus

One response can serve more than one purpose when it shows the same learning. Reduce copying, number of samples or repeated demonstrations; retain questioning, predicting, safe methods, observation/measurement, representation, evaluation, communication and a practical application.



Access, safe routines and conferences

Before each investigation

Inspect paper/card, folded foil edges and soft cloth. Demonstrate gentle actions on a clear table. Children stop and tell an adult if an edge becomes sharp or an action is uncomfortable. Substitute paper or cloth when foil or scissors are unsuitable; record the substitution.

Participation with the same learning

Offer a seated demonstration, partner handling, large samples, picture/action choices, spoken/drawn responses, usual communication supports or adult scribing. Let the child direct an action or compare evidence. Give a short word bank: fold, roll, bend, twist, stretch, tear; shape, size, material, before, after.

Conferences without a speaking bottleneck

Ask partners to explain simultaneously or record a short response. Meet selected children during the practical block, rotating across lessons. Check all evidence by the final session. Children need not present publicly; a familiar adult can record the same evidence in a quiet space.

Questions that reveal reasoning

What changed? What was it made of before and after? What observation supports your idea? Did it match your prediction? Were your starting samples alike? Why might your partner find something different? What would you tell me? How could this change help someone?

Respond to misconceptions

If “different shape means a new material”, compare the same sample before/after. If “all physical changes reverse easily”, use thin paper. If “everything stayed the same”, name a changed crease or size. If “my prediction must be right”, celebrate an honest record and revise the idea.

Factual source

Based on ACARA, Year 2 Science (australiancurriculum.edu.au). This guide uses original teaching examples; no source visuals are reproduced. Follow school safety procedures and your knowledge of the children when selecting materials.



Material-change cards – teacher criteria

CI-01 – fold and open

Paper remains paper. Look for changed shape and a crease that may remain after opening. Ease of return depends on the sample and action.

CI-02 – tear paper

Pieces become smaller and edges change; all retained pieces remain paper. Difficulty restoring the sheet does not mean a new material formed.

CI-03 – bend foil

A gentle bend changes the strip's form; it remains foil. Accept a child's accurate description of curve or remaining marks.

CI-04 – twist cloth

The cloth changes form and remains fabric. Judge whether it twists from actual evidence; do not demand a universal result.

CI-05 – stretch fabric

Record starting and observed length at created stretch using equal informal units if useful. Different safe fabrics can respond differently.

CI-06 – matched samples

Paper type and starting shape should match while the action differs. A prediction needs a reason; evidence is recorded only after testing.

CI-07 – use a label

Observe whether the standing label serves its purpose. Link a shape change to that result and name the unchanged material; a failed test is valid evidence.

CI-08 – compare samples

Describe each sample's actual response. Explain a relevant difference or limitation and ask a further question before generalising.



Evidence Trail – teacher response key

Set up and play

Use G1's rules, six-stop path and eight challenge cards with C1. Two to four children point to their position; no counters, timer or child cutting are required. Take turns selecting a challenge, locating its case card and explaining evidence. Partners may help communicate; use the criteria below for feedback rather than a speed contest.

Challenge 1 / CI-01

Name paper before and after folding. Accept an observation-based description of the changed shape or crease.

Challenge 2 / CI-02

Torn pieces remain paper. The size/edges changed; a difficult-to-undo tear is still a physical change.

Challenge 3 / CI-03

Describe the gentle bend/curve and identify foil. Do not require a low-material claim or a fixed bend angle.

Challenge 4 / CI-04

Use an observation of untwisting the cloth. Accept easy or difficult when the child explains the evidence.

Challenge 5 / CI-05

Record before/after length or width and the observation stage. Informal units must be equal and placed consistently.

Challenge 6 / CI-06

Keep paper type and starting size/shape alike. The comparison changes the action rather than several starting features.

Challenge 7 / CI-07

Test whether the folded label stands in the intended place; connect observed evidence with the practical purpose.

Challenge 8 / CI-08

Samples can differ in fabric, thickness, starting form or action. Compare evidence and propose a fair follow-up test.



Assessment guide – use the whole evidence set

Gather before the final session

Collect W04 question/prediction/method, W05 observations and any informal comparison, W06 representation/pattern, W07 evaluation/further question and W08 portfolio. Check three distinct changes, including a size change. Use A1 to record the child's explanation and support used.

Transfer and practical application

Use W09 or a new safe cloth demonstration to check an unfamiliar example. Ask for a claim, observation, link and limitation/further question. Use W10 or an oral standing-label example to explain how an observed pattern informs a useful prediction and how evidence tests it.

Apply RI's four dimensions

Understanding: shape/size changes with material identity. Evidence/process: question, reasoned prediction, safe comparison, observations and representation. Explanation/evaluation: a claim supported by observations and an everyday purpose. Reflect/compare prediction/peers, discuss fairness or variation, and ask a further question.

Interpret levels fairly

Still developing: needs teaching prompts to connect data and evidence. Sound: explains the taught examples with relevant evidence. Transfer: uses evidence in a new context and recognises a limitation. Record a separate judgement per dimension; this unit is not an annual achievement-level certificate.

Answer pages and quiz

Red worksheet pages are illustrative responses, not measurements from your class. Accept different safe results with appropriate explanations. The ten-question quiz supports diagnosis and discussion; practical/inquiry evidence remains necessary. Do not reduce a judgement because a child used speech, pictures, gesture or adult scribing.

Next teaching step

Record one precise next step: material naming, useful starting controls, honest observation, evidence-linked explanation, or fair comparison. Arrange a safe focused follow-up rather than repeating all activities.

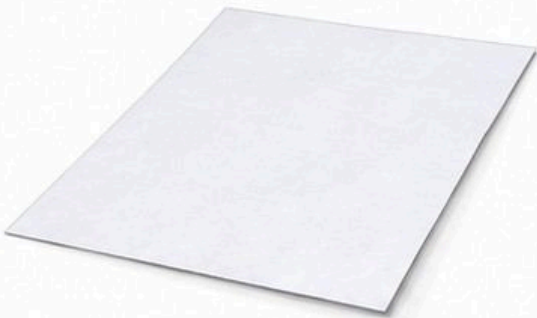


Change It, Keep It?



Key ideas - Year 2

Material: What an object is made of.



Physical change: The form changes, but the material stays the same.



Bend: Make a curve.



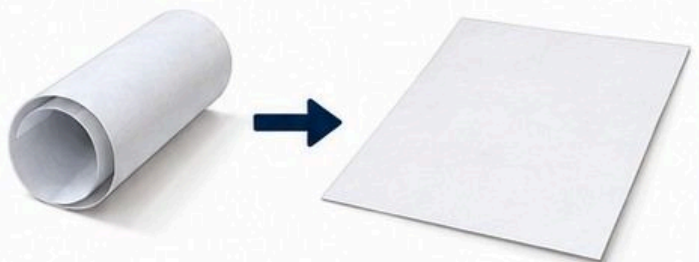
Twist: Turn parts in different directions.



Stretch: Gently pull longer.



Reversible: A change can be undone.



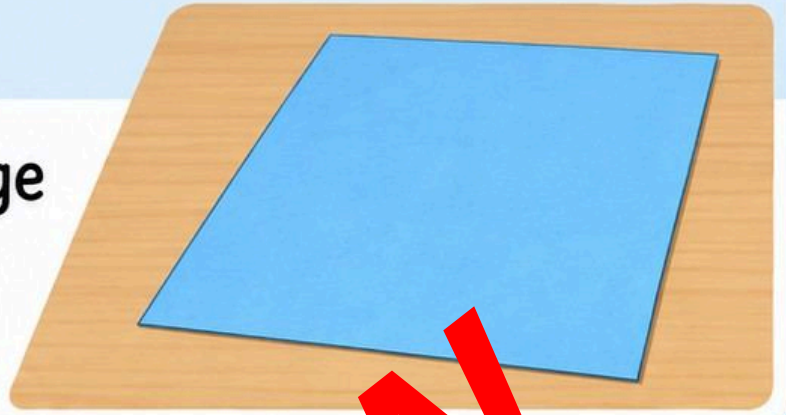
Some physical changes are hard to undo exactly.



How We Explain Our Evidence

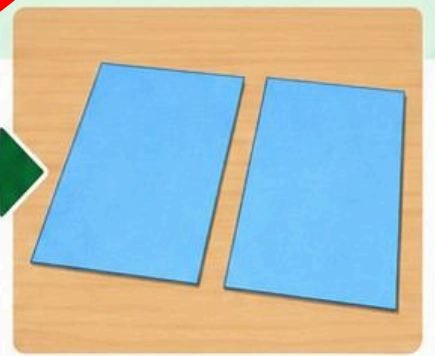
1 Question

Is every physical change easy to reverse?



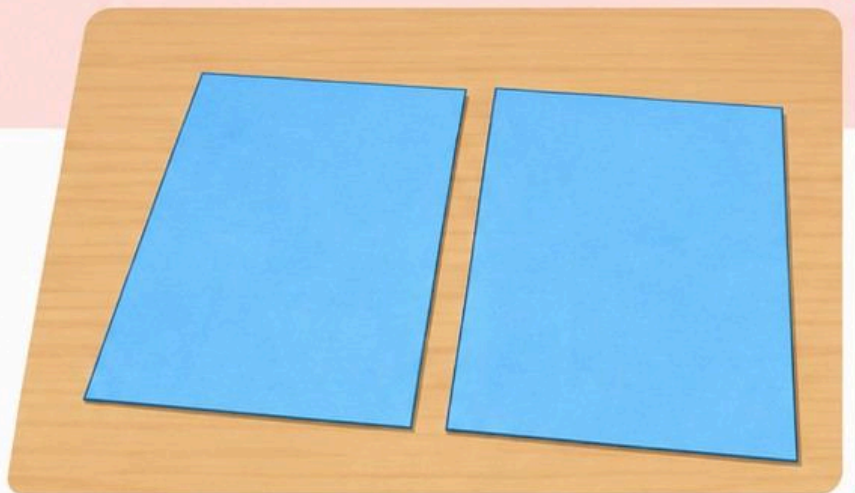
2 Evidence

An adult cuts the same sheet into two pieces. Both pieces are still paper.



3 Explanation

No. The form changed, but the material stayed paper. The cut is hard to undo exactly.

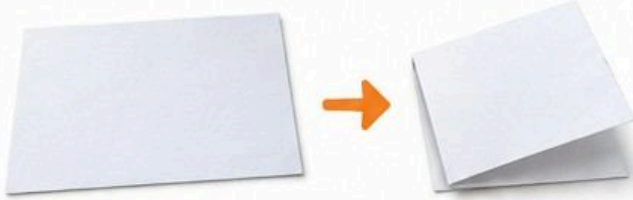


Material Change Cards

Original classroom examples - Year 2

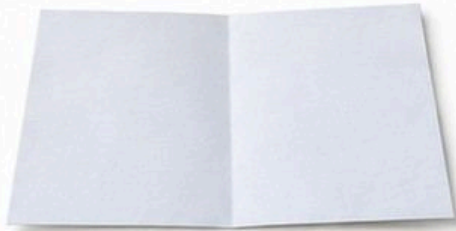
C1-01

Fold and open



Flat paper

Folded paper

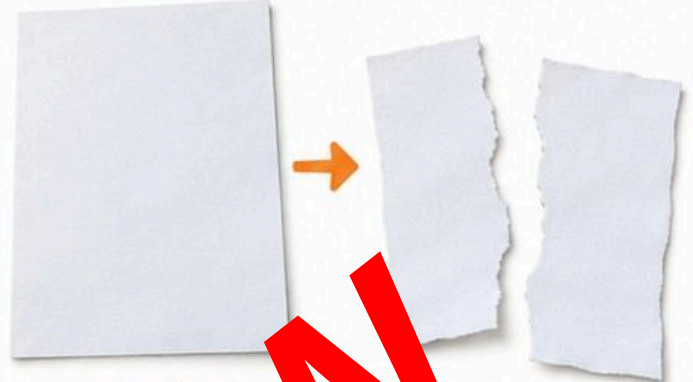


Opened again

Fold paper, then open it.
It is still paper. Does a crease remain?

C1-02

Tear paper



Whole sheet

Torn pieces

Tear sheet into smaller pieces.
The pieces are still paper.

C1-03

Bend foil



Flat foil



Bent foil

Gently bend smooth foil.
Its shape changes. It remains foil.

C1-04

Twist cloth



Flat cloth



Twisted cloth

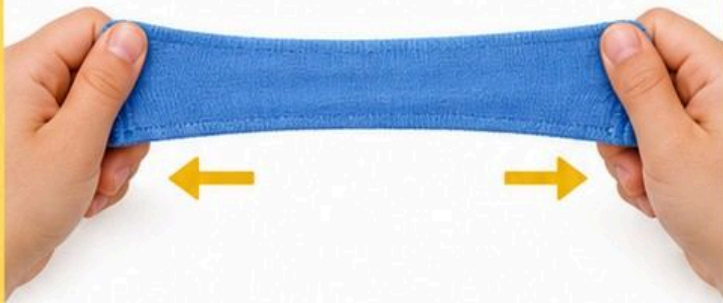
Gently twist a cloth. It remains fabric.
Can you untwist it?

Material Change Cards

Original classroom examples - Year 2

C1-05

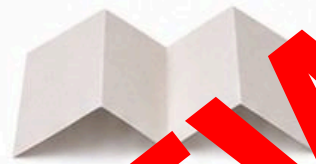
Stretch fabric



Gently stretch a safe fabric strip.
Observe its length before and after.

C1-06

Keep starts alike



Fold

Roll

Compare two equal-sized strips of the same paper. Change one by folding and one by rolling.

C1-07

A useful fold



Fold card into a standing label.
Test whether its new shape helps it stand.

C1-08

Compare evidence



Two safe samples may respond differently. Describe what you observe before deciding.



Evidence Trail



How to play

- 1 Choose a challenge card.
- 2 Take turns at the six steps.
- 3 Give a reason using the case cards or your observations.
- 4 Ask one respectful question.
- 5 Check the teacher key together.
- 6 Keep going until everyone has explained.



Use a large counter or point.
There is no timer.



Speak, draw, choose pictures
or ask a partner to help record.



Worked turn - Card 2

A torn sheet is still paper.
Its pieces are smaller.
It may be hard to put
back exactly.



Evidence Trail

START

1

NOTICE

What changed?

2

ASK

What is your question?

?

3

COMPARE

What stayed the same?

4

EXPLAIN

What evidence supports you?

5

APPLY

How could this help?

6

REFLECT

What could you test next?

FINISH

Use one challenge card for the whole trail.
Everyone may speak, draw or point.

Evidence Trail - Challenge Cards

1

C1-01

Name the material before and after folding.



2

C1-02

Is torn paper a new material? Explain.



3

C1-03

Describe what bending changed.



4

C1-04

Can this twist be undone? Use evidence.



5

C1-05

What would you record before and after stretching?



6

C1-06

Name one feature to keep alike.



Fold

Roll

7

C1-07

How would you test whether the fold is useful?



8

C1-08

Why might two samples give different results?



Check the teacher key. Support your answer with evidence.



Name: _____

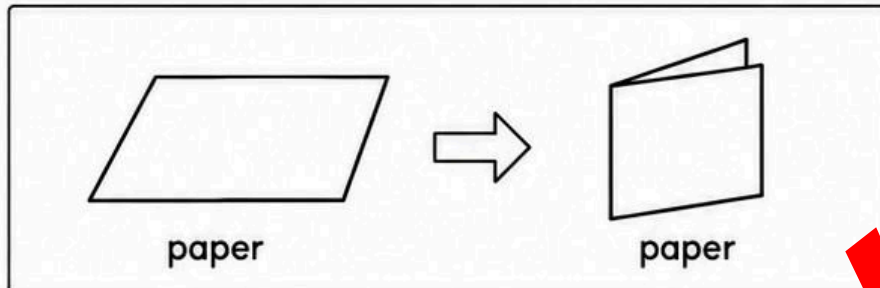
Date: _____

Before and after

Year 2 Science - W01

Case card: C1-01

Observe a paper fold. Name the material before and after.



Before

After

Material: _____

Material: _____

What changed?

What stayed the same?

Show your learning with words, drawings, picture choices or an adult-scribed response.

Name: **ANSWERS**

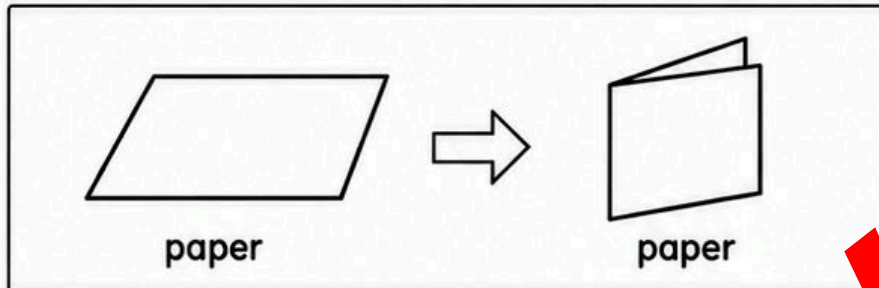
Date: _____

Before and after

Year 2 Science - W01

Case card: C1-01

Observe a paper fold. Name the material before and after.



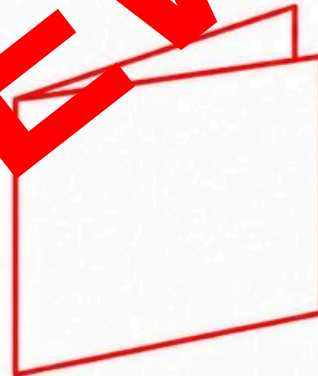
Before

SAMPLE RESPONSE



Material: **paper**

After



Material: **paper**

What changed?

The shape changed and a crease formed.

What stayed the same?

The sheet remained paper.

Show your learning with words, drawings, picture choices or an adult-scribed response.

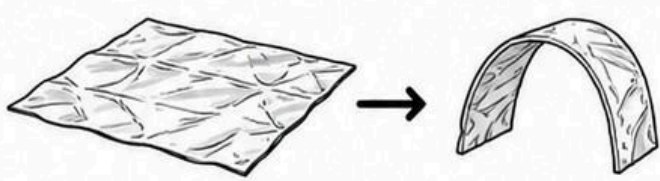
Name: _____

Date: _____

Shape changes

Year 2 Science - W02

Example: a safe, smooth bent foil.



Observe two safe shape changes. Describe each action.

Case card: C1-03 and C1-04

Material	Action	Before	After

Material	Action	Before	After

My observation words

Show your learning with words, drawings, picture choices or an adult-scribed response.

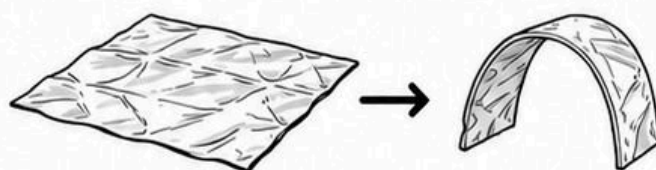
Name: **ANSWERS**

Date: _____

Shape changes

Year 2 Science - W02

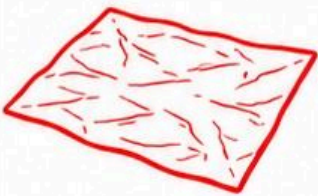
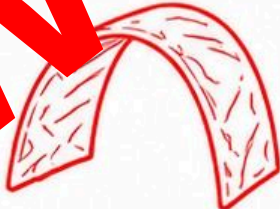
Example: a safe, smooth bent foil.

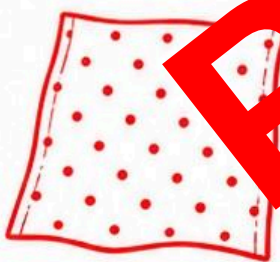
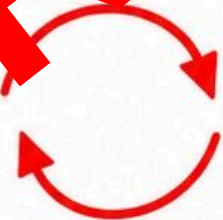
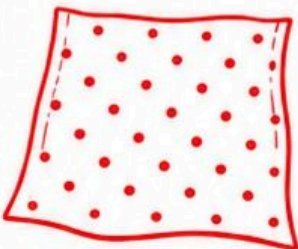
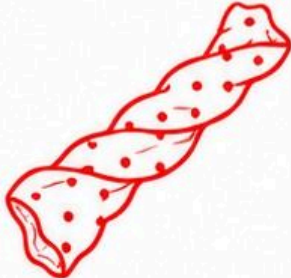


Observe two safe shape changes. Describe each action.

Case card: C1-03 and C1-04

SAMPLE RESPONSE

Material	Action	Before	After
foil 	bend 	flat strip 	curved strip 

Material	Action	Before	After
fabric 	twist 	flat cloth 	twisted cloth 

My observation words

SAMPLE RESPONSE: bent, curved and twisted.

Show your learning with words, drawings, picture choices or an adult-scribed response.

Name: _____

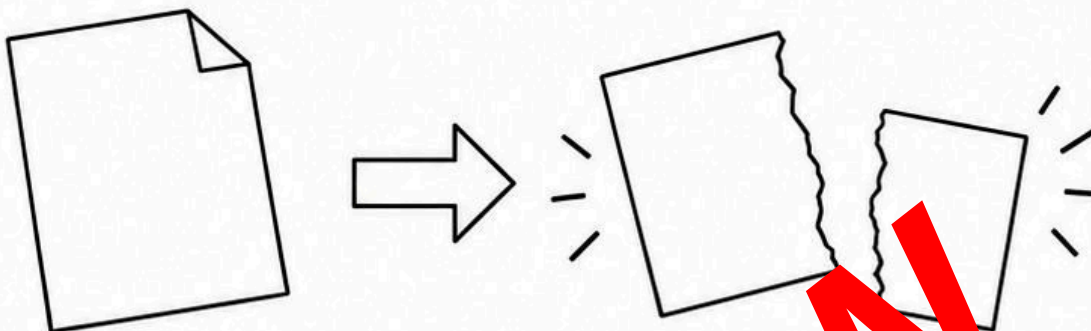
Date: _____

Size changes

Year 2 Science - W03

Case card: C1-02

Observe a safe tear or supervised cut. Keep all pieces.



Before

After

Number of pieces: _____

Material before: _____

Material after: _____

Explain the change:

Show your learning with words, drawings, picture choices or an adult-scribed response.

Name: ANSWERS

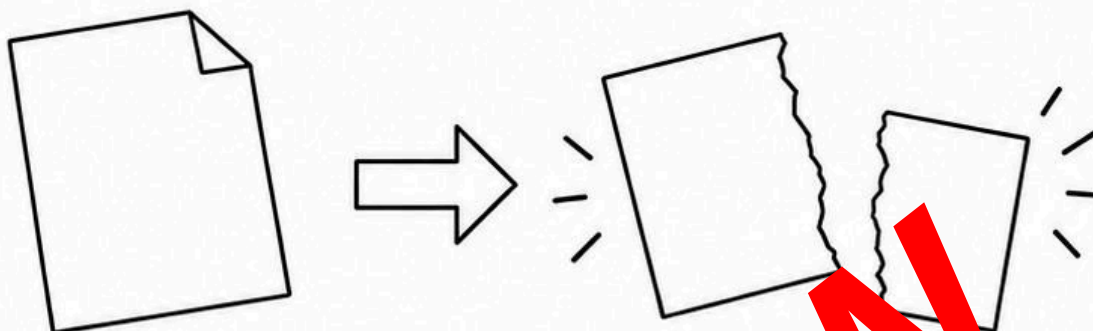
Date: _____

Size changes

Year 2 Science - W03

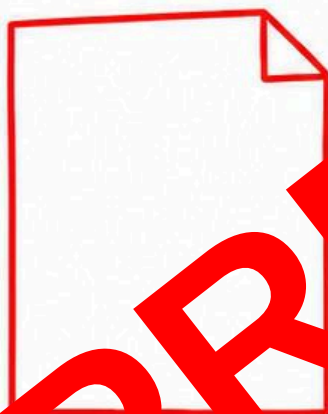
Case card: C1-02

Observe a safe tear or supervised cut. Keep all pieces.



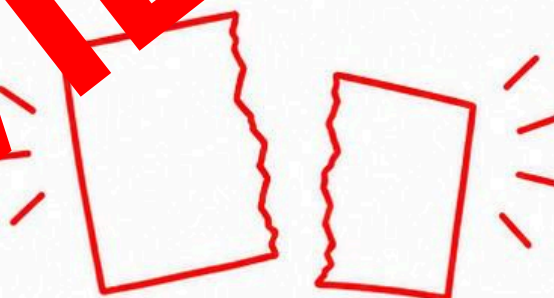
Before

SAMPLE RESPONSE



After

SAMPLE RESPONSE



Number of pieces: 2

Material before: paper

Material after: paper

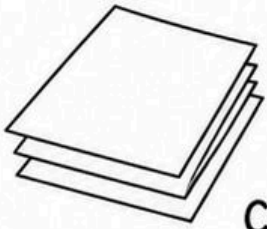
Explain the change:

The pieces are smaller. The material remained paper.
The tear is hard to undo exactly.

Show your learning with words, drawings, picture choices or an adult-scribed response.

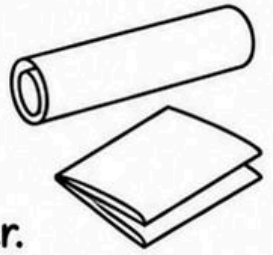
Name: _____

Date: _____



Plan a comparison

Year 2 Science - W04



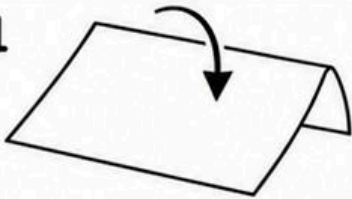
Compare folding and rolling the same kind of paper.

Case card: C1-06

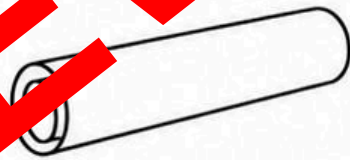
My question:

My prediction and reason:

Action 1



Action 2



My safe steps:

1. _____
2. _____
3. _____

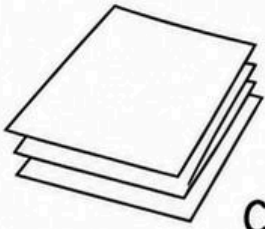
Keep alike:

Look for:

Show your learning with words, drawings, picture choices or an adult-scribed response.

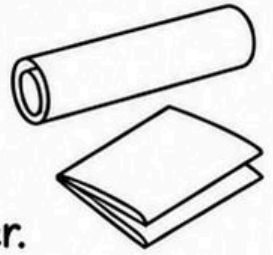
Name: **ANSWERS**

Date: _____



Plan a comparison

Year 2 Science - W04



Compare folding and rolling the same kind of paper.

Case card: C1-06

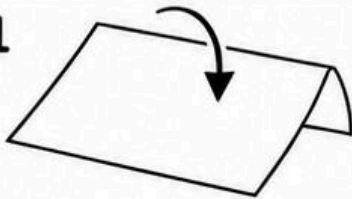
My question:

How will folding and rolling change this paper?

My prediction and reason:

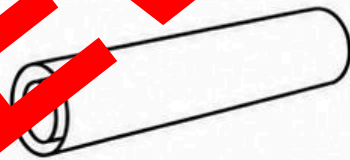
Both will change its shape because I have folded paper before.

Action 1



Fold the paper.

Action 2



Roll the paper.

My safe steps:

- 1. Name matched samples.**
- 2. Make one gentle change to each.**
- 3. Observe and record.**

Keep alike:

Paper type and starting size.

Look for:

Changed shape.

SAMPLE RESPONSE

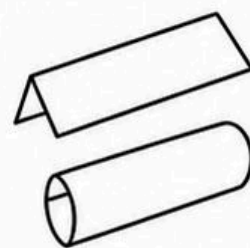
Name: _____

Date: _____



Investigate actions

Year 2 Science - W05



Follow your approved plan. Record actual observations.

Case card: C1-06

My question:

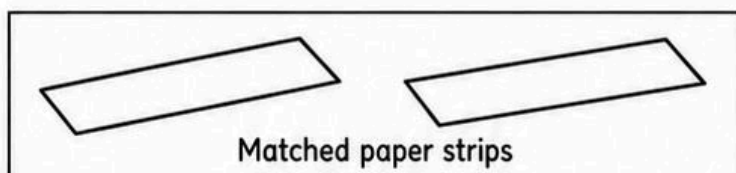
Observation time or stage:

Action	Before	Observed after

One thing we kept alike:

My prediction compared with evidence:

A partner observed:



Show your learning with words, drawings, picture choices or an adult-scribed response.

Name: _____

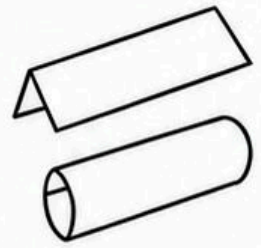
ANSWERS

Date: _____



Investigate actions

Year 2 Science - W05



Follow your approved plan. Record actual observations.

Case card: C1-06

My question:

How do fold and roll change shape?

Observation time or stage:

Immediately after each action

Action	Before	Observed after
Fold	Flat strip. 	Folded strip with crease. 
Roll	Flat strip. 	Curved roll. 

One thing we kept alike:

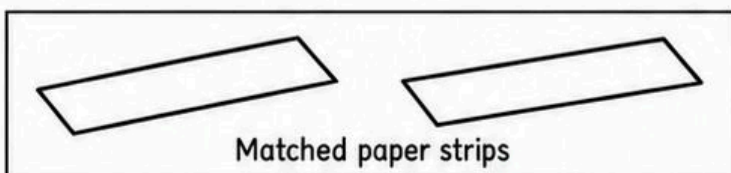
Paper type and starting size.

My prediction compared with evidence:

SAMPLE RESPONSE: Both shapes changed.

A partner observed:

SAMPLE RESPONSE: Compare their actual record. Actual results may differ.



Show your learning with words, drawings, picture choices or an adult-scribed response.

Name: _____

Date: _____

What stays the same

Year 2 Science - W06

Sort evidence from two changes you observed.

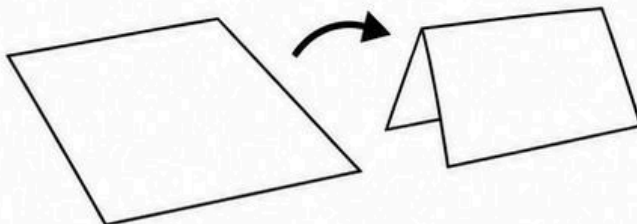
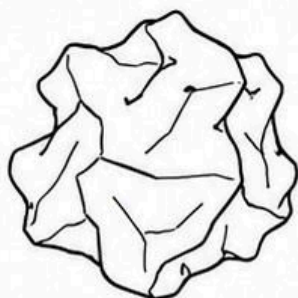
Case card: C1-01 and C1-02

Action	Changed	Stayed the same

Number of actions observed _____

A pattern in my evidence _____

An observation that supports it: _____



Show your learning with words, drawings, picture choices or an adult-scribed response.

Name: **ANSWERS**

Date: _____

What stays the same

Year 2 Science - W06

Sort evidence from two changes you observed.

Case card: C1-01 and C1-02

Action	Changed	Stayed the same
Fold	Shape and crease	Paper
Tear	Size of pieces and edges	Paper

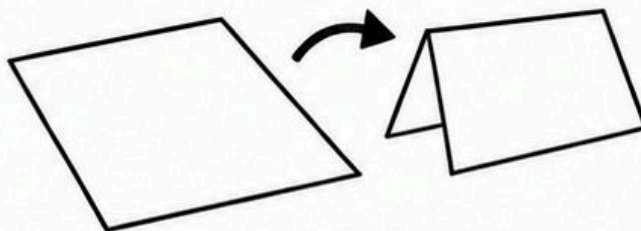
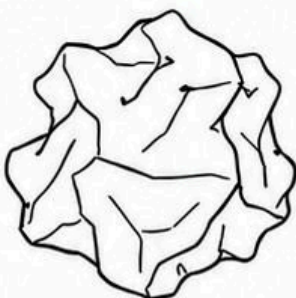
Number of actions observed: _____

A pattern in my evidence: _____

SAMPLE RESPONSE: These actions changed the form while the material remained paper.

An observation that supports it:

SAMPLE RESPONSE: Both before and after samples were paper.
Other properties can change.



Show your learning with words, drawings, picture choices or an adult-scribed response.

Name: _____

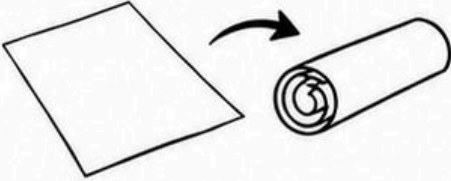
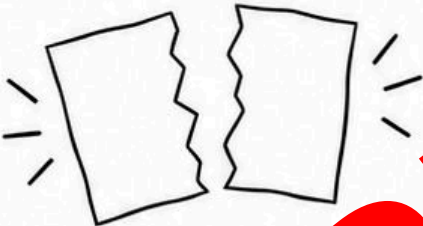
Date: _____

Can we undo it?

Year 2 Science - W07

Try to undo a safe change. Use what you observe.

Case card: C1-01, C1-02 and C1-04

Change	Easy or hard to undo exactly?	My evidence
Roll a piece of paper. 		
Tear a piece of paper. 		
Twist a soft cloth. 		

Is every physical change easy to reverse?

My next question

Show your learning with words, drawings, picture choices or an adult-scribed response.

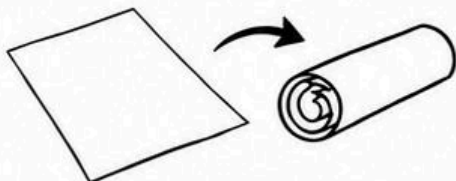
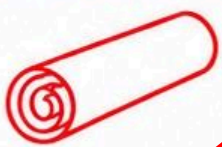
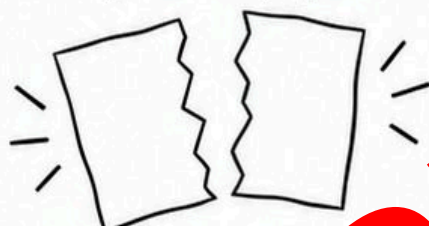
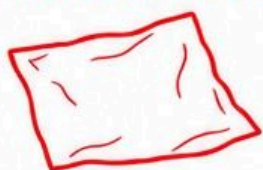
Name: ANSWERS Date: _____

Can we undo it?

Year 2 Science - W07

Try to undo a safe change. Use what you observe.

Case card: C1-01, C1-02 and C1-04

Change	Easy or hard to undo exactly?	My evidence
Roll a piece of paper. 	Easier. SAMPLE RESPONSE 	I could unroll it but some curve remained. SAMPLE RESPONSE
Tear a piece of paper. 	Hard. SAMPLE RESPONSE 	The pieces did not rejoin exactly. SAMPLE RESPONSE
Twist a soft cloth. 	Easier. SAMPLE RESPONSE 	I could untwist it. SAMPLE RESPONSE 

Is every physical change easy to reverse?

No, torn paper is still paper although hard to restore.

My next question

Does a different safe fabric untwist in the same way?

Show your learning with words, drawings, picture choices or an adult-scribed response.

Name: _____

Date: _____

Material-change portfolio

Year 2 Science - W08

Show three safe changes. Include a size change.

Case card: C1-01, C1-02 and C1-03

Action: _____

Before

After

Changed: _____

Stayed: _____

Action: _____

Before

After

Changed: _____

Stayed: _____

Action: _____

Before

After

Changed: _____

Stayed: _____

Use an observation to explain each change.

Show your learning with words, drawings, picture choices or an adult-scribed response.

Name: **ANSWERS**

Date: _____

Material-change portfolio

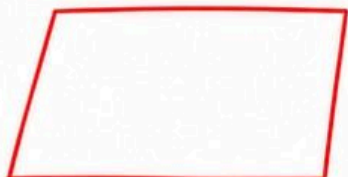
Year 2 Science - W08

Show three safe changes. Include a size change.

Case card: C1-01, C1-02 and C1-03

Action: **SAMPLE RESPONSE: Fold paper**

Before



After

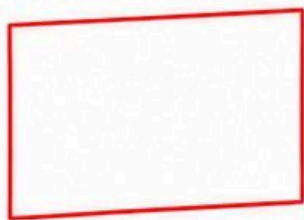


Changed: **The shape changed.**

Stayed: **It stayed paper.**

Action: **SAMPLE RESPONSE: Tear paper**

Before



After



Changed: **The pieces became smaller.**

Stayed: **It stayed paper.**

Action: **SAMPLE RESPONSE: Bend foil**

Before



After



Changed: **The strip became curved.**

Stayed: **It stayed foil.**

Use an observation to explain each change.

SAMPLE RESPONSE: When I folded, tore and bent the materials, their shape and size changed, but they were still the same material (paper or foil).

Show your learning with words, drawings, picture choices or an adult-scribed response.

Name: _____

Date: _____

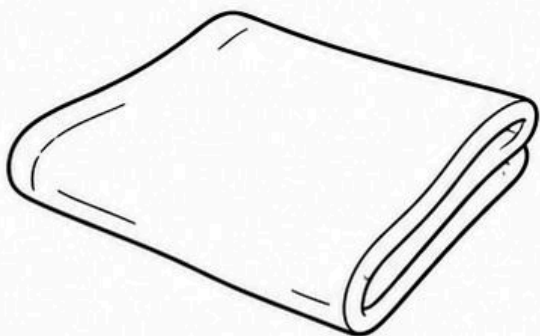
Explain a new example

Year 2 Science - W09

Your teacher changes a new safe cloth sample. Observe it.

Case card: C1-04 and C1-08

Before



After

My claim:

My observation:

How the evidence supports my claim:

One limit or further question:



Speak, draw, dictate or select pictures.

Show your learning with words, drawings, picture choices or an adult-scribed response.

Name: **ANSWERS**

Date: _____

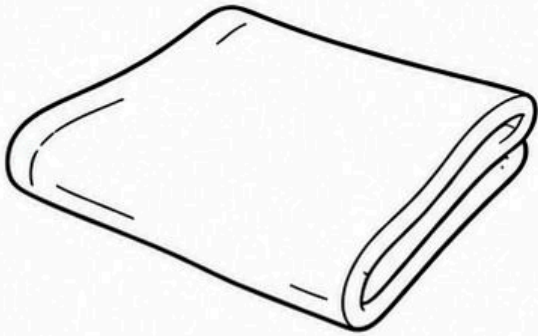
Explain a new example

Year 2 Science - W09

Your teacher changes a new safe cloth sample. Observe it.

Case card: C1-04 and C1-08

Before



After



My claim:

A gentle twist changed the cloth's form.

My observation:

SAMPLE RESPONSE

I saw the flat cloth become twisted, while it remained fabric.

How the evidence supports my claim:

SAMPLE RESPONSE

The observation supports a physical change.

One limit or further question:

SAMPLE RESPONSE

Another fabric may respond differently. Can this sample untwist as easily?

Actual observations may differ.



Speak, draw, dictate or select pictures.

Show your learning with words, drawings, picture choices or an adult-scribed response.

Name: _____

Date: _____

Useful physical changes

Year 2 Science - W10

Choose a useful safe fold or shape. Test your idea.

Case card: C1-07

Before

Useful shape



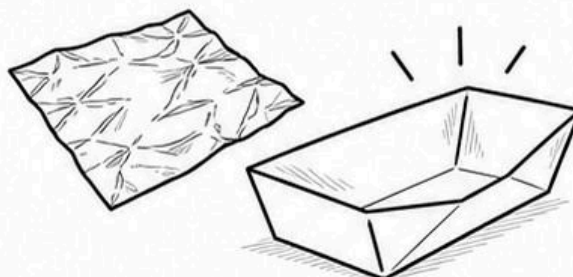
Purpose: _____

My prediction and reason: _____

What I observed: _____

Material before and after: _____

An improvement or next question: _____



Show your learning with words, drawings, picture choices or an adult-scribed response.

Name: _____

ANSWERS

Date: _____

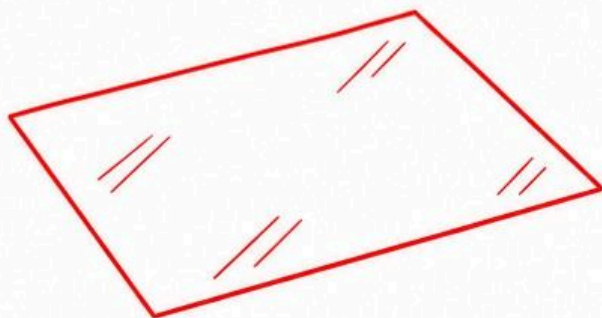
Useful physical changes

Year 2 Science - W10

Choose a useful safe fold or shape. Test your idea.

Case card: C1-07

Before



Useful shape



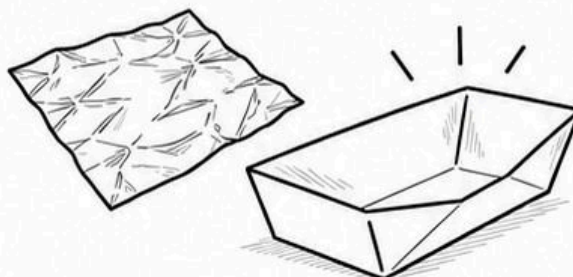
Purpose: **ILLUSTRATIVE EXAMPLE:** standing name label.

My prediction and reason: **A fold may help the card stand because it makes a base.**

What I observed: **SAMPLE RESPONSE:** this folded label stood on the table.

Material before and after: **SAMPLE RESPONSE:** card.

An improvement or next question: **Would a different starting size stand as well?**
Actual tests may give different results.



Show your learning with words, drawings, picture choices or an adult-scribed response.

Quiz reference – questions 1-5

Use with the separate quiz deck

Show the question before the explanation slide. Invite the child's usual response mode. Use these responses as discussion criteria; collect practical assessment evidence separately.

Question 1: Is every physical change easy to reverse?

Explain with a safe example. No. Torn or cut paper is still paper, but putting it back exactly as it was can be difficult. Accept another observed example with the same reasoning.

Question 2: Has folded paper necessarily become a new substance?

Say what changed and what stayed the same. No. The sheet changed shape and may have a crease. It remains paper.

Question 3: Object or material?

A paper fan is made of paper. Which word names the material? Paper names the material. Fan names the object.

Question 4: Which action?

You gently turn the ends of a cloth in different directions. Is this bending, twisting or cutting? Twisting. The cloth changes form while it remains fabric.

Question 5: A useful comparison

You compare folding and rolling in the same paper. Name one starting feature to keep alike. Use the same kind of paper and equal starting sizes. Accept another relevant matched starting feature.



Quiz reference – questions 6-10

Use with the separate quiz deck

Show the question before the explanation slide. Invite the child's usual response mode. Use these responses as discussion criteria; collect practical assessment evidence separately.

Question 6: Safe steps

A foil edge becomes sharp. What should you do? Stop handling it and tell the teacher. Use a safe replacement or observe an adult demonstration.

Question 7: An observation record

Illustrative example: a paper strip was flat before rolling and curved afterwards. What changed? Its shape changed. The material stayed paper. This supplied example is illustrative, not a result from your class.

Question 8: Evidence and predictions

Your result differs from your prediction. Which result belongs in your record? Record what actually happened. Compare it with your prediction and consider a reason for the difference.

Question 9: A new material sample

A different soft cloth stretches less than the first one. Can we say all fabrics stretch equally? No. These samples differed. Describe each observation and test other safe samples before making a wider claim.

Question 10: A useful new design

You fold card into a standing model. What evidence would help you judge whether the fold is useful? Observe whether the model stands in the intended place. Explain how the changed shape helps. It remains card. Accept a test with a relevant purpose and evidence.



Name: _____

Assessment - My Three Changes

Change It, Keep It? - Year 2

Use three safe changes, including a size change. Show before and after.
Explain what changed and what stayed the same.

Action: _____	Before	After	Changed: _____ _____ Stayed: _____ _____
-------------------------	---------------	--------------	---

Action: _____	Before	After	Changed: _____ _____ Stayed: _____ _____
-------------------------	---------------	--------------	---

Action: _____	Before	After	Changed: _____ _____ Stayed: _____ _____
-------------------------	---------------	--------------	---

My question and prediction:

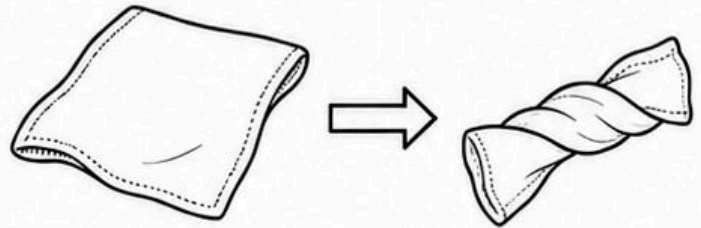
Use your earlier records. Speak, draw, dictate or select pictures.

Name: _____

Assessment - Explain My Evidence

A new safe cloth example

What changed?



What material stayed the same?

Which observation supports your explanation?

One safe step:

One feature we kept alive:

How my evidence compared with my prediction or a partner:

A pattern and useful purpose:

One limit or further question:

Evidence used: earlier records / demonstration / explanation

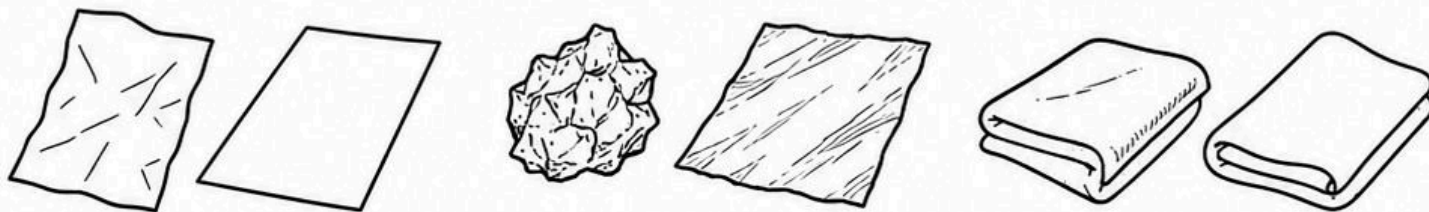
Communication support does not reduce the learning expectation.

Change It, Keep It? - Assessment Rubric

Year 2 Science

Student: _____

Date: _____



Learning	Still developing	Sound	Transfer
Understanding	An important change or material identity is unclear.	Explains three changes, including size, while naming the same material.	Applies the idea accurately to a new life example.
Evidence and process	Evidence or a method step is missing.	Uses observations, says steps and a named comparison.	Explains a useful comparison or evidence limitation.
Explanation and use	A claim checks linked observation.	Links an observation to a claim and a useful purpose.	Justifies a new use with evidence and a prediction.
Reflection	Needs help to compare evidence or ask a new question.	Compares results with predictions or peers and asks a further question.	Uses a difference or limitation to propose a relevant next test.

Judge learning across the portfolio, practical work and conference.

A communication or access support is not a lower achievement level.

Teacher evidence notes:

Lesson 1

Before and after



Our learning

I can describe what changed and name the material before and after.

PREVIEW

What do you notice?

Look at a paper sheet. What is it made of? Predict what will change when we fold it.

PREVIEW

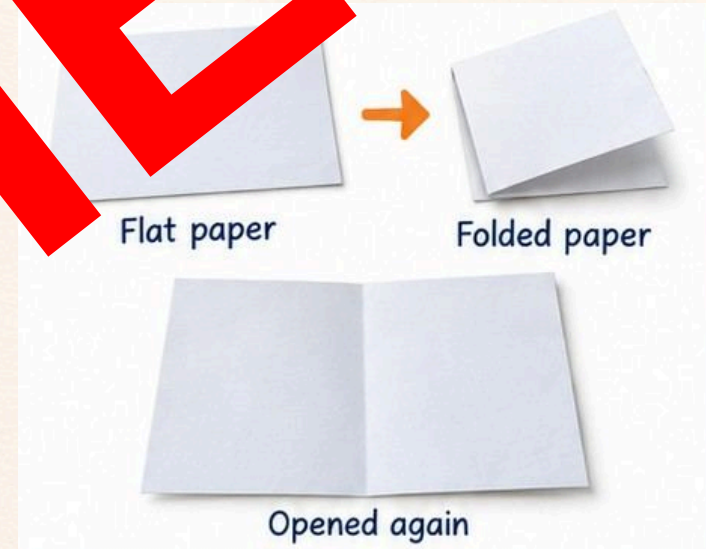
Words for our science

An object is a thing. A material is what it is made of. A paper fan is an object made of paper.

Based on: ACARA, Year 1 Science (australiancurriculum.edu.au)

Watch the change

Name the material: paper. Fold the sheet once. Compare the outline before and after. It is still paper.



Based on: ACARA, Year 1 Science (australiancurriculum.edu.au)

Materials and safe handling

Use one large paper sheet and W01. Keep edge away from eyes.

Work on a clear table.

PREVIEW

Our investigation

Watch one fold. Open it and look for a crease. Now fold your own sheet and compare it with the starting sheet.

PREVIEW

Record your evidence

Draw the sheet before and after. Label paper in boxes with pictures. Say or write what changed.

PREVIEW

Explain your thinking

A folded sheet looks different. Has it become a new material? Use your observation to explain.

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Reflection

Ask a question about another action we could try, predict what might change and give a reason.

PREVIEW

Well Done!



Lesson 2

Shape changes



Our learning

I can use action words to explain a change in shape.

PREVIEW

What do you notice?

A folded sheet remains paper. What could bending or rolling do to its shape?

PREVIEW

Words for our science

Bend means make a curve. Twist means turn parts in different directions. Stretch means gently pull longer.

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Watch the change

Gently bend folded-edge foil. Roll a paper strip. Twist a soft cloth. Name the material each time.



Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Materials and safe handling

Use paper, teacher-prepared smooth foil and soft fabric. Keep actions gentle. Stop if an edge becomes sharp.

PREVIEW

Our investigation

Try one safe action at a time. Compare the sample before and after.

Try a second sample and describe any difference.

PREVIEW

Record your evidence

Use W02 to show two actions. Choose precise verbs. folded, bent, rolled, twisted or stretched.

PREVIEW

Explain your thinking

Which sample changed most easily? Your partner may find something different. What did each of you observe?

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Reflection

How might a designer use bending or rolling? Explain a prediction from a change you actually observed.

PREVIEW

Well Done!



Lesson 3

size changes



Our learning

I can explain how smaller pieces can stay the same material.

PREVIEW

What do you notice?

A paper strip can change shape. What might happen if we tear it into two pieces?

PREVIEW

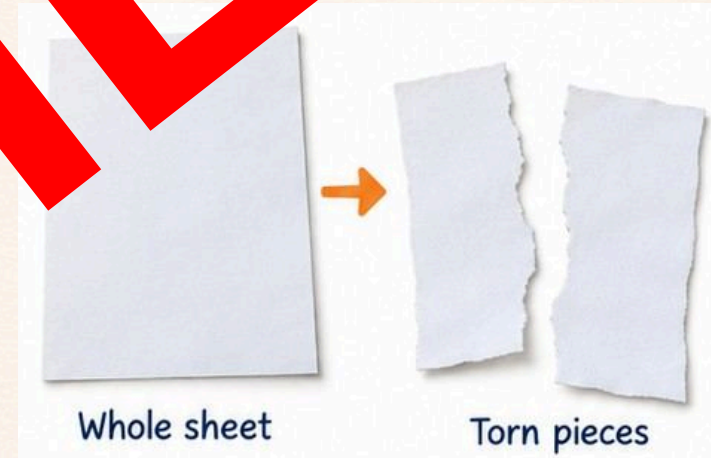
Words for our science

Size tells us how big a piece is. A tear changes one sheet into smaller pieces.

Based on: ACARA, Year 1 Science (australiancurriculum.edu.au)

Watch the change

The teacher tears a sheet. Place both pieces beside the original-sized outline.
Both pieces are still paper.



Based on: ACARA, Year 1 Science (australiancurriculum.edu.au)

Materials and safe handling

Use large paper samples and W03. Tear gently. Only use blunt scissors after the teacher demonstrates safe handling.

PREVIEW

Our investigation

Name the starting material. Tear or make one unpermitted cut. Keep all pieces. Compare their size with the starting sample.

PREVIEW

Record your evidence

Draw before and after. Count the pieces. Label the material. Explain what changed and what stayed the same.

PREVIEW

Explain your thinking

Can we easily put the sheet back exactly as it was? Does that answer tell us a new material formed?

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Reflection

Explain: the pieces are smaller, but they are stronger. A hard-to-undo change can be a physical change.

PREVIEW

Well Done!



Lesson 4

Plan a comparison



Our learning

I can ask a question, predict and plan safe steps

PREVIEW

What do you notice?

We changed paper by folding and tearing. How could we compare two actions on the same kind of paper?

PREVIEW

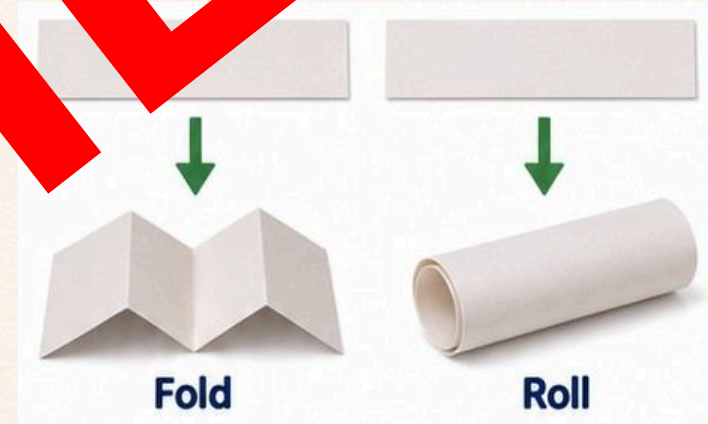
Words for our science

A prediction is what we think will happen and an observation is what we notice during a test.

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Watch the change

Question: How does this paper change when folded or rolled? Predict a result using something you have already observed.



Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Materials and safe handling

Prepare two equal-sized strips from the same material. Use the same starting shape. Choose gentle actions as proposed by the teacher.

PREVIEW

Our investigation

Plan: name each sample, change one by folding and one by rolling, then compare the shapes. Tell a partner the shape names.

PREVIEW

Record your evidence

Use W04. Draw the two actions and your prediction. Record one thing to keep alike and one observation to look for.

PREVIEW

Explain your thinking

Would different starting sizes make our comparison harder to interpret? Explain how you will keep the comparison useful.

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Reflection

Say your question, prediction and a safe step. Your prediction can change after we collect evidence.

PREVIEW

Well Done!



Lesson 5

Investigate actions



Our learning

I can follow a plan and record what actually happens.

PREVIEW

What do you notice?

What was our question? What did we predict? Which starting feature did we keep alike?

PREVIEW

Words for our science

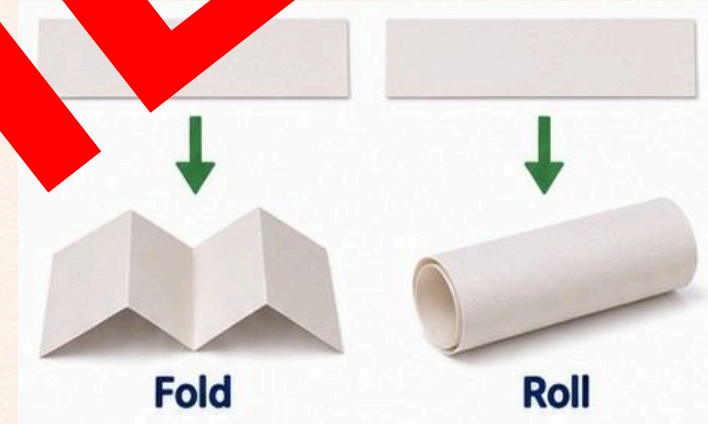
Evidence is information from what we observe. Record evidence even when it differs from your prediction.

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Watch the change

Before changing either strip, mark its material and compare the starting size

The teacher models recording immediately after an action.



Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Materials and safe handling

Use the approved paper samples, W04 and W05. A partner can handle a sample while you observe. Stop if a person's reaction feels unsafe.

PREVIEW

Our investigation

Carry out the planned fold and roll. Observe and record each action. Use equal-sized informal blocks if you compare lengths.

PREVIEW

Record your evidence

On W05, record the starting state, the action and the observed result.

Repeat with fresh matched samples if time allows.

PREVIEW

Explain your thinking

Compare your observations with a partner. Which starting sizes or actions were alike? What might explain differences?

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Reflection

Did evidence match your prediction? Tell what you saw, not what you hoped would happen. Tidy sample and pool neatly.

PREVIEW

Well Done!



Lesson 6

What stays the same



Our learning

I can sort observations into changed and stayed the same.

PREVIEW

What do you notice?

Choose a fold, roll or tear from your evidence. What has changed? What can you still name?

PREVIEW

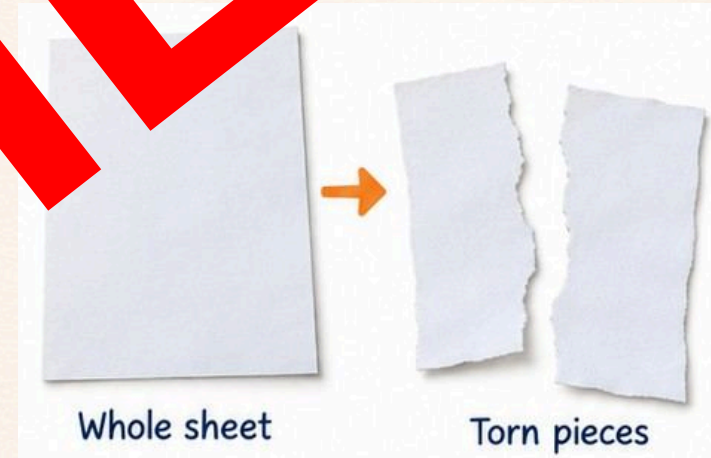
Words for our science

A physical change alters a material's form. In our examples, what the sample is made of stays the same.

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Watch the change

Compare a whole paper sheet and a torn piece. Their sizes differ. Both are made of paper. Do not assume every property is unchanged.



Based on: ACARA, Year 1 Science (australiancurriculum.edu.au)

Materials and safe handling

Use your safe samples and W06. Compare dry surfaces by looking and gentle touch. Keep every observation linked to its sample.

PREVIEW

Our investigation

Sort your recorded observations into changed and stayed the same.

Compare material labels with shape, size and surface observations.

PREVIEW

Record your evidence

Make a provided table on W06. Add two tested actions. Count the actions you tried and describe a pattern in the table.

PREVIEW

Explain your thinking

If a crease changes how paper bends, does it stop being paper?

Explain the difference between a property and material identity.

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Reflection

Use one observation to finish: The ____ change _____ while the sample remained _____. Show the evidence you used.

PREVIEW

Well Done!



Lesson 7

Can we undo it?



Our learning

I can use evidence to judge how easily a change can be undone.

PREVIEW

What do you notice?

Compare rolled paper with torn paper. Predict which might return more easily to its earlier shape.

PREVIEW

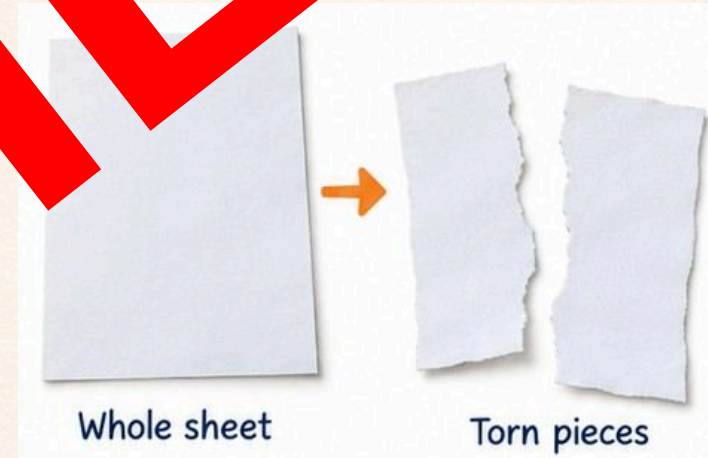
Words for our science

Reversible means a change can be undone. Some physical changes are easy to undo. Others are difficult to undo. Examples:

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Watch the change

Unroll a paper strip and compare it with its earlier shape. Compare torn pieces. Both examples still use paper.



Based on: ACARA, Year 1 Science (australiancurriculum.edu.au)

Materials and safe handling

Use rolled and torn paper, C1-01, C1-02 and V1-07. Use fresh samples for a repeat. Keep scraps in a tray.

PREVIEW

Our investigation

Try to undo each change gently. Sort the examples by what you observed. Notice creases or marks that remain.

PREVIEW

Record your evidence

Record evidence for each sort on W07. Compare with a partner.

Accept a different result when the evidence explains.

PREVIEW

Explain your thinking

Is every physical change easy to reverse? Explain with one example.

A torn sheet can be hard to restore and still be paper.

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Reflection

Pose a further question about another safe sample. How could observations help someone choose an action for a useful purpose?

PREVIEW

Well Done!



Lesson 8

Material-change portfolio



Our learning

I can show three changes and explain my evidence

PREVIEW

What do you notice?

Which record clearly shows changed shape? Which shows smaller pieces? Which names the material before and after?

PREVIEW

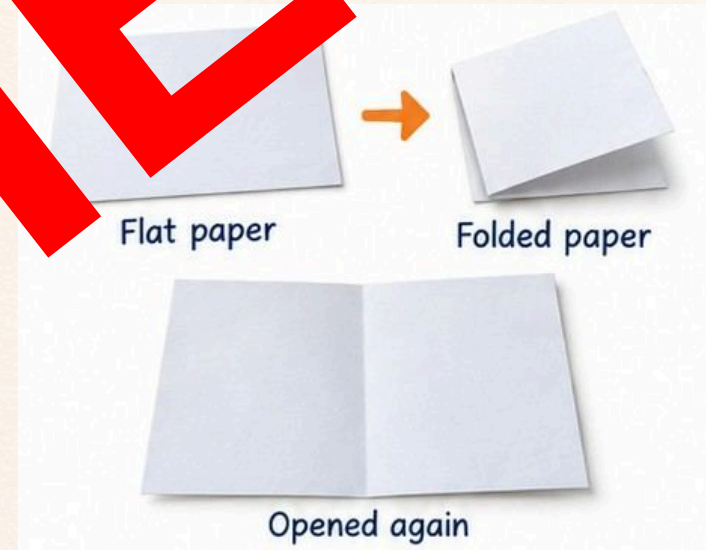
Words for our science

A portfolio is a collection of evidence. Choose examples that help another person understand your observations.

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Watch the change

Model example: paper before and after folding. Caption the changed form and unchanged material. Label any supplied sample as an example.



Based on: ACARA, Year 1 Science (australiancurriculum.edu.au)

Materials and safe handling

Gather three safe classroom examples or clear existing records, including a size change. Use W08 and your earlier learning records.

PREVIEW

Our investigation

Choose three changes. Show before and after for each. State the action, what changed, what remained and the observation that supports it.

PREVIEW

Record your evidence

Add captions, labels or an adult-scribed explanation. Practise explaining using the real evidence rather than making up a sentence.

PREVIEW

Explain your thinking

Can a partner identify the starting material in every example? Does your evidence show both shape and size changes?

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Reflection

Prepare your question, prediction and method evidence for the conference. A drawing, gesture, picture, or oral response can show learning.

PREVIEW

Well Done!



Lesson 4

Explaining a new example



Our learning

I can use evidence to explain a new physical concept.

PREVIEW

What do you notice?

Use your portfolio to explain one change without reading a memorised answer.

PREVIEW

Words for our science

A claim is your idea. Evidence shows why it makes sense. Explain the link using material, shape, size or action words.

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Watch the change

The teacher gently twists a different safe cloth. First name its material. Then ask what changed and what information is still needed.



Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Materials and safe handling

Use W09, your portfolio and a teacher-selected safe cloth. Keep the cloth away from bodies. A partner or adult may demonstrate.

PREVIEW

Our investigation

Explain three changes to a partner or teacher. Analyse the new cloth example. Compare it with a previous observation. Ask one further question.

PREVIEW

Record your evidence

Draw, speak, dictate or select pictures to explore your claim and supporting observation. Record the responses on the conference sheet.

PREVIEW

Explain your thinking

Could two different fabrics respond differently? Explain a limit of what one sample tells us. Do not claim every material behaves alike.

Based on: ACARA, Year 10 Science (australiancurriculum.edu.au)

Reflection

Choose accurate words for your audience. Tell what you observed and one question you would investigate next.

PREVIEW

Well Done!



Lesson 10

Useful physical changes



Our learning

I can explain how an observed change can help people.

PREVIEW

What do you notice?

What pattern did we notice about folding this paper? What could we predict for another matched strip?

PREVIEW

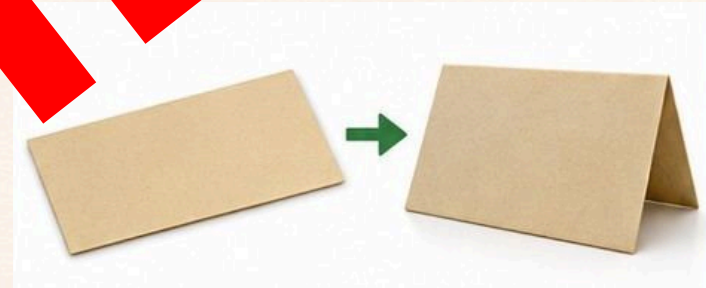
Words for our science

People who design and make things use observations of materials. A useful choice depends on the material, function and purpose.

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Watch the change

Model folding a paper strip into a simple standing name label. Test whether it stands. It remains paper even though its shape helps its use.



Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Materials and safe handling

Use large paper or card, W10 and a clear table. No throwing or flying objects. Use only teacher-approved gentle changes.

PREVIEW

Our investigation

Choose a useful fold or shape. Predict what it may help. Try it safely, observe the result and explain whether the evidence supports your choice.

PREVIEW

Record your evidence

Use W10 to show the purpose, changed shape, and unchanged material. Compare a classmate's result and suggest the improvement or new question.

PREVIEW

Explain your thinking

How did an observed pattern help your prediction? What would need a new test if we changed the material or starting size?

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Reflection

Share an evidence-based explanation for an error in class. Use your observations to explain a useful choice rather than compromising a result.

PREVIEW

Well Done!



Change It, Keep It?

Unit Quiz



How to respond

Listen to each question. Speak, draw, point to a picture, use a gesture or dictate to an adult. Explain your evidence when asked. This quiz supports the practical assessment.

PREVIEW

Question 1

Is every physical change easy to reverse?

Explain with a safe example.

PREVIEW

Question 1: Explanation

No. Torn or cut paper is still paper, but putting it back exactly as it was can be difficult. Accept another observation example with the same reasoning.

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Question 2

Has folded paper necessarily become a new substance?

Say what changed and what stayed the same.

PREVIEW

Question 2: Explanation

No. The sheet changed shape and may have a crease. It remains paper.

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Question 3

Object or material?

A paper fan is made of paper. Which word names the material?

PREVIEW

Question 3: Explanation

Paper names the material. Fan names the object.

PREVIEW

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Question 4

Which action?

You gently turn the ends of a cloth in different directions. Is this bending, twisting or cutting?

PREVIEW

Question 4: Explanation

Twisting. The cloth changes form while it remains fabric.

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Question 5

A useful comparison

You compare folding and rolling the same paper. Name one starting feature to keep alike.

PREVIEW

Question 5: Explanation

Use the same kind of paper and equal starting size. Accept another relevant matched starting feature.

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Question 6

Safe steps

A foil edge becomes sharp. What should you do.

PREVIEW

Question 6: Explanation

Stop handling it and tell the teacher. Use a safe replacement or observe an adult demonstration.

Based on: ACARA, Year 6 Science (australiancurriculum.edu.au)

Question 7

An observation record

Illustrative example: a paper strip was flat before rolling and curved afterwards. What changed?

PREVIEW

Question 7: Explanation

Its shape changed. The material stayed paper. This supplied example is illustrative, not a result from your class.

Based on: ACARA, Year 7 Science (australiancurriculum.edu.au)

Question 8

Evidence and predictions

Your result differs from your prediction. Which result belongs in your record?

PREVIEW

Question 8: Explanation

Record what actually happened. Compare it with your prediction and consider a reason for the difference.

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Question 9

A new material sample

A different soft cloth stretches less than the first one. Can we say all fabrics stretch equally?

PREVIEW

Question 9: Explanation

No. These samples differed. Describe each observation and test other safe samples before making a wider claim.

Based on: ACARA, Year 6 Science (australiancurriculum.edu.au)

Question 10

A useful new design

You fold card into a standing label. What evidence would help you judge whether the fold is useful?

PREVIEW

Question 10: Explanation

Observe whether the label stands in the intended place. Explain how the changed shape helps. It remains correct. Accept a test with a relevant purpose and evidence.

Based on: ACARA, Year 5 Science (australiancurriculum.edu.au)

Our science reflection

Choose one change you can explain with evidence. What would you ask or test next? How might people use what you found?

PREVIEW

Well Done!

