

Science

Year 1
Above satisfactory

WORK SAMPLE PORTFOLIO

Annotated work sample portfolios are provided to support implementation of the Foundation – Year 10 Australian Curriculum.

Each portfolio is an example of evidence of student learning in relation to the achievement standard. Three portfolios are available for each achievement standard, illustrating satisfactory, above satisfactory and below satisfactory student achievement. The set of portfolios assists teachers to make on-balance judgements about the quality of their students' achievement.

Each portfolio comprises a collection of students' work drawn from a range of assessment tasks. There is no pre-determined number of student work samples in a portfolio, nor are they sequenced in any particular order. Each work sample in the portfolio may vary in terms of how much student time was involved in undertaking the task or the degree of support provided by the teacher. The portfolios comprise authentic samples of student work and may contain errors such as spelling mistakes and other inaccuracies. Opinions expressed in student work are those of the student.

The portfolios have been selected, annotated and reviewed by classroom teachers and other curriculum experts. The portfolios will be reviewed over time.

ACARA acknowledges the contribution of Australian teachers in the development of these work sample portfolios.

THIS PORTFOLIO: YEAR 1 SCIENCE

This portfolio provides the following student work samples:

- Sample 1 Report: Seeing the light
- Sample 2 Report: Changes in our environment
- Sample 3 Investigation: Comparing sounds
- Sample 4 Investigation: Changing materials
- Sample 5 Investigation: Properties of materials
- Sample 6 Worksheet: Minibeast habitats
- Sample 7 Worksheet: Daily weather
- Sample 8 Investigation report: Comparing local habitats

In this portfolio, the student describes a range of objects and events that typically occur in everyday life, including features of local habitats (WS8), changes in the environment (WS2, WS7), changes to properties of light (WS1) and the stretching, bending and shaking of objects (WS3, WS4, WS5). The student describes a living thing and its habitat (WS6, WS8) and explains why it is found in that environment (WS6). The student suggests how science helps people care for environments (WS8). The student conducts simple investigations of everyday phenomena and demonstrates an ability to make predictions (WS3, WS4) and follow teacher instructions to record and sort observations (WS2, WS3, WS4, WS5, WS7, WS8). The student shares observations with others through text and drawing (WS1, WS2, WS3, WS4, WS5, WS6, WS7, WS8) and explains texts to the teacher (WS4, WS5, WS8).

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Science

Year 1
Above satisfactory

Report: Seeing the light

Year 1 Science achievement standard

The parts of the achievement standard targeted in the assessment task are highlighted.

By the end of Year 1, students describe objects and events that they encounter in their everyday lives, and the effects of interacting with materials and objects. They identify a range of habitats. They describe changes to things in their local environment and suggest how science helps people care for environments.

Students make predictions, and investigate everyday phenomena. They follow instructions to record and sort their observations and share their observations with others.

Summary of task

Students had completed a range of exploratory activities related to light, including investigating darkened rooms, blackened boxes, reflective materials and sources of light such as torches. They had also engaged with some interactive digital materials.

Students were asked to write a summary report about light, including properties of light, what enables us to see, times when we might not be able to see, and how our knowledge of light helps us in our lives.

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Report: Seeing the light

Science Report

Your task is to write a report about light, and how we see, for a visitor who will be coming to your classroom.

You should include information about light and what enables us to see, times when we might not be able to see and how, what we know about light, helps us in our lives.

The sun helps us to see. If we did not have the sun we would not be able to see. We get light from many different sources of light such as torches, fire, candles and the sun. Light helps us to see in the dark. When you are on a bike you might have a reflector. If a car light shines on the reflector then it bounces off to the ground then you can see where you are going. Your eyes help us see in the dark.

Annotations

Explains that light (from the sun) is required to see objects.

Identifies a variety of light sources.

Describes a behaviour of light (reflection) and identifies that reflected light requires a reflector and a light source.

Identifies that light needs to hit an object for the object to be visible.

Identifies that eyes are needed to see.

Annotations (Overview)

Shares observations and ideas through a written report.

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Report: Changes in our environment

Year 1 Science achievement standard

The parts of the achievement standard targeted in the assessment task are highlighted.

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Students make predictions, and investigate everyday phenomena. They follow instructions to record and sort their observations and share their observations with others.

Summary of task

Students had discussed the ways in which things change over time, particularly the different ways living and built components of the environment change.

Students were asked to look at photos of sites around the school taken in Term 3 and Term 4 and describe the changes that had taken place.

Report: Changes in our environment

Annotations

Describes changes to living things in the local environment and relates to changes in seasons.







Describes changes to the sky and relates to change in time of day.





Suggests that built features are changed by human intervention.

Identifies changes in the weather and living things in the landscape and suggests time of day as an explanation.

Records information in a provided table.

Changes in the Land and Sky

TERM 3	TERM 4	What kinds of changes have happened?
		<ul style="list-style-type: none"> • no leaves in term three. • Leaves in term four. because the one with the leaves was in spring the one with no leaves was in winter
		<ul style="list-style-type: none"> • the clouds are different in term three • the clouds are darker then term three because it mite be a different time of the day
		<ul style="list-style-type: none"> • the buidels in term three are are smaller then term four. • the buidels are longer then term 3. because they changed it

		<ul style="list-style-type: none"> • the sun is shining in one picture. • the other picture is dark • one picture has birds in it the other one doesn't because they where a different time of day
		<ul style="list-style-type: none"> • one picture is sunny • the other one is dark because it mite of been a different day

☐ Tick the things that are natural.
☐ CIRCLE the things in each photo which stayed the same.

Annotations (Overview)

The student shares their observations and ideas through written text.

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Investigation: Comparing sounds

Year 1 Science achievement standard

The parts of the achievement standard targeted in the assessment task are highlighted.

By the end of Year 1, students describe objects and events that they encounter in their everyday lives, and the effects of interacting with materials and objects. They identify a range of habitats. They describe changes to things in their local environment and suggest how science helps people care for environments.

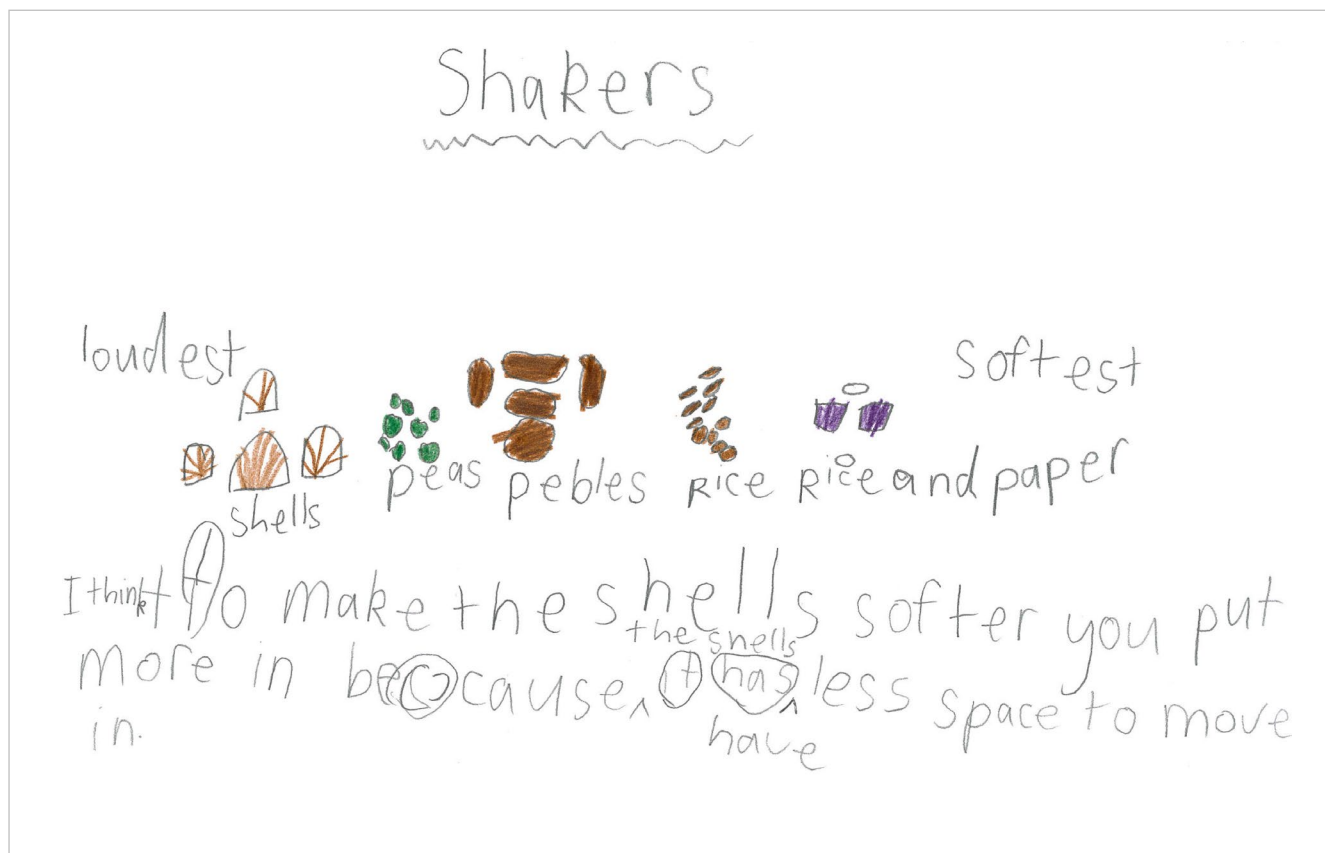
Students make predictions, and investigate everyday phenomena. They follow instructions to record and sort their observations and share their observations with others.

Summary of task

Students had investigated how different sounds could be made with a variety of musical instruments. They discussed the ways that they sense sound, including hearing and feeling.

For this task, students made a set of shakers, each with different contents. They sorted the sounds made by the shakers from loudest to softest and recorded their findings. They were also asked to explain how the sound in the shakers could be made louder and softer.

Investigation: Comparing sounds



Annotations

Represents contents of shakers to show differing size and contents.

Compares sounds made by shakers using an informal measurement of loudness.

Sorts and records shakers in order from loudest to softest.

Suggests a plausible way to soften the sound of the loudest shaker.

Annotations (Overview)

The student communicates their observations through text and an annotated diagram.

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Investigation: Changing materials

Year 1 Science achievement standard

The parts of the achievement standard targeted in the assessment task are highlighted.

By the end of Year 1, students describe objects and events that they encounter in their everyday lives, and the effects of interacting with materials and objects. They identify a range of habitats. They describe changes to things in their local environment and suggest how science helps people care for environments.

Students make predictions, and investigate everyday phenomena. They follow instructions to record and sort their observations and share their observations with others.

Summary of task

Students had investigated how they could manipulate different materials to change their shape. They explored the meaning of the words 'bend', 'twist', 'roll', 'stretch', 'cut' and 'squeeze' so that they could link the action to the word.

Students worked independently to make predictions and then explored the effect of performing different actions on three different objects (an icy pole stick, a sheet of aluminium foil and a pipe cleaner). They were asked to record their predictions and observations in a provided table. The teacher then interviewed the student about patterns in their results and annotated their responses.

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Investigation: Changing materials

DATA SHEET

EXPERIMENT 1

Object: ~~stick~~ stick

Question: Will the shape of the object change when I it?

	Prediction Yes or No	Results Yes or No
bend	Yes	Yes
twist	no	Yes
roll	no	no
stretch	no	no
cut	Yes	Yes
squeeze	no	no

EXPERIMENT 2

Object: Alfoil

Question: Will the shape of the object change when I it?

	Prediction Yes or No	Results Yes or No
bend	Yes	Yes
twist	Yes	Yes
roll	Yes	Yes
stretch	no	no
cut	Yes	Yes
squeeze	Yes	Yes

commented, "Alfoil could change the most because it only has one 'NO'."

Scientist name: _____

EXPERIMENT 3

Object: pipe cleaner

Question: Will the shape of the object change when I it?

	Prediction Yes or No	Results Yes or No
bend	Yes	Yes
twist	Yes	Yes
roll	no	no
stretch	no	no
cut	Yes	no
squeeze	Yes	Yes

Annotations

Makes plausible predictions about changing everyday objects.

Observes when an object changes shape as a result of manipulation.

Records observations of changes in the shapes of the object.

Identifies the object that could be changed in the most ways, and provides a justification based on data.

Annotations (Overview)

The student communicates their observations through written text and verbal explanation.

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Investigation: Properties of materials

Year 1 Science achievement standard

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Students make predictions, and investigate everyday phenomena. They follow instructions to record and sort their observations and share their observations with others.

Summary of task

Students had investigated the properties of a range of materials, and how these properties could be linked to the uses of materials.

Students worked independently to investigate the properties of a range of everyday materials and then answered a number of questions regarding which material would be best for a particular purpose. They were asked to explain their reasoning.

Investigation: Properties of materials

My hardest to bend was the plate and the paddle pop stick, then the ear plug, the foil and then the pipe cleaner, the playdough, the balloon and then the serviette. The balloon and the serviette are really, really bendy, it just bends and you don't even need your little fingers to bend it.

plate

playdough

Name:

- Which material would be best for wrapping a sandwich? foil
Why? "If I choose the playdough, the playdough will stick onto my food when I take it off and break into little bits. The serviette, too small, and the plate, too big and you can't even 'wrap it'. The foil is big, easy to 'wrap' stuff in, bendy, but not too bendy."
- Which material would be best for making a bracelet? pipe cleaner
Why? "The balloon, you kind of have to stick it on and then stretch it out and around. The serviette would be a bit too big... The plate wouldn't bend around the ear bud shape is too short. The paddle pop stick can't even fit and if you try and get it around it would break and snap. The playdough can wrap, but it is easy to break into little bits. The pipe cleaner can go right around and you can get the other bit and it won't break."
- Which one would be best for building a little house? stick
Why? "The paddle pop stick is long and you can use lots of them to build on and then they are strong. Because it can break but it is easy to make like a house shape."
- Could any of these materials be changed to make a cup? Playdough
Why? "It wouldn't be strong on its own but it can still make a cup shape."

Annotations

Describes a variable property (ease of bending) of the materials and makes comparisons.

Identifies appropriate materials for stated purposes.

Selects and rejects materials based on appropriate combinations of properties of the materials.

Identifies a material that can be manipulated to form another shape and notes a limitation of the material for the stated purpose.

Annotations (Overview)

The student communicates their observations through verbal explanation and written text.

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Worksheet: Minibeast habitats

Year 1 Science achievement standard

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Students make predictions, and investigate everyday phenomena. They follow instructions to record and sort their observations and share their observations with others.

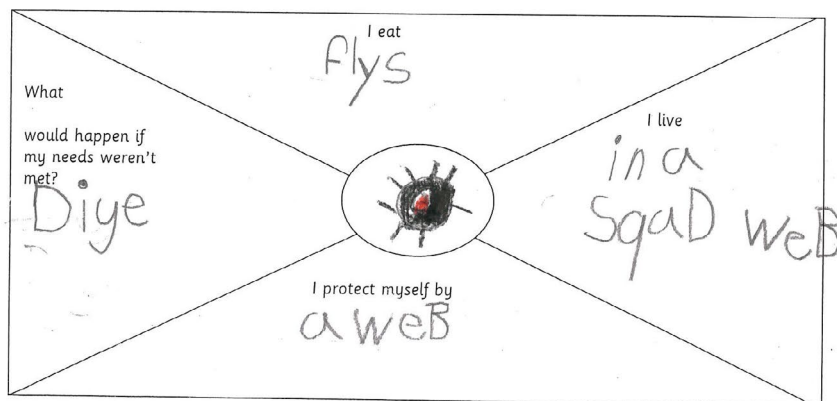
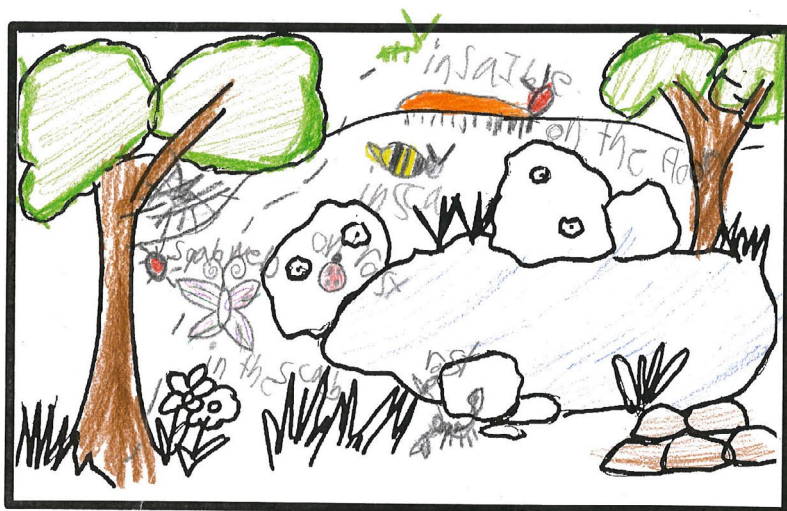
Summary of task

Students had investigated a range of minibeasts, including discussing where minibeasts live, why they live there, and the need to protect their environment.

Students were taken on a walk to observe a range of minibeast habitats. They were asked to record where minibeasts live on the provided worksheet. They were asked to select two of their minibeasts to report on in more depth. The final part of the task required students to design an environment to suit the needs of a newly discovered mini beast. Students completed the task in an hour.

Worksheet: Minibeast habitats

Draw your mini beasts and label where you would find them.



My Sqad lives here because there is a lot of flies. he is safe.

Annotations

Identifies a diverse range of minibeasts and the different places they live.

Identifies that a spider's habitat provides it with food and shelter.

Identifies that a spider has requirements for living.

Identifies that a spider lives where it does because it has food and safety.

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Worksheet: Minibeast habitats

Scientists have discovered a new beetle.

Some things it likes are:

- Eating bugs it finds on leaves and in water
- Hiding under rocks to protect itself
- Lying in the sun
- Laying eggs on leaves

Draw a habitat that where you think the new beetle would have all its needs met.



Annotations

Designs a habitat that includes detailed features needed by the minibeast.

Annotations (Overview)

The student communicates their observations and ideas through annotated drawings and written text.

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Worksheet: Daily weather

Year 1 Science achievement standard

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Students make predictions, and investigate everyday phenomena. They follow instructions to record and sort their observations and share their observations with others.

Summary of task



Students participated in a class discussion about the different types of weather, and developed a vocabulary list to describe weather. They had investigated the ways that weather is represented and as a class had completed a daily weather chart.











Students were asked to individually complete a daily weather worksheet to chart the weather over the week. They were asked to describe their observations and to predict how the weather might change in a different season. The teacher annotated their responses.

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Worksheet: Daily weather

This week's weather   Name: _____ Year: _____ Date: 29.5.12

	Monday	Tuesday	Wednesday	Thursday	Friday
morning					
afternoon					

What did you notice?
Most of it was sunny. Not many days were windy and cloudy.
Wednesday morning and afternoon were windy and cloudy.

Would your chart look the same in winter?
No, because it's a different season of the year and that season is usually windy and stormy.

Annotations

Accurately records detailed daily observations of the weather in a provided table, including representations of wind and rain.

Identifies that the daily weather changed and describes trends in weather observations.

Makes plausible predictions about the different weather that would be observed in another season, describing weather trends for that season.

Annotations (Overview)

The student communicates their observations and ideas through verbal description, drawing and written text.

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Investigation report: Comparing local habitats

Year 1 Science achievement standard

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Students make predictions, and investigate everyday phenomena. They follow instructions to record and sort their observations and share their observations with others.

Summary of task

Students were investigating local habitats. They were read a number of texts such as *Green Air* by Jill Morris, *Hairy Nose*, *Itchy Butt* by Elizabeth Frankel and Garry Duncan, and *Leaf Litter* by Rachel Tonkin. Pair and class discussions were held during and after the reading.

Students investigated two local habitats: the playground and a bush area near the school. They observed plants and animals in each habitat. Following the excursion, they discussed as a class how they might represent their observations using collage, and how scientists find out about life in different habitats. Students recorded their initial ideas in their workbooks, then shared their observations through a collage and a recorded explanation.

Investigation report: Comparing local habitats



Annotations

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