Science

Year 1
Below 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 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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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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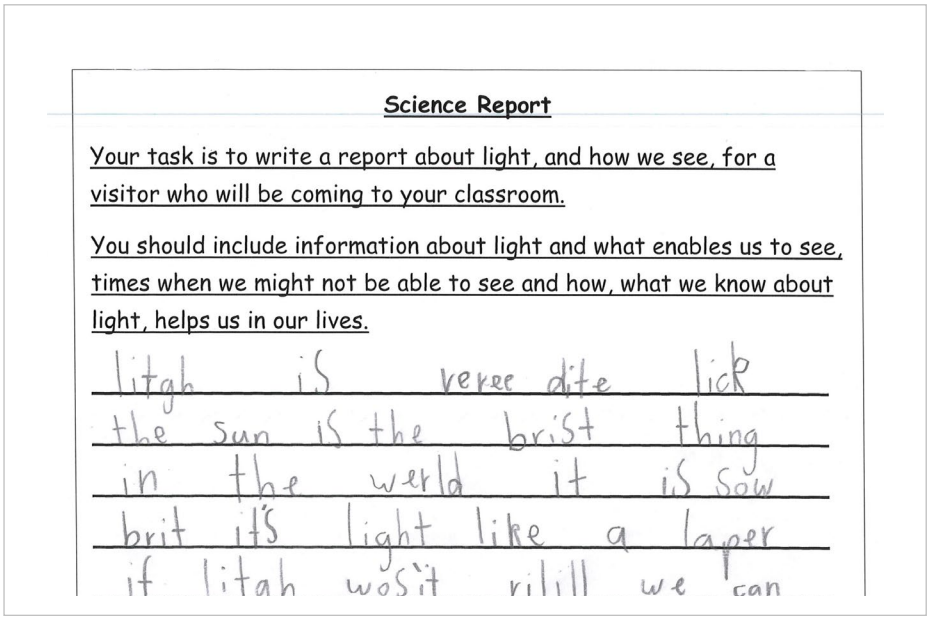
Report: Seeing the light



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.

litgh iS veree dite lick
the sun iS the brist thing
in the werld it iS Sow
brit it's light like a laper
if litah wosit rilill we can

Annotations

Identifies a property of light (brightness).

Annotations (Overview)

Shares observations and ideas through a written report.

Report: Changes in our environment

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 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.

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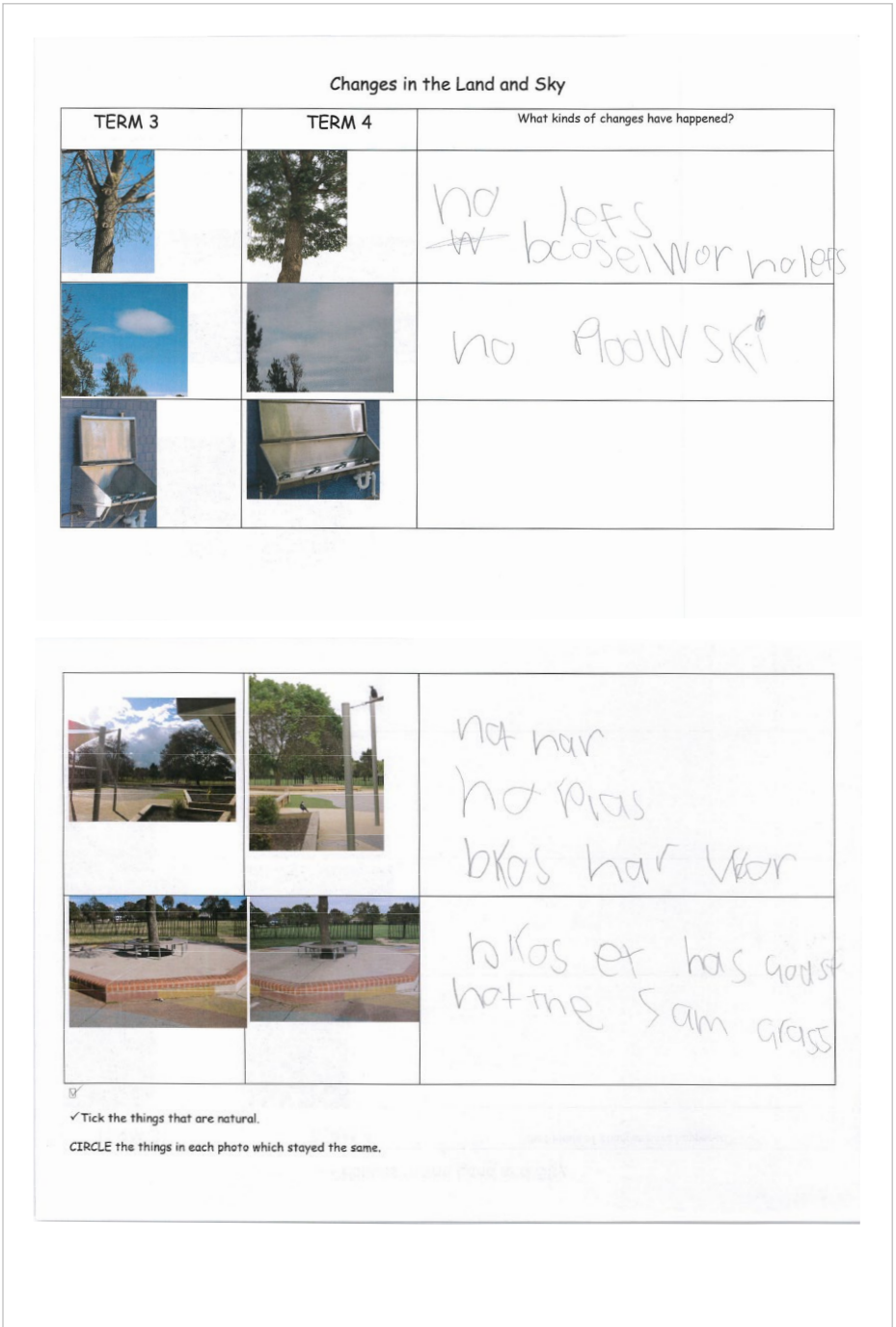
Report: Changes in our environment



Annotations

Describes changes to living things in the local environment.

Describes changes to the sky.

Annotations (Overview)

The student shares their observations and ideas through written text.

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.

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Investigation: Comparing sounds

Annotations

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

Represents shakers and indicates that they contain materials.

Records findings as an ordered set of diagrams.

Annotations (Overview)

The student communicates their observations through diagrams and some text.

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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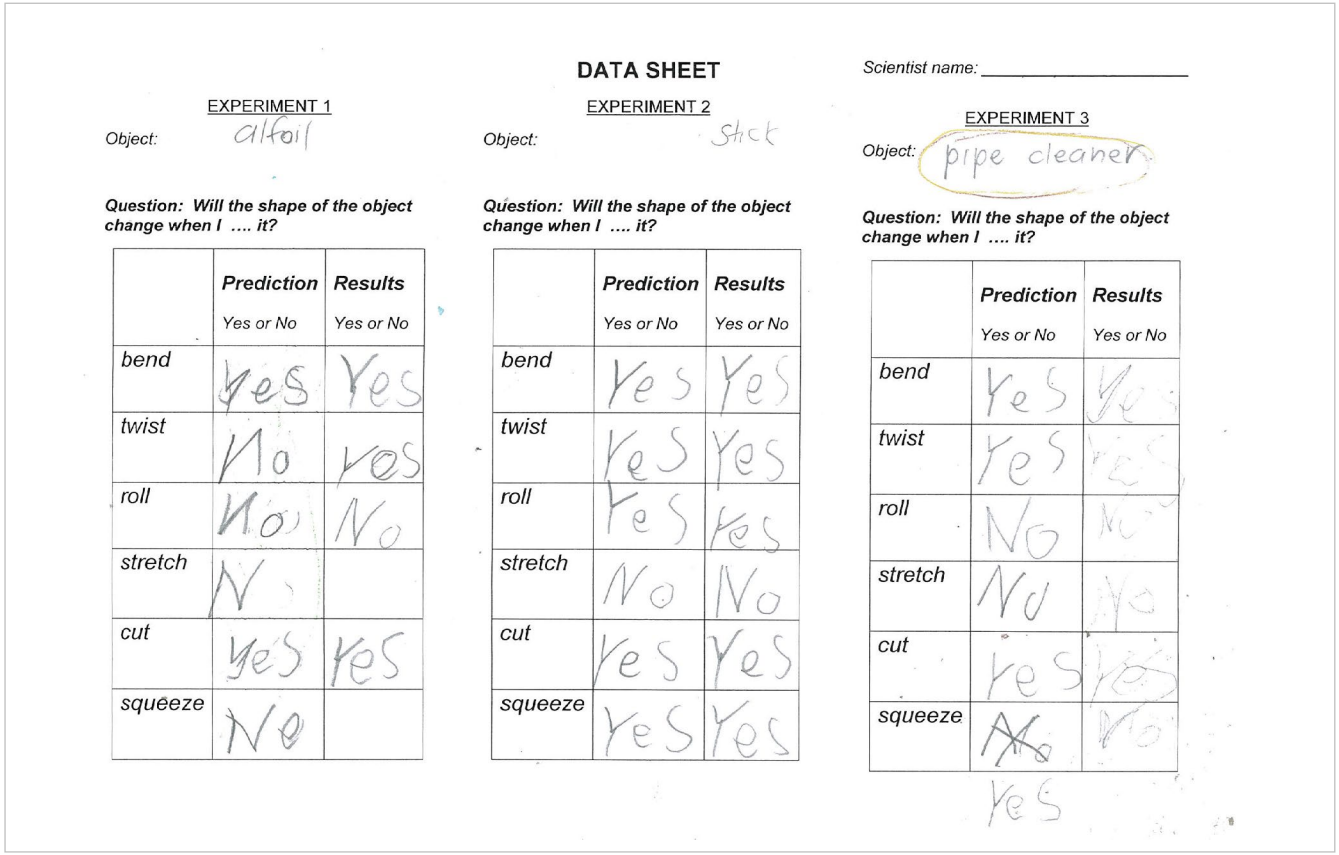
Investigation: Changing materials



DATA SHEET

Scientist name: _____

EXPERIMENT 1

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	No	yes
roll	No	No
stretch	N	
cut	yes	yes
squeeze	No	

EXPERIMENT 2

Object: stick

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

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	Ye
twist	Yes	Yes
roll	No	No
stretch	No	No
cut	Yes	Yes
squeeze	No	No

Yes

Annotations

Makes predictions about changing everyday objects, with teacher guidance.

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

Records observations in a provided table with teacher guidance.

Annotations (Overview)

The student communicates their observations through text.

Investigation: Properties of 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 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.

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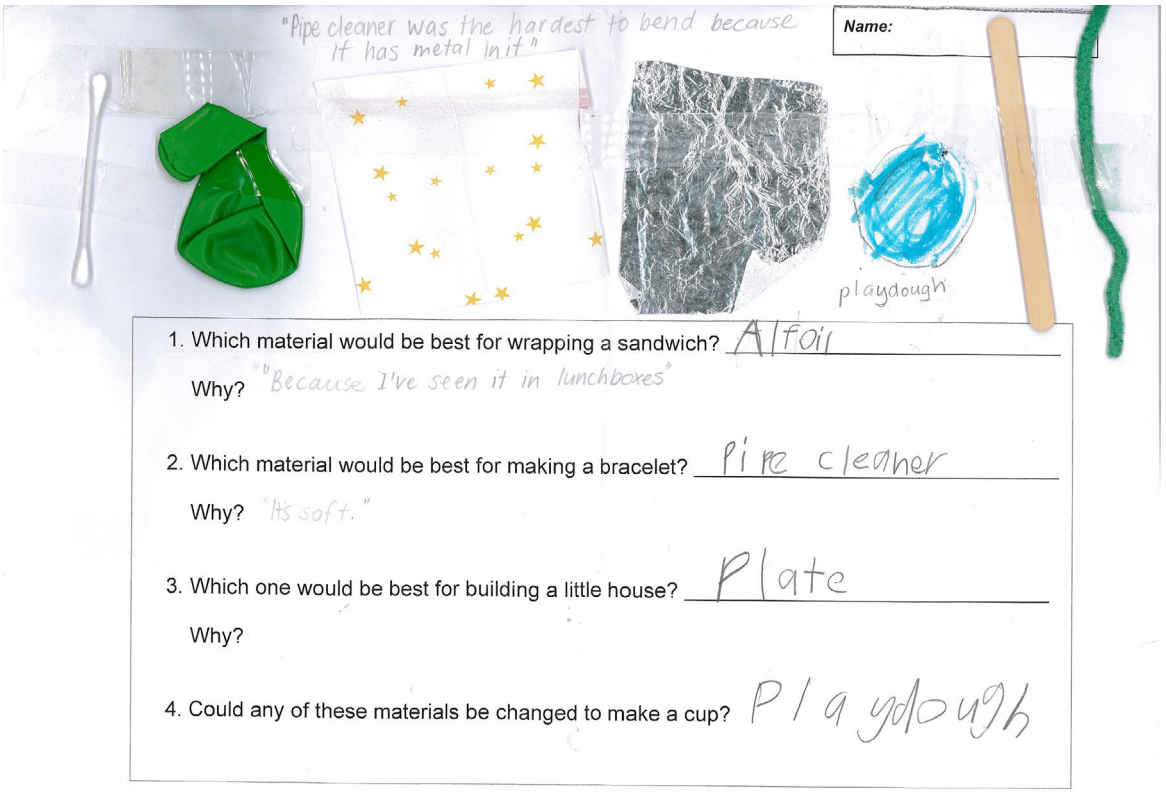
Investigation: Properties of materials



Annotations

Attempts to identify and explain the least 'bendy' material.

Identifies some appropriate materials for stated purposes.

Identifies a material that can be manipulated to form another shape.

Annotations (Overview)

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

Worksheet: Minibeast habitats

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.*

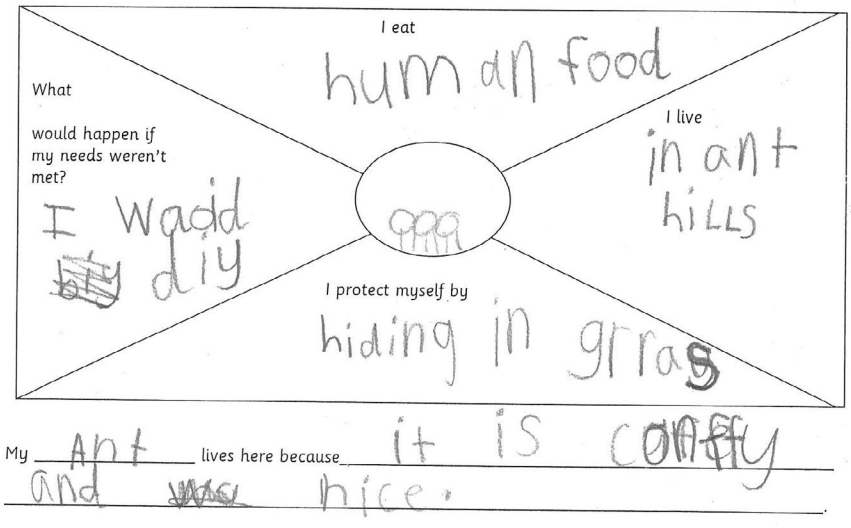
Summary of task

Students had investigated 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 minibeast. Students completed the task over an hour.

Worksheet: Minibeast habitats

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



Annotations

Identifies some minibeasts and the different places they live.

Identifies behaviours of the ant in its habitat.

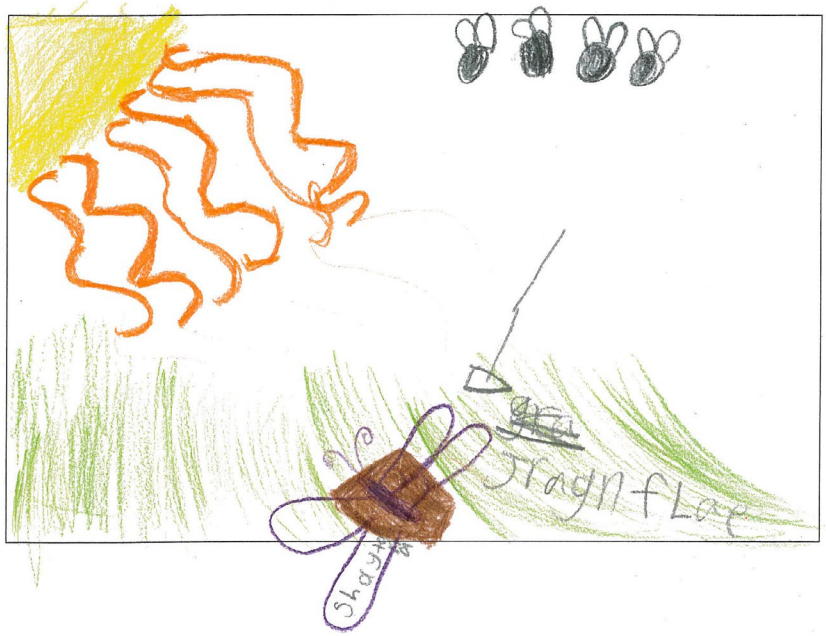
Identifies that an ant has requirements for living.

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 some features needed by the minibeast.

Annotations (Overview)

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

Worksheet: Daily weather

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 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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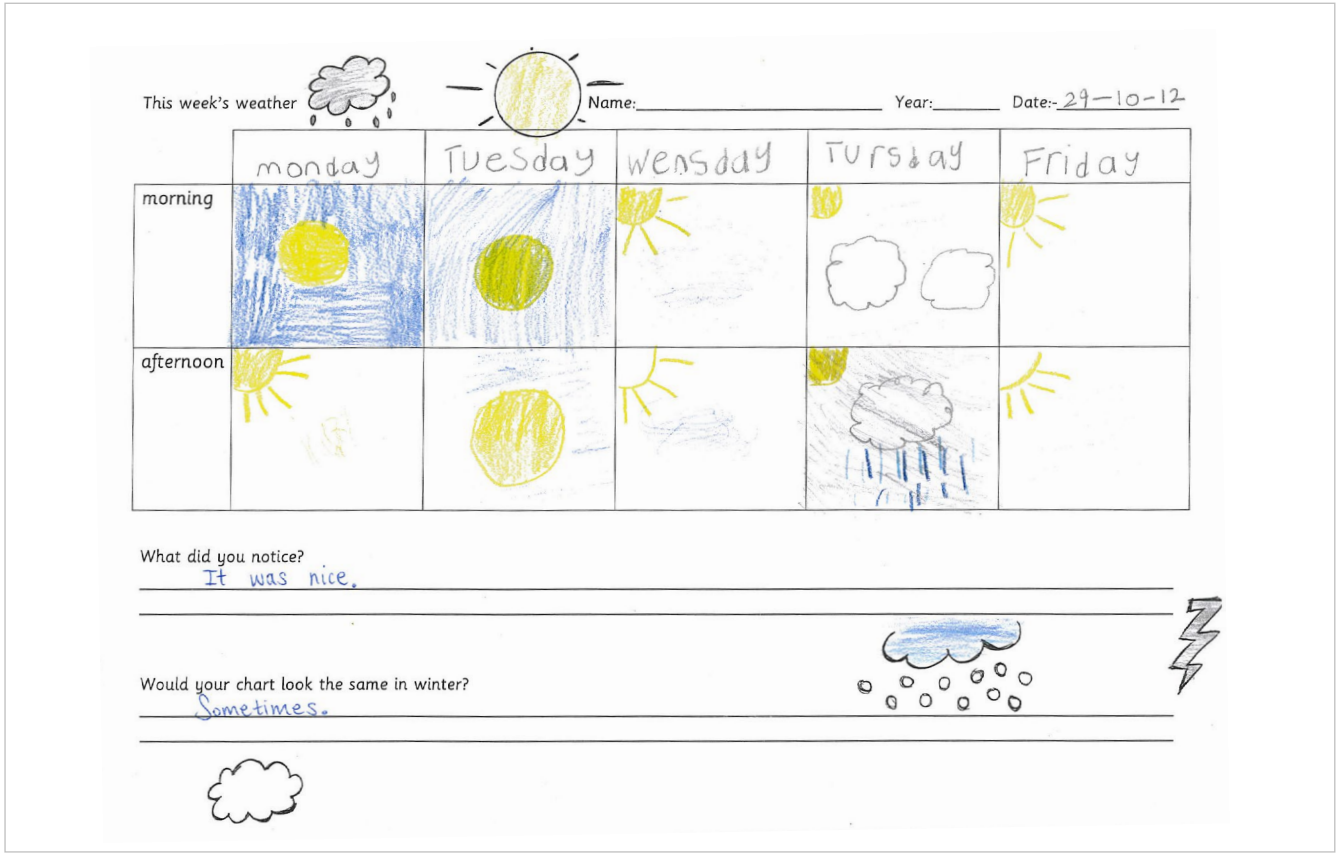
Worksheet: Daily weather



Annotations

Accurately records daily observations of the weather in a provided table.

Makes a prediction about the weather that would be observed in another 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

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 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.

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Investigation report: Comparing local habitats

Annotations