

Schoolyard Safari Bug Study

Written by Michelle Allen of Birrigai Outdoor School



Number of lessons: Four

Year level(s): Grade/Year 1

Australian Curriculum content descriptions:

Living things have a variety of external features [\(ACSSU017\)](#)

Living things live in different places where their needs are met [\(ACSSU211\)](#)

Science involves observing, asking questions about, and describing changes in, objects and events [\(ACSHE021\)](#)

Pose and respond to questions, and make predictions about familiar objects and events [\(ACSI024\)](#)

Participate in guided investigations to explore and answer questions [\(ACSI025\)](#)

Use a range of methods to sort information, including drawings and provided tables and

through discussion, compare observations with predictions [\(ACSI027\)](#)

Compare observations with those of others [\(ACSI213\)](#)

Represent and communicate observations and ideas in a variety of ways [\(ACSI029\)](#)

Achievement standard:

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 describe changes in their local environment and how different places meet the needs of living things. Students respond to questions, make predictions, and participate in guided investigations of everyday phenomena. They follow instructions to record and sort their observations and share them with others.

Context

Students brainstorm what they think they know about small animals living in different places where their needs are met. Students will then investigate a selected habitat eg school compost, vegetable garden, garden bed or tree lot. They'll explore features, behaviour and habitat of different small animals.

Students at this age can usually readily name common larger animals such as birds and lizards residing in playground environments but don't generally have broader conceptual understandings of insects and other invertebrates living in the same habitats, in particular, their features and reasons for different behaviours.

These lessons works well if an area of the school containing several habitats can be investigated by teams at once. If not, have students' complete investigations of different habitats over several sessions so adequate supervision of the class can be maintained. Lesson 4 will need to be done over several sessions to allow for quality work.

Materials and equipment

Equipment for creating dioramas and models - foam balls, pipe cleaners, wire, variety of wing designs, craft eyes, papers, card, match sticks, adhesives, foil, plasticine all work well.

Bug collection and study tools - clean paint brushes, trowels, forceps, bug pots, pooters, nets, magnifying glasses, bug identification keys.

Safety Advice

Students should have developed a code of conduct for observing, collecting and handling creatures to keep themselves and the animals safe. Students should be cautioned about potential dangers before beginning activities involving observing, collecting and handling animals.

Lesson 1 - What do we THINK is living in our schoolyard?

Objectives

To predict what small animals are found in their schoolyard environment and share what they think they know about these animals.

Introduction

Ask students to think about what animals they have observed in the schoolyard and where. Identify key schoolyard environments eg vegetable garden, compost heap, a garden bed, a significant tree or bush area and key features of or in, each of these habitats eg. dark, long grass, mulch, rocks, logs, light shade etc.

Core

Students work in small groups to draw and write what small creatures they think live in each of the identified habitats what they know about their features and behaviours.

Conclusion

Each group shares their responses and a collation is displayed for future reference.

Resources

<https://primaryconnections.org.au/curriculum-resource/schoolyard-safari>

These lessons are based on ones contained within this resource

Lesson 2 - What is REALLY living in our schoolyard?

Objectives

Student will investigate what small animals are actually found in schoolyard habitats identified in lesson 1 and compare these to predictions.

Introduction

Students review predictions and beliefs held about animals made in lesson 1. Explain students are going to compare predictions to what is actually in these habitats by working in teams to investigate a designated habitat.

Core

Review code of conduct and safety precautions regarding potential hazards before dividing students into small working teams to investigate one of the identified habitats from lesson 1 (1 habitat area per team). Students search their identified habitat for small animals. If safe to do so, they use collection tools to place them in bug pots for closer observation.

Students record through drawing, digital photos and writing what they have found, where in the habitat they were located and any animal behaviours or features they observed.

Conclusion

Each group shares their discoveries. Any collected animals are housed appropriately in preparation for the next lesson.

Resources

Digital resources:

<https://australianmuseum.net.au/uploads/documents/9379/quick%20invertebrate%20guide.pdf>

Good visual guide to help students identify small animals found

Worksheets:

(See appendix 1)

Useful links:

<https://www.csiro.au/en/Research/Collections/ANIC/ID-Resources>

Good for teachers but too complex for year 1 students!

<https://www.backyardbuddies.org.au/enviro-ed-resources/school-resources>

Good visuals that can assist students in identification of bugs and insects

<https://australianmuseum.net.au/bugwise>

Great information and links to further teaching resources

Lesson 3 - A closer look

Objectives

For students to build on current understandings by taking a closer look at a chosen small animal, its external features and behaviours.

Introduction

Revise animals discovered in lesson 2. Students choose 1 collected animal to conduct a further focus on. Each student completes a drawing of their chosen animal. Complete the Y chart on the 'My Minibeast' worksheet detailing current concepts about external features ('It Has'), behaviours and movement ('It Can') and its habitat ('It Lives').

Core

Revise code of conduct and safety precautions regarding potential hazards when handling and observing the collected animals. After completing their drawing and Y Chart, students study their chosen animal closely using tools including bug pots and magnifying glasses. Model for students how to look closely at the animal to observe detail of body parts, movement and behaviours. Model drawing a detailed diagram of an animal including labelling external features. Students redraw their chosen animal after close observation. Add any new observations to the Y chart.

Conclusion

Students display their before and after drawings and share interesting observations they have made about their animal.

Resources

Worksheets: (see appendix 2).

Useful links:

<https://primaryconnections.org.au/curriculum-resource/schoolyard-safari>

Lesson 4 - Minibeast Models

Objectives

For students to represent what they know about small animals living in an identified schoolyard habitat. Students will work in teams to create a diorama of a chosen habitat. Using shared understandings from lesson 2 and 3, students build models of small animals living there, including their external features. Animals will then be located in their preferred location within the habitat.

Introduction

Revise student's animal observations and annotated diagrams of lesson 3. Students choose a habitat from the schoolyard areas explored and then form teams to design a diorama depicting the chosen habitat.

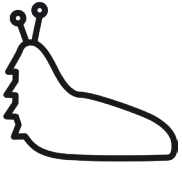
Core

Students create the designed diorama and build models of the small animals living there using the supplied materials. They place their models in the preferred living site of their animal within the diorama.

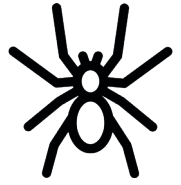
Conclusion

Dioramas are displayed and teams share their designs with one another, explaining what animals are living where, why and what features they have to help them survive there. Compare understandings with original understandings explored in lesson one.

Appendix 1



SCHOOLYARD SAFARI SEARCH



Name of animal _____

We found it _____

Name of animal _____

We found it _____

Name of animal _____

We found it _____

Name of animal _____

We found it _____

Appendix 2

MY MINIBEAST IS A _____

IT HAS	
IT LIVES	IT CAN