

Learning to Love Australian Birds

Primary Activities

Introduction

Thank you for providing your students with the opportunity to make a commitment to the original 1909 Gould League Pledge for the Preservation of Birds - as relevant today as it was nearly one hundred years ago with many native bird and animal species facing the threat of extinction. These class activities will help reinforce a freshly motivated interest in understanding Australian birds and their welfare with enjoyable participatory activities.

The Bird Lovers Pledge 1909

- 1. I hereby promise that I will protect native birds and will not collect their eggs.**
- 2. I also promise that I will endeavour to prevent others from injuring native birds and destroying their eggs**



Outdoor Introduction to Birds- Without Binoculars

Take your students outdoors where they are able to see for a long distance as well as observe several habitats. If they start by moving quietly, they will see more birds.

Equipment

Binoculars (optional)



Introducing binoculars (optional extension with binoculars)

- Form into a circle.
- Hand out one by one a pair of binoculars to each student or groups of students.
- Explain the features on a pair of binoculars. Locate the eye piece that rotates. Look for the markings on the eye piece.
- Ask students to rotate the eye piece to zero. The adjustable eye piece allows people who need glasses to use the binoculars with out their glasses.
- Binoculars bend in the middle to allow the both eyes to see clearly trough the two eye pieces. Bend the binoculars to fit the eyes.
- Focus the binoculars on an object at least 7 metres away.

Listening to the environment

- Form into a circle, facing out of the circle.
- Ask everyone to close their eyes and cover their eyes with their hands.
- Get the group to listen to different sounds. Highlight many bird calls. Listen to louder and quieter sounds. Listen to cars, dogs etc. Pick sounds that may be moving. Listen to the air. Keep coming back to bird sounds.

What scares birds?

- Stay in the circle. Ask people to look into the centre while you speak.
- Birds escape when frighten. Three things will frighten birds unnecessarily.
 - Pointing with an outstretched arm.
 - Sudden movement, e.g. a kid swinging a bag, throwing a ball, all forms of play fighting etc, can frighten birds because of the fast movement.
 - Sudden loud sounds - you can talk at an even pitch with little trouble.

Locating birds

- Look out of the circle again.



- To find birds, look for movement and locate where sound is coming from. The brightest parrot is invisible in a green tree when it remains motionless. Look for movement in the air, on the ground and among plants. You may also find some birds resting on structures like power lines, roofs etc. Look in the direction of bird calls. Remember not to point with an outstretched arm.

Developing skills (optional extension with binoculars)

- Use the binoculars to look at the birds more closely. Develop the skills of locating the birds in the binoculars and focusing. Check to see if the eye piece hasn't moved.

What to look for

- Line up the group so they are all looking in the same direction.
- Pick a bird of interest.
- Go through some of the features that enable its identification. Talk about its colour pattern, shape of the body, beak and legs, how it moves and what calls it makes.

How close can we get?

- Ask the group to guess how close they think a person can get to a particular bird they can see.
- Ask one student to sneak up on the bird and see when it flies off.

Feeding

- Ask the group to look at the birds and try and work out how it might be feeding.

What is it doing?

- As a group, look at one type of bird and identify as many things as possible that it is doing.



Understanding Bird Features – Individual Activities

Birds have an interesting range of features. These activities explore the how birds can use their features to survive.

Setting up the classroom

If most of these activities are set up as a number activity stations that students rotate through in the classroom, less equipment will be required.

Understanding Bird Beaks

Beaks perform many functions for birds. They may need to pick up food, drink, build a nest, clean their feathers and care for their young.

Activity One

Equipment: Tweezers, kitchen utensils and grains of rice.

Method: Some birds use their beaks as tweezers to pick up small items. Use tweezers to pick up grains of rice. Use other household items like tongs and spoons. Which piece of equipment is most effective?



Activity Two

Equipment: Stopwatch

Method: Observe a ground dwelling bird feeding. Use a stopwatch to find out the rate of pecking the ground for five minutes to write as many things as possible that a bird can do with its beak

Activity Three

Equipment: Scrap paper, pencils and bird books from the library

Method: Draw a beak and ask students to match it to a bird in a book or set of stickers. Design a bird beak for a specific function. As a class, make a list of all the functions a wide range of birds can perform with their beaks.

Understanding Bird Eyes

Birds' eyes provide excellent colour vision, similar to ours. The eyes of most birds can see around a much wider angle than ours, almost behind the back of their head, however most birds see things a lot smaller than we do.

Activity

Equipment: Binoculars, tweezers and grains of rice

Method: Viewing through a pair of binoculars makes things look larger but when we look back to front through a pair of binoculars, the world looks small and we start to see the world



in a similar way to birds. Look back to front through a pair of binoculars. While looking through the binoculars, use a pair of tweezers and try to pick up the grains

Understanding Bird Feathers

Feathers are modified scales. They are light, keep the bird warm (birds have a slightly higher body temperature than us) and protect the skin. Large flat feathers are layered to make wings and tails for flying.

Activity

Equipment: A selection of different shaped feathers, various equipment for measuring length and weight, and a microscope

Method: Measure feathers in every possible way, length, area, sort, weight etc. Look at the structure of the different types of feathers under high magnification.

Thesaurus Journey

Thesauruses are available as books or as part of a variety of computer applications, such as a word processor. These can be used to take a word journey.

Activity

Equipment: Computer with an application that includes a thesaurus or a book thesaurus.

Method: Show students how to access the thesaurus on a software application or look up words in a paper thesaurus. Take any word that applies to birds. Use the thesaurus to find similar words. Examples may be bird, flight, beak etc. Double click on any similar word and it will take you to a new set of words (or follow the path through the book). Do this six times.

What kind of words did you end up with?



Understanding Bird Features – Class Activities

Understanding Bird Feathers

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Class Activity

Equipment: Doona feathers, other insulating materials, thermometer, stop watch and frozen plastic bottles of water

Method: Investigate the insulation properties of feathers. Compare the insulation properties of doona feathers with those of other materials. Wrap several frozen plastic bottles of water in various materials and leave one unwrapped. Which material keeps the water frozen for the longest period of time?

Understanding Bird Skeletons

The bird skeleton is very light so it is easier for birds to fly. The breast bone has a keel for the attachment of the large wing muscles.

Equipment: picture of a bird skeleton and a human skeleton

Method: Compare the bird skeleton with a human skeleton. Find the equivalent limbs on a bird compared with a human.

Understanding Bird Wings

Bird wings can be swung backwards when diving. Wings are folded away when the bird is not flying.

Equipment: scrap paper, clean feathers

Method: Move the class into a large space where they can swing their arms. Simulate by using the arms the movement of a bird's flight. Birds move their wings in a figure of eight to achieve lift and forward movement. Get them to fly, glide and dive. They can also act as if they are resting and then taking off. Using paper and other materials, experiment with surfaces that glide. Using cleaned feathers, try and make a bird's wing.



Understanding Bird Tails

The feathers in a bird's tail are important in flying. Most aircraft have a tail. The tail helps the bird to fly horizontally.

Equipment: scrap cardboard and paper, writing materials and suitable scissors

Method: Draw the different shapes of birds' tails. Make a cardboard bird's tail to be worn by students. Try to use the tail. What problems would humans have if they had bird tails? Only the toes touch the ground. Most birds have four toes - three forward and one backwards. Some exceptions are owls, emus and ostriches. Use a diagram of a bird skeleton to find the bird knee and ankle. How do birds stand? Give students five minutes to write a list of the things birds can do with their feet and claws.

Understanding the Bird Cloaca (Bottom)

Birds have only one opening for the rear end that does the works.

Equipment: Recording material, box of eggs

Method: Start a discussion: "Did you know that birds have only one hole for everything - What comes out? Do birds do wee? (No, they produce a white solid called uric acid). Do male birds have a penis? (No, except for ducks).



Play with an egg and open it. How does it feel? What is inside?

Have an egg throwing competition (aim to wrap it so it does not break)

Guess how many bird droppings are splattered on the school windows. Sample some rooms and estimate the number of

droppings. Now count the total number.

Understanding Bird Brains

For birds to remain light they have small brains. But these brains are highly programmed for birds learn specific things. Many bird behaviours are perfectly repeated again and again.

Equipment: Scrap paper and writing materials

Method: In a large area, in which students can freely move, simulate a bird dance. The bird dance requires constant repetition.

In small groups simulate bird behaviour. This could be feeding themselves, a young chick, fighting etc. Demonstrate the behaviour in front of the class and see if they can guess what the simulation is portraying.

In five minutes, list what a bird can do to protect itself e.g from a cat or a falcon.



Understanding Bird Colours

Many birds can identify members of the same species by colour or patterns on the feathers. For some types of territorial birds, young have some colours missing so they are not attacked. Sometimes male and females have different colours.

Equipment: Photocopies of a bird outline, colouring materials

Method: Photocopy a black outline drawing of a bird. Pairs of students colour-in identical birds. Collect, shuffle and hand the birds out. Using the bird cards, students should find their mates.

Photocopy a black outline drawing of a bird. Create a camouflaged bird for a specific habitat. Ask other students if they can guess what habitat it might live in. Sometimes staying together for protection is more important than having good camouflage. Choose patterns and colours that would help birds remain together and not be accidentally confused with other birds.

Understanding Bird Communication

Many birds have a complex range of calls and songs to communicate to other birds. They may want to communicate to all birds, to only their own species, to a mate or their young or the young to their parents.

Equipment: variety of equipment that can be improvised to make sounds, whistles, class set of blind folds.

Method: Use vocal cords, whistling techniques, whistle, and instruments to improvise bird calls. Rub materials together (e.g. polystyrene) to produce squeaking sounds.

In a large open area, pair up students. In pairs, they are to invent their own bird call. Line up each pairs at the opposite end of the open. Place blindfolds over the eyes. Ask students to find their pair using their bird call.

Understanding Bird Feeding

Birds like mammals are warm blooded and need a lot of food to keep themselves alive. Birds must spend a lot of their time feeding.

Equipment: packet of soup mix seed, recording materials

Method: Take a packet of soup mix seed and drop equal amounts in different locations e.g. grass, soil concrete etc. Divide students into equal groups, each group will be picking up seeds in one of the locations. Give students a fixed time, (no more than five minutes) to find as many seeds as possible. Back in class, compare the pick up rate. Which seeds are hardest to find on the different surfaces?

Try to find bird food. How many insects can a student find in the grass in five minutes? If the students could eat insects, would they be able to find enough food?



Bird maths challenge

The purpose of this exercise is for students to direct their own learning. Listed following is a series of questions and challenges about birds. To answer these, students will need to design an investigation, gather data, and analyse and present the data. Students may choose to identify their own question to answer.

- On average how long does a bird sing?
- Is there a difference between where large birds and small birds feed?
- Do birds turn up at lunch time?
- Estimate how many feathers are in a doona?
- Do more birds sing at 9 am compared to 12 pm?
- How does the length and width of a feather compare?
- Graph the number of lorikeets seen flying in flocks
- Estimate the number of times a magpie pecks the ground in a day
- How often does a pigeon or mudlark jerk its head when walking ten metres?
- What speed does a bird fly? Or how long does it take for a bird to fly the width of the school?
- Measure every aspect of an egg
- Use a diagram and measure and compare the length of the equivalent limbs in a bird compared to a human
- Find the chance of a bird doing a dropping on a car
- Which is the most popular structure made by people for birds to rest on in your school?
- Which type of bird song travels the longest distance?
- Is there a size relationship between birds that hop with those that walk?
- How many times does a large bird beat its wings to cover 100 metres?
- Find a way to represent the movement (on paper) of a bird feeding on the ground
- How many chickens and eggs will you eat during your lifetime?
- Estimate the total number of birds that are in the school ground at a particular time
- Record the number of birds in different places to find where the most birds occur in the school ground
- Record the behaviour of a bird every 30 seconds. Make a graph to represent its behaviour
- Design a bird aviary – indicate how much material is required
- Design a nesting box – indicate how much material is required
- Design a bird hide – indicate how much material is required
- Design a pigeon loft or chook pen – indicate how much material is required

