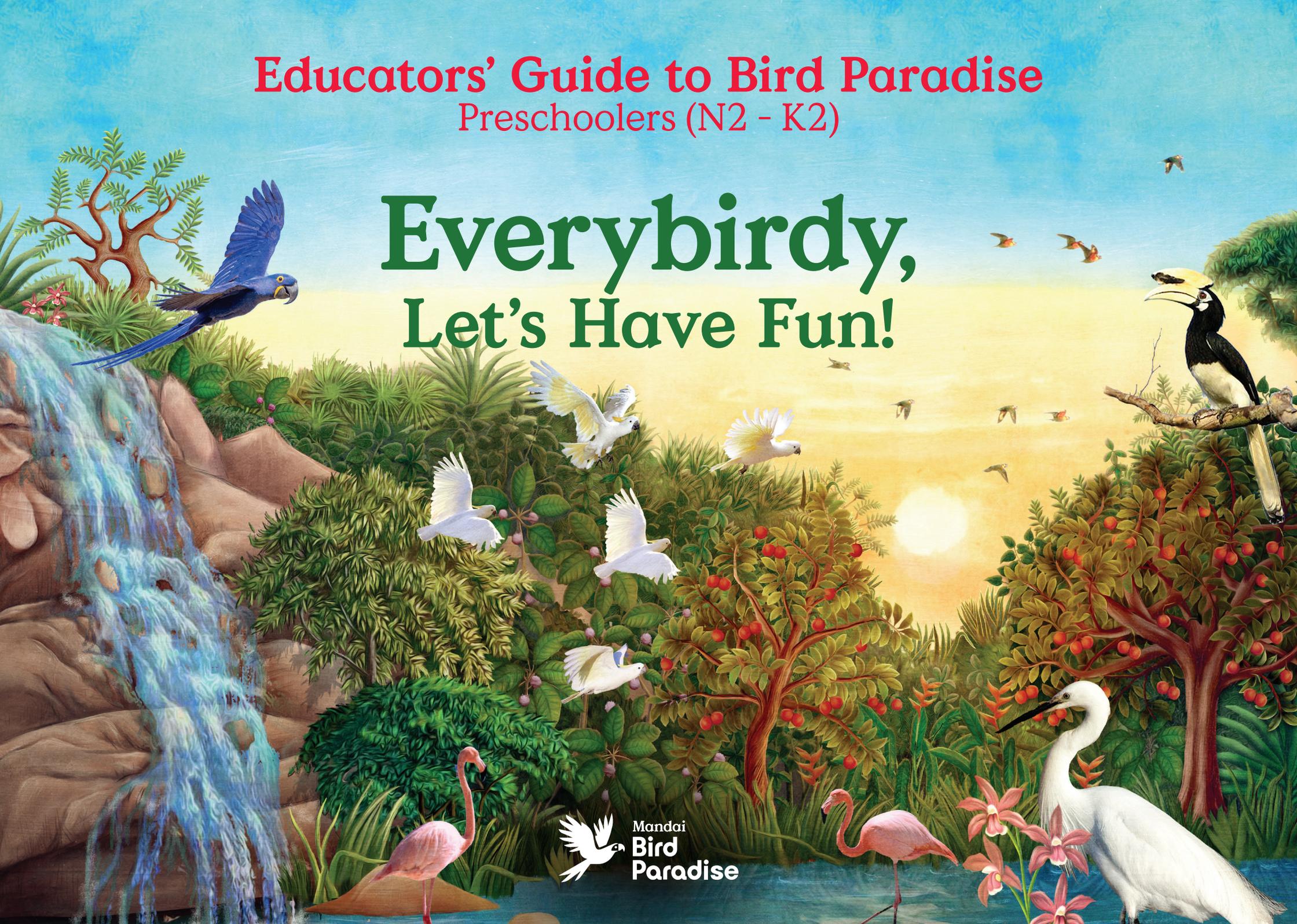


Educators' Guide to Bird Paradise
Preschoolers (N2 - K2)

**Everybirdy,
Let's Have Fun!**



Planning a learning journey

Bird Paradise is a huge place. We recommend that you focus on a section of Bird Paradise for learning journeys.

This guide features:
 ~ Penguin Cove,
 ~ Feathers Hub,
 ~ Heart of Africa,
 ~ Nests Hub,
 ~ Wings of Asia and
 ~ Eggs Hub.

Do make use of the **fun facts** on feathers, nests and eggs at the Hubs to facilitate **observation, discovery and learning** in addition to exploration at Penguin Cove, Heart of Africa and Wings of Asia.

Use the suggested **See-think-wonder prompting questions** to help children practise the skill of perspective taking and critical thinking.

Suggested Itinerary

- A** Start from entrance
- B** Penguin Cove
- C** Feathers Hub
- D** Heart of Africa
- E** Nests Hub
- F** Wings of Asia
- G** Eggs Hub
- H** Shuttle back to entrance



About Bird Paradise

Look out for



8 walk-in Aviaries:

- ~ Heart of Africa
- ~ Wings of Asia
- ~ Crimson Wetlands
- ~ Amazonian Jewels
- ~ Songs of the Forest
- ~ Lory Loft
- ~ Mysterious Papua
- ~ Australian Outback



11 Thematic Discovery Hubs

Discovery spaces to learn about feathers, beaks, nests, camouflage, eggs, colours, migration and more.



Children Play Areas

- ~ **Treetop Play**
a dry play area inspired by the movement of birds in tree canopies
- ~ **Egg Splash**
a wet play area inspired by bird eggs



Sky Amphitheatre

- ~ **'Predators on Wings'**
presentation featuring eagles, hawks and other birds of prey
- ~ **'Wonders of the World'**
presentation that is simply awe-inspiring about birds.

Gawk at these birds

There are 3,500 birds representing over 400 species, of which 24% are threatened. We encourage you to focus on only selected groups to best achieve your learning outcomes. Here are some suggestions:



Hornbills



Parrots



Penguins



Flamingos

Penguins



Penguins are flightless birds.

- ~ Can swim and dive well
- ~ Waddle, hop or slide on their bellies on land



Not all penguins live in cold places

- ~ Some penguins, like the African penguin, never see snow
- ~ Galapagos penguins swim in waters as warm as 30°C



Penguins come in different sizes

- ~ 18 species (types) in total
- ~ Largest: emperor penguin (about 130cm tall)
- ~ Smallest: little penguin (about 33cm tall)

In the wild, penguins and polar bears do not exist together. Penguins live in the Southern Hemisphere. Polar bears live in the Arctic (in the North).

Try these at

@ Interpretive Wall

Choose 1 penguin on the wall and mimic its pose.

I wonder how that penguin moves.

Name 1 penguin that live in cold places.

Name 1 penguin that live in warmer places.

How do you cool down when you feel hot?

Compare your height with that of the penguins on the wall. Which penguin is as tall as you are?

Find the largest and smallest penguins.

B

Penguin Cove:

@ Exhibit

Observe one penguin. Describe what it is doing.

Mimic the penguin for 30 seconds.

How do you keep warm? Let's huddle like king penguin chicks!

In cold places like the sub-Antarctica, king penguin chicks huddle together to keep warm.

Use 5 words to describe the selected penguin.

Compare 2 different species of penguins. How are they similar?

Beak, flippers, webbed feet, black & white, feathers

Spot Me at **B** Penguin Cove

About Penguin Cove

- ~ Features one of the world's largest sub-Antarctic, cold salt-water habitats for penguins.
- ~ The water and air temperature are maintained at a low of 8°C for the cool comfort of the penguins.
- ~ Has special lighting that mimics the changes in day length in the different seasons – all to simulate the natural habitat of the penguins.

Look out for the **white markings** that resemble a headset!



Gentoo Penguin

Look out for the **black crest feathers** and **yellow 'eyebrows'**



Northern Rockhopper Penguin

Look out for the **yellow teardrop patch**



King Penguin

Look out for the **pink skin patches** around its eyes and the base of its bill.



Humboldt Penguin

Find out more about penguins [here](#) or book '[Penguin Adventure](#)' for discovery and fun

I Like to Move It at **B** Penguin Cove



Swim

like a
gentoo
penguin

**Fastest
swimming bird**
– up to 36km/h

That is around 3 times the speed
of an adult cycling on a bicycle!



Hop

like a
rockhopper
penguin

Strong legs
– can jump about 2m
in a single bound

That is about the height of an
average-sized door!



Waddle

like a
king
penguin

**Second tallest
penguin in the world**
– about 100cm tall

That is a little taller than
most children of your age!

Feathers

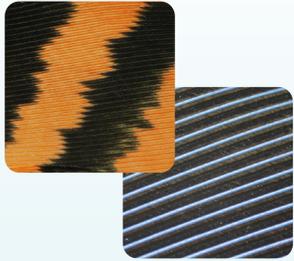
Try these at



**Feathers
Discovery Hub**



**Heart of
Africa**



All birds have feathers

- ~ Feathers are body coverings of birds
- ~ Feathers come in all colours, patterns and shapes

What patterns and shapes can you spot on the feathers on display?

Long, short, curved, straight lines, polka dots, patches...

Spot 3 birds with feathers of different colours and patterns.

Draw them. Use 5 words to describe the birds' feathers.



Feathers are not just for flying

- ~ To keep warm
- ~ To camouflage (blend in with the surroundings)
- ~ To line nests
- ~ Down feathers break down to become powder dust for feather care in some birds.

Imagine you were a bird.

Show how you would use your feathers other than flying.

Look out for birds that are flying and try spotting the well camouflaged ones as well.

Describe how they are using their feathers.



Most male birds have more brightly coloured feathers than females

- ~ Used to attract females
- ~ May grow different feathers during the breeding season to be more attractive

Find the photo spot of the Great Argus and show your best pose for the album!

The male Great Argus shows off his long, beautiful feathers to attract females.

Spot 2 birds that look similar in size and shape. Describe the differences in their feather colours.

I wonder if they are male or female.

Spot Me at **D** Heart of Africa

About Heart of Africa

- ~ Largest aviary in Bird Paradise
- ~ Also the most forested aviary, with many large trees retained during construction

Try these **See-Think-Wonder** prompting questions:

- ~ Spot 3 birds with different beak shapes. Describe the beak shapes
- ~ What do you think they use their beaks for? Show me using actions
- ~ I wonder how the shape of their beaks help them eat



Saddlebill

Long, sharp
beak to jab
fish and hold
wriggling prey



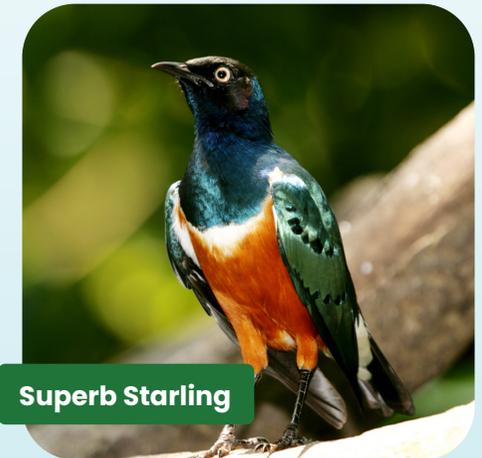
African Grey Parrot

Sharp, hook-like
beak to crack
open fruits, nuts
and seeds



Lesser Flamingo

Curved beak with
comb-like filters
to trap algae and
shrimps in water



Superb Starling

Sharp, pointed
beak that acts
as tweezers to
catch insects

I Like to Move It at **D** Heart of Africa



Von der Decken's
Hornbill

Fly

High up
in the sky
like a hornbill

Glide

From
tree to tree
like a hornbill

Hop

From branch
to branch
like a hornbill



Get to know more about
birds by booking our
programme
'**Fun With Birds**' here



Get children to observe other birds :

~ **African grey parrots**
using their toes to grip
branches and to hold food.

~ **Flamingos**
wading in shallow waters

Find out more about Heart of Africa [here](#)

Nests

Try these at

E Nests
Discovery Hub

F Wings of Asia



Nests are not birds' homes

- ~ Nests are safe places to lay eggs and raise chicks
- ~ Chicks leave the nest once they are ready to survive on their own

I wonder why birds build nests.

Choose 1 nest on display.
How do you think the bird build this nest?

Find 1 nest in the aviary.
Describe the nest.

I wonder why the parents built the nest here.



Nests come in different shapes, and are made of different materials.

- ~ Flat, bowl-shaped or bag-shaped
- ~ Nest materials include leaves, twigs, mud, pebbles, feathers or even wires and straws

Compare the shapes of 3 different nests on display.

What materials are the nests made of?

In groups, use natural loose parts (e.g. leaves, twigs) from the ground to create a nest.

Name the materials.



Not all nests are found on trees.

- ~ Some are found in tree hollows, burrows, cliffs, on the ground and wall of caves
- ~ Some birds do not build nests at all.

Where do you think nests can be found?

Name 1 bird that does not build nests.

King penguin parents take turn to balance their egg on their feet to keep it warm.

If you were a parent bird, where would you build your nest to keep your eggs safe?

Enjoy hands-on learning through our programme 'Let's Build A Nest'

Spot Me at **F** Wings of Asia

About Wings of Asia

~ Features some of Asia's most threatened species such as the black-faced spoonbill

Try these **See-Think-Wonder** prompting questions:

- ~ Spot 3 birds with different types of feet. Describe their feet
- ~ How do you think they use their feet? Observe and copy their actions
- ~ I wonder how their feet is different from ours



Green Peafowl

Sharp claws
for digging to find food like insects and berries on the ground



Black-faced Spoonbill

Long, thin legs
to wade in the water to find food like fish and shrimps.

Additional talking point:
Bill is shaped like a spoon; used to stir up mud to snag fish



Papuan Hornbill

Strong toes with sharp claws
to grip tree branches.

Additional talking point:
Large, long bill to reach fruits on branches.



Bar-headed Goose

Webbed feet
act like paddles to help the bird swim in water.

I Like to Move It at **F** Wings of Asia



Spotted Whistling Duck

Fly

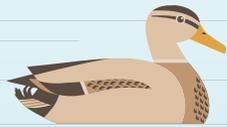
up to the trees
like a duck

Waddle

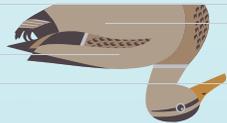
on the ground
like a duck

Paddle

in the water
like a duck



Get to know more about birds by booking our programme '**Fun with Birds**' here



You may get a chance to witness the **spotted whistling ducks** dabbling - dipping their head in the water while pointing their tail upwards. They do this to feed on water plants, seeds and snails.

Eggs

Try these at



**Eggs
Discovery Hub**



All birds reproduce by laying eggs.

- ~ Eggs contain nutrients needed for chicks to grow
- ~ Hard shell protects the chick
- ~ Tiny holes on eggshells allow the chick to breathe

Try this activity at the photo point.

Imagine you were a chick that has just hatched.

How would you feel?



Eggs come in different shapes and sizes

- ~ Largest: Ostrich. Its content (volume) is equivalent to about 25 chicken eggs
- ~ Smallest: bee hummingbird. It's the size of a coffee bean

Describe and compare the eggs on display.

*Size (big, small),
shape (round, long),
pattern (spots, stripes),
colour (blue, red, brown)*



Colours and patterns on the shells help the chick survive

- ~ Protect them from predators by blending in with the surroundings
- ~ Birds that nest in tree hollows lay white or pale coloured eggs - easier for parents to spot in the dark

Help parent birds find their eggs. Match the eggs on display to their parents.

Design your own egg.

Find out more about bird eggs [here](#)