



## WONDER-FULL

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## **Overall Learning Goals**

Children learn to ask meaningful questions, observe closely, form hypothesis, explore how to find answers to their questions, and communicate their ideas.

## **Key Curriculum Expectations**

### **Science and Technology:**

Overall Expectation 1: demonstrate an awareness of the natural and built environment through hands on investigations, observations, questions, and representations of their findings.

### **Language:**

1.7 – use specialized vocabulary for a variety of purposes

1.8 ask questions for a variety of purposes

Overall Expectation 4: communicate in writing, using a variety of strategies that are appropriate for beginners

### **Personal and Social Development:**

Overall Expectation 2: demonstrate an ability to use problem-solving skills in a variety of social contexts.

### **Emotional Development:**

2.1 use a variety of simple strategies to solve social problems

2.5 interact cooperatively with other in classroom events and activities

## **Guiding Children's Ability to Observe and Question**

Giving children exciting and authentic opportunities to observe and question builds upon their natural curiosity. In *A Place for Wonder: Reading and Writing Nonfiction in the Primary Grades*, Georgia Heard and Jennifer McDonough speak to the importance of keeping children's sense of wonder alive by encouraging them to look closely, question, and search for answers. They underscore the importance of a classroom environment that encourages children's sense of wonder with the natural world. As teachers we can do this by,

- Bringing animals into the classroom to give children real world opportunities to practice observation and inquiry.
- Providing opportunities, tools, and encouragement for children to observe and describe what they see. For example setting up a centre with a variety of interesting natural objects.
- Modelling and supporting children in developing the vocabulary of questioning so that they are able to communicate their questions. For example, giving prompts such as Why do... or How do...to a child who is struggling to form a question. Posting a list of question words on the wall for children to refer to.

- Asking children open ended questions so that they feel comfortable to discuss and ask questions that are important to them. For example, what are you wondering about? Do you see anything that makes you wonder?
- Providing time to discuss questions in whole group, small group, or individually and accepting each child's contribution to the group discussion equally. Georgia Heard and Jennifer McDonough call this "pondering" time, (A Place for Wonder, pg. 17.)
- Modelling how we discover answers to our questions through reading texts, looking online, asking experts, watching TV or videos, observing more closely and experimenting.
- Emphasizing that there is often no one correct answer.
- Providing opportunities to experiment.
- Giving children access to Non-fiction texts and online content that can both incite questioning and help children find answers to their inquiries.

## **Shared Reading**

Little Turtle, Crystal Inwood  
Who lives at the zoo? , Crystal Inwood

## **Read Alouds**

### **Ocean / Water**

One Tiny Turtle, Nicola Davies  
Commotion in the Ocean, Giles Andreae and David Wojtowycz  
Fabulous Fish, Julie Haydon  
Octopus, Melvin and Gilda Berger  
What Am I?, Fiona Bayrock  
Whales, Sally Morgan

### **Zoo Books:**

Life-Size Zoo: From Tiny Rodents to Gigantic Elephants, an Actual Size Animal Encyclopaedia, Toyofumi Fukuda  
Zoo, Gail Gibbons  
A Kid's Guide to Zoo Animals, Michelle Gilders  
I Want To Be A Zookeeper, Dan Liebman  
Zoo Animals (Baby Genius), DK Publishing  
Zoo Borns! Zoo babies from around the world, Andrew Bleiman and Chris Eastland  
AlphaTales: Zack the Lazy Zebra, Wendy Cheyette Lewison

## CENTRES

### Betta Fish Inquiry Centre



# Zoo Building Centre



## Ocean Exploration / Marine Biologist Centre



## Zoo Vet Centre



## Betta Fish Inquiry Centre

**Form(s) of Play / Learning:** Inquiry

**Themes / Connections:** Living Things & Environments

### **Read-Alouds and Reference Materials –**

Fabulous Fish, Julie Haydon

Quick & Easy Betta Care

Betta: Your Happy Healthy Pet, John H. Tullock

### **Learning Goal(s):**

- ☺ Wondering and questioning
- ☺ Investigation and observation
- ☺ Discussing Ideas
- ☺ Making connections between needs of living things (the Betta and our own)
- ☺ Connections between how the Betta Fish's environment has an impact on it and how our environment has an impact on us

**Possible Vocabulary:** Aquarium, environment, habitat, impact, healthy, air, food, Betta, fin, oxygen, breathing, gills, illness, fry, male, living / non-living, female, scales.

### **Learning Opportunities:**

Prior to interacting with the Betta, the children will brainstorm and create a set of "rules" for our Betta Fish Centre. These might include how to care for the fish, what to do and not to do while at the centre etc.

Before being given **any** information about their Betta fish, the children observe and wonder

about our new classroom pet. They are encouraged to ask questions and record them in our inquiry journal. Question words are posted and children struggling can be given prompts for question starters e.g. Why does.... How does..... During language arts and other times, the students and teacher will ponder and try to find answers to the questions, developing a reference chart of where we can find answers to our questions. Through their own experiences and observations, texts, internet pages, and asking experts, the children will explore answers to their questions.

### **Materials / Animal and Layout:**

- ★ 3 Gallon aquarium
- ★ Betta fish
- ★ Betta food
- ★ PH test kit for water & PH balancer
- ★ Aquarium plants
- ★ Optional pump and hose
- ★ Pens, pencils, markers
- ★ Betta Journals / Clipboards

After initial observation and questioning

- ★ Betta care non-fiction texts
- ★ Betta information about activities and habits
- ★ Online Betta Fish Resources and pictures

### **The children may wonder,**

What kind of fish it is and its' name  
Why Betta fish lay at the bottom of their tanks (sleeping)  
Why they swim to the top (to breathe)  
How they breathe (by going to the top for air)  
What the moving parts are (fins and gills)

Why they need the plants  
How they eat and what they eat  
How to clean the tank  
If our fish is a boy or girl  
If our fish can have babies  
What the babies are called

**\* To prompt further observation and inquiry the teacher might ask...**

When you look very closely, what do you notice about our Betta Fish? What do you notice about our Betta Fish's aquarium?  
Is there anything about our fish or aquarium that you wonder about?  
Why might our Betta Fish be... lying on the bottom, swimming to the top, in the plants etc.?  
What do you notice about our Betta Fish's environment?  
Is there anything you would add to the aquarium if this was your fish?  
What in the aquarium do you think is alive?  
What do you think is not alive? How do you know this?  
What do you think we need to do to keep our fish alive and healthy?  
What in our fish's environment does it need to stay alive?  
How might water that is too hot or too cold impact our Betta fish?  
How might dirty water impact our Betta Fish? (test the PH of the water and change water together)  
How would having no water impact our fish?

**Assessment Strategies and Considerations:**

- Record children's questions in a "Betta Fish Inquiry Book"
- Discuss questions daily and assess questions and responses for depth of vocabulary and understanding
- Video questioning and response sessions to view later for formative and summative assessment.

**Curriculum Expectations :**

**Science and Technology**

Overall Expectation 1: demonstrate an awareness of the natural and built environment through hands on investigations, observations, questions, and representations of their findings.

- 1.1 – ask questions about and describe some natural occurrences using their own observations and representations.
- 1.2 - Sort and classify groups of living and non-living things in their own way.

Overall Expectation 3: demonstrate an understanding of the natural world and the need to care for and respect the environment.

**Language**

1.7 – use specialized vocabulary for a variety of purposes

1.8 ask questions for a variety of purposes

Overall Expectation 3: use reading strategies that are appropriate for beginning readers in order to make sense of a variety of written materials.

3.1 begin to use reading strategies to make sense of unfamiliar texts in print

Overall Expectation 4: communicate in writing, using a variety of strategies that are appropriate for beginners

4.3 - write simple messages

4.4 – begin to use classroom resources to support their writing

4.5 – experiment with a variety of simple writing forms for different purposes and in a variety of texts

## Zoo Building Centre

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**Form (s) of Play:** Constructive / Pretense

**Themes / Connections:** Zoo Animals / Structures

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**Read-Alouds** – Life-Size Zoo: From Tiny Rodents to Gigantic Elephants, an Actual Size Animal Encyclopaedia, Toyofumi Fukuda  
Zoo, Gail Gibbons  
A Kid's Guide to Zoo Animals, Michelle Gilders  
I Want To Be A Zookeeper, Dan Liebman  
Zoo Animals (Baby Genius), DK Publishing  
Zoo Borns! Zoo babies from around the world, Andrew Bleiman and Chris Eastland  
AlphaTales: Zack the Lazy Zebra, Wendy Cheyette Lewison  
Excerpts from National Geographic's For Kids  
**Media** – [www.zooborns.com](http://www.zooborns.com)

**Printable Small Signs:**  
<http://www.epuzzled.net/memorygametoprint.htm>

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### **Learning Goal(s):**

- ☺ Ask meaningful questions and seek possible answers
  - ☺ Build three dimensional structures and begin to develop a hands on knowledge of 3-D shapes
  - ☺ Interact cooperatively with others
  - ☺ Communicate with others using increasingly precise vocabulary
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### **Possible Vocabulary:**

Exhibit, environment, habitat, enclosure, fence, inside / outside, adults, male, female, baby, cub, calf, foal, nursery, living, not-living, zoo, safari, cube, cone, rectangular prism, cylinder.

### **Learning Opportunities:**

Take picture walks through several Zoo texts or and record children's questions about zoos and zoo animals. Help children who are struggling by providing questioning sentence prompts. Take time each day to explore, discuss and answer their questions. Create a chart of how we can find answers to questions.

After reading Zack the Lazy Zebra, create during shared writing an environment and schedule to keep Zack healthy and happy.

Discuss and then design environments for the zoo animals that meet their basic needs.

Match word cards to animal names as well as those of baby animals e.g. cub to female lion.

Search for pictures and videos of animals on the Zooborn website using the beginning letter and alphabetical order.

### **\* To prompt further learning the teacher might ask...**

What would an animal in a zoo need to live and be healthy?

What might your exhibit need to keep your animal safe and healthy?

How can we make sure that we know where all our zoo animals are after we use them?

How could we build an exhibit for a \_\_\_\_\_ that has the things it will need to live in its environment?

Why would zoo designers have an exhibit for zebras and a separate exhibit for lions? What might happen if a lion and zebra were made to live together?

Why did you choose to use this block, cone, etc. in this way?

What might need to be in a gorilla exhibit? Why would they need these things?

Would you call this a zoo or safari? Why?

What other places might we need at this zoo? (Nursery, veterinarian, kitchen, places for people).

What 3-D shapes did you use in constructing this zoo? Why was the cube, rectangular prism etc. a good choice for building with?

### **Materials and Layout:**

- ★ Wooden blocks of various shapes – could be organized into bins of specific shapes for a natural sorting opportunity during clean up.
- ★ Plastic zoo animals
- ★ Maps of zoos
- ★ Small animal signs
- ★ Common map symbol signs
- ★ Paper, pencils, crayons etc. for the creation of water, extra signs etc.
- ★ Popsicle sticks, tape, sticky tack, and animal pictures with words for self made signs
- ★ Small paper or plastic items to represent trees, grass, water, food etc.
- ★ Place on a contained mat area or table top.

### **Curriculum Expectations :**

#### **Science and Technology:**

Overall Expectation 1: demonstrate an awareness of the natural and built environment through hands on investigations, observations, questions, and representations of their findings.

2.1 state problems and pose questions before and during investigations

4.2 state problems and pose questions as part of the design process

4.3 make predictions and observations throughout the design process

#### **Language:**

1.7 – use specialized vocabulary for a variety of purposes

1.8 ask questions for a variety of purposes

Overall Expectation 3: use reading strategies that are appropriate for beginning readers in order to make sense of a variety of written materials.

3.1 begin to use reading strategies to make sense of unfamiliar texts in print

Overall Expectation 4: communicate in writing, using a variety of strategies that are appropriate for beginners

4.3 - write simple messages

4.4 – begin to use classroom resources to support their writing

4.5 – experiment with a variety of simple writing forms for different purposes and in a variety of texts

#### **Personal and Social Development:**

Overall Expectation 2: demonstrate an ability to use problem-solving skills in a variety of social contexts.

#### **Emotional Development:**

2.1 use a variety of simple strategies to solve social problems

2.5 interact cooperatively with other in classroom events and activities

#### **Language / Communication:**

1.6 – use language to talk about their thinking, to reflect, and to solve problems.

1.7 – use specialized vocabulary for a variety of purposes

#### **Geometry:**

G34 -build three-dimensional structures using a variety of materials and begin to recognize

the three-dimensional figures their structure

contains.

## Zoo Veterinarian Centre

**Form (s) of Play:** Pretend or “ Pretense”

**Themes / Connections:** Zoo Animals, Living Things, Caring for living things.

### **Read-Alouds –**

Life-Size Zoo: From Tiny Rodents to Gigantic Elephants, an Actual Size Animal

Encyclopaedia, Toyofumi Fukuda

Zoo, Gail Gibbons

A Kid’s Guide to Zoo Animals, Michelle Gilders

I Want To Be A Zookeeper, Dan Liebman

Zoo Animals (Baby Genius), DK Publishing

Zoo Borns! Zoo babies from around the world,

Andrew Bleiman and Chris Eastland

AlphaTales: Zack the Lazy Zebra, Wendy

Cheyette Lewison

Excerpts from National Geographic’s For Kids

**Media – [www.zooborns.com](http://www.zooborns.com)**

### **Printable Pictures, Vocabulary etc.:**

<http://www.sparklebox.co.uk/topic/living/safari.html>

<http://www.sparklebox.co.uk/topic/roleplay/animals/zoo.html>

<http://www.sparklebox.co.uk/topic/roleplay/animals/>

### **Learning Goal(s):**

- ☺ Interact cooperatively with others
- ☺ Solve problems using a variety of strategies
- ☺ Communicate with others using increasingly precise vocabulary
- ☺ Develop an understanding of zoo animals as living things and what they need to survive

- ☺ Develop empathy for others through role playing of care-taking
- ☺ Read simple headings / labels

### **Possible Vocabulary:**

Veterinarian, zoo keeper, syringe, stethoscope, illness, schedule, o’clock, appointment, adults, male, female, babies and nursery (calf, cub, foal, baby).

### **Possible Questions:**

After reading several zoo texts, record children’s questions about zoos and zoo animals.

In the role of bringing in a sick animal:

Do you have a time for my appointment? (Child can book in a time and tell it)

What do you do when animals are very ill like this (elephant)?

How would you be able to help with the stethoscope? Syringe? Blood Pressure monitor?

Are there any tests you could do to find out why the animal is ill?

Would you be able to keep track of this appointment in the zoo journal? (drawing and writing about the animals that come in).

What does an animal need to live and be healthy?

## Materials and Layout:

- ★ Various zoo animal puppets / stuffed animals
- ★ Lab Coat
- ★ Stethoscope, syringes, blood pressure monitor etc.
- ★ Lists of zoo animals or pictures with names
- ★ Maps of Zoos
- ★ Non-Fiction texts about zoo and jungle animals with clear headings for copying
- ★ Appointment schedule forms on clip boards that include an area to write the date, and spaces with times to write animals in for appointments
- ★ Schedule forms on clip boards for students to write schedules for individual animals
- ★ Zoo Journals to write about how the animals are feeling
- ★ Open flat areas to place clip boards and writing / reading materials

## Curriculum Expectations :

### Science & Technology:

Overall Expectation 3: demonstrate an understanding of the natural world and the need to care for and respect the environment

### Personal and Social Development:

Overall Expectation 1: identify and use social skills in play and other contexts;

1.2 – demonstrate the ability to take turns in activities and discussions

Overall Expectation 2: demonstrate an ability to use problem-solving skills in a variety of social contexts.

3.1 – develop empathy for others, and acknowledge and respond to each others feelings

### Emotional Development:

1.3 express their thoughts

2.5 interact cooperatively with other in classroom events and activities

### Language / Communication:

Overall Expectation 1: Communicate by talking and by listening and speaking to others for a variety of purposes and in a variety of contexts

1.3 – begin to use and interpret gestures, tone of voice, and other non-verbal means to communicate and respond

1.7 – use specialized vocabulary for a variety of purposes

Overall Expectation 3: use reading strategies that are appropriate for beginning readers in order to make sense of a variety of written materials.

3.1 begin to use reading strategies to make sense of unfamiliar texts in print

Overall Expectation 4: communicate in writing, using a variety of strategies that are appropriate for beginners

4.3 - write simple messages

4.4 – begin to use classroom resources to support their writing

4.5 – experiment with a variety of simple writing forms for different purposes and in a variety of texts

### Measurement and Spatial Sense:

M2 : Measure and compare...the passage of time using non-standard and standard units, through free exploration, focused exploration, and guided activity

## Ocean Exploration / Marine Biologist Centre

**Form(s) of Play:** Socio-dramatic, pretend

**Themes / Connections:** Oceans, Water, Living-Things, The Environment

**Read-Alouds –**

One Tiny Turtle, Nicola Davies  
Commotion in the Ocean, Giles Andreae and David Wojtowycz  
Fabulous Fish, Julie Haydon  
Octopus, Melvin and Gilda Berger  
What Am I?, Fiona Bayrock  
Whales, Sally Morgan

**Media –**

<http://www.sparklebox.co.uk/topic/living/ocean.html>

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**Learning Goal(s):**

- ☺ Develop an understanding of what living things need to survive – air, water, shelter, food.
- ☺ Develop an understanding of how an environment can impact a living thing
- ☺ Take on various roles including that of animals to begin to understand point of view
- ☺ Communicate with others using increasingly precise vocabulary

**Possible Vocabulary:**

Aquarium (tank), sea, ocean, pond, clean, clear, habitat, environment, living, alive, natural, man-made, coral reef, air, school, fin, gill, scales, blowhole, flippers, flukes, beak, ink, tentacle, shell, specific names of marine animals.

**Learning Opportunities:**

- ★ Children are given opportunities to ask, discuss, and answer questions while reading texts about ocean / sea animals.
- ★ Children dramatize behaviours of sea animals while interacting with read-alouds and within the centre
- ★ While reading “What Am I?” children are asked to solve the riddle using a series of non-fiction clues.
- ★ Children sort objects that can be found in an ocean that are man-made and natural. Objects such as such as nets, plastic bottles etc. that can harm marine animals are included and children dramatize how these might harm an ocean animal.

**Possible Questions to Prompt Learning:**

What type of natural and man-made things might you place in a fish’s environment?

What things should be in an ocean environment? What things should not be in an ocean environment?

What might you discover if you were in an ocean environment?

**Materials and Layout:**

- ★ Various plastic marine animals
- ★ Shells
- ★ Clear containers
- ★ Containers labeled food with various types of food (e.g. tissue paper cut into small pieces, plastic lacing cut into worms etc.)
- ★ Foam balls or pom poms to resemble eggs
- ★ Aquarium decorations
- ★ Various objects harmful to ocean animals including nets, plastic bottles, Styrofoam etc.

- ★ Lab Coats
- ★ Various marine animal “head bands”
- ★ Stethoscope, syringes
- ★ Labelled pictures of marine animals
- ★ Goggles and pretend scuba like gear
- ★ Large inflatable swimming pool sea animals
- ★ Non-Fiction texts about oceans, shells, water etc.
- ★ Writing instruments and materials that become more specific as the children choose to write for specific purposes.
- ★ Open flat areas to place clip boards and writing / reading materials

### **Assessment Strategies and Considerations**

- If possible, set up a video recorder looking into the centre, if not observe and make anecdotal records
- Observe and listen to children’s interactions, dramatic play, and vocabulary

### **Curriculum Expectations:**

#### **The Arts, Drama and Dance:**

17. demonstrate an awareness of personal interests and a sense of accomplishment in drama and dance
18. explore a variety of tools and materials of their own choice to create drama and dance in familiar and new ways

### **Science & Technology**

**Overall Expectation 3:** demonstrate an understanding of the natural world and the need to care for and respect the environment

#### **Personal and Social Development:**

Overall Expectation 2: demonstrate an ability to use problem-solving skills in a variety of social contexts

#### **Emotional Development:**

2.5 interact cooperatively with other in classroom events and activities

#### **Language / Communication:**

Overall Expectation 1: Communicate by talking and by listening and speaking to others for a variety of purposes and in a variety of contexts

1.3 – begin to use and interpret gestures, tone of voice, and other non-verbal means to communicate and respond

1.7 – use specialized vocabulary for a variety of purposes

**Overall Expectation 3:** use reading strategies that are appropriate for beginning readers in order to make sense of a variety of written materials.

**Overall Expectation 4:** communicate in writing, using a variety of strategies that are appropriate for beginners

4.3 - write simple messages

4.4 – begin to use classroom resources to support their writing

4.5 – experiment with a variety of simple writing forms for different purposes and in a variety of texts

# Who Lives at the Zoo?

By: Crystal Inwood

Who, who, who lives at the zoo?

The elephant said, "I do and the zebras do too!"

Who, who, who lives at the zoo?

The zebra said, "I do and the monkeys do too!"

Who, who, who lives at the zoo?

The monkey said, "I do and the hippos do too!"

Who, who, who lives at the zoo?

The hippo said, "I do and the giraffes do too!"

Who, who, who lives at the zoo?

The giraffe said, "I do and the tigers do too!"

Who, who, who lives at the zoo?

The lion said, "I do and my cubs do too!"

Who, who, who lives at the zoo?

The elephant said, "I do and my calf does too!"

Who, who, who lives at the zoo?

The zebra said, "I do and my foal does too!"

# Little Turtle

By: Crystal Inwood

Little turtle, little turtle, soon you will be b, b, big!  
With air to breathe, food and water,  
you will grow so b, b, big!

You come out from your e, e, egg,  
on your sandy b, b, beach.

Then scurry to the s, s, sea,  
where you can swim so f, f, free!

You can flap your f, f, flippers,  
swim up, up to b, b, breathe.

Dive down, down to m, m, munch,  
shrimp and crabs for l, l, lunch!