



Theme: Animals Basic Needs for Survival

Grade Band: K-2

Pre-Visit Activities: Approximately 40 minutes

Length of Aquarium Visit: 1 hour 30 minutes

Post-Visit Activities: Approximately 40 minutes

Overview

Investigate how living things have adaptations to help them get oxygen, find food, use water and seek shelter. Discover why fish have whiskers, sharks and eels have sharp teeth, seahorses camouflage and turtles have shells. Learn which animals breathe with lungs and which breathe with gills, and observe hundreds of amazing animal adaptations on a scavenger hunt through aquatic habitats.

Goal

Students will become aware of the unique adaptations that allow animals to survive in different habitats. Students will learn the basic needs animals require to survive.

Objectives

1. Identify the 4 basic needs of humans.
2. Compare the basic needs of humans to the needs of other living things, focusing on aquatic life.
3. Determine how different adaptations allow animals to meet their basic needs in unique ways.
4. Recognize that animals can only meet their needs in specific habitats.

Key Vocabulary

Food Water Shelter Oxygen Habitat Survival *Living* Basic Needs *Non-living* Space

Pre-Visit Activities (approximately 40 minutes)

1. **What's That, Habitat?** *Adapted from Project Wild K-12 Curriculum and Activity Guide*
 - A. Introduce the concept of basic needs. Have students generate a list of basic needs for humans. Write the items listed on the board sorted into "needs" and "wants." The needs list should include food, water, shelter and oxygen. Try to get students to understand that while some things are nice, they may not be necessary to survive.
 - B. Give each student a copy of the home/habitat handout (available on A1-A2). Have students draw a picture of where they live on the top half of the paper. Have students include their basic needs. Have students label the faucet "water" and label the refrigerator "food" etc. Answer key for the home/habitat handout available on A3-4.
 - C. Introduce the term habitat. (**Habitat:** Where a living thing lives and gets everything it needs to survive.)



- D. On the bottom half of the paper have students write the name of their favorite animal. Have students draw the habitat of this animal, and include its basic needs. Students should label the basic needs of the animal.
- E. Talk about the basic needs of the student's animals. Ask students to share some examples of food, shelter, oxygen and water that their animals use. Although the basic needs may look different (different food source, different homes, etc.) the basic needs of living things remain the same.
- F. On the back of each picture, ask students to complete the sentence, "This is a good habitat because . . ."
- G. Have students compare the basic needs of the animals to the basic needs of people. Again, although the basic needs may look different they fit in the same "buckets."
- H. Extensions:
 - 1. Include space and arrangement in the list of basic needs. Discuss how space and arrangement play an important role in survival. Could people survive in a single room with 40 other people? Could a sand tiger shark survive in a 10-gallon tank? What would happen if the bathroom in your house was 9 miles away from the kitchen?
 - 2. Introduce students to the vocabulary they will be using during their Aquarium visit.
 - A. Option 1: Word Board – Put up the word cards on the board (available on A5-8). Read out the words and see if students know what they mean. Discuss any words of which the students are unsure.
 - B. Option 2: Vocabulary Matching– Print out the vocabulary worksheet (available on A9-10). Have students draw a line from the phrase to the matching word. You can read the sentences out loud or students can do this work independently.

Aquarium Visit & Program (1 hour 30 minutes)

What better way to learn about fish than by visiting the Aquarium? Reservations should be made with Aquarium staff early in the school year. Field experiences themselves take place **September – May**. If you have any questions about scheduling your visit, please contact our Education team.

1. Before you visit to the Aquarium, review student and chaperone expectations.

Post- Visit Activity (approximately 50 minutes)

Post-activity is a lessons for the classroom to help reinforce concepts from your field trip experience.

1. Basic Needs of Other Animals

- A. Ask students to list their favorite animals from their Aquarium visit. Make a list on the board. Once everyone has had a chance to share, have students pick out the animals from the list that are fish.



- i. Once students have identified the fish, pass out the studying fish worksheet (available on A11). Each student only needs half of a page. Have students write the name of a fish and draw a quick picture of the fish they selected. As a class, discuss the characteristics that helped students know the animals they are studying are fish. Review the basic needs for fish that students explored at the Aquarium. (A studying fish answer key available on A12.)
- B. Tell students that now that they understand the basic needs you are going to explore the basic needs of other types of animals.
- C. Each student needs a copy of the “exploring animal groups” worksheet (available A13-14). Break students into groups of 4-6 students. Give each group a set of animal group pictures (available A17-20). By using the pictures and engaging in group discussion, students should have the information needed to complete the worksheet. Have students discuss in their group what basic needs they think go with the specific animal groups. Students should discuss features that are unique to animals in the groups as well.
 - i. **Extension:** Advanced students can also receive a copy of the animal groups fact sheet (available a 21-22). This will help students to label the characteristics that help them identify the animal for the specific group (body covering, body parts, etc.).
 - ii. After students have completed their animal group sheet, review the different animal groups as a class and check for overall understanding of animal groups and basic needs. (Exploring Animal Groups Answer Key available A15-16)
- D. Now that students have learned the different animal group, students will be challenged to put an animal into the correct animal group. Give each student a name of an animal that belong in one of the five animal groups studied, as well as a copy of the Basic Needs Animals sheet (available A23).
 - i. Using the name of their animal and thinking about the animal groups the class studied, the student should be able to determine to which group this animal belongs. For reference, students could look at the “exploring animal groups” worksheet.
 - ii. Once student identify the animal group students should determine the basic needs of the animal. Students can then identify the basic need for their animal to survive.
 - iii. Once the basic needs are identified, the student will draw a picture of their animal, as well as the components the animal will need to survive.
 - iv. Have students share their pictures with the class. Students can practice speaking clearly and answering questions to elaborate on details about their animal and its habitat.



Standards

Grade	Strand	Topic	Content Statement
K	Life Science	Physical and Behavioral Traits of Living Things	Living things have specific characteristics and traits.
K	Life Science	Physical and Behavioral Traits of Living Things	Living things have physical traits and behaviors, that influence their survival.
1	Life Science	Basic Needs of Living Things	Living things have basic needs, which are met by obtaining materials from the physical environment.
1	Life Science	Basic Needs of Living Things	Living things can survive only in environments that meet their needs.
2	Life Science	Interactions within Habitats	Living things cause changes on Earth.
K - 2	Science Inquiry and Application		Plan and conduct simple investigations.
K - 2	Science Inquiry and Application		Communicate about observations, investigations and explanations.
K-2	Reading Standards for Foundational Skills	Phonics and Word Recognition	Know and apply grade-level phonics and word analysis skills to decode words.
K-2	Speaking and Listening	Comprehension and Collaboration	Participate in collaborative conversations about grade-level topics and texts with diverse partners in small and larger groups.
K	Speaking and Listening	Presentation of Knowledge and Ideas	Speak audibly and express thoughts, feelings and ideas clearly.
1	Speaking and Listening	Presentation of Knowledge and Ideas	Produce complete sentences when appropriate to task and situation.
2	Speaking and Listening	Presentation of Knowledge and Ideas	Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.

Appendix

Home / Habitat Worksheet (A1-2)

Where I Live

Name: _____



Habitat

(Favorite Animal)

Finish the sentences below:

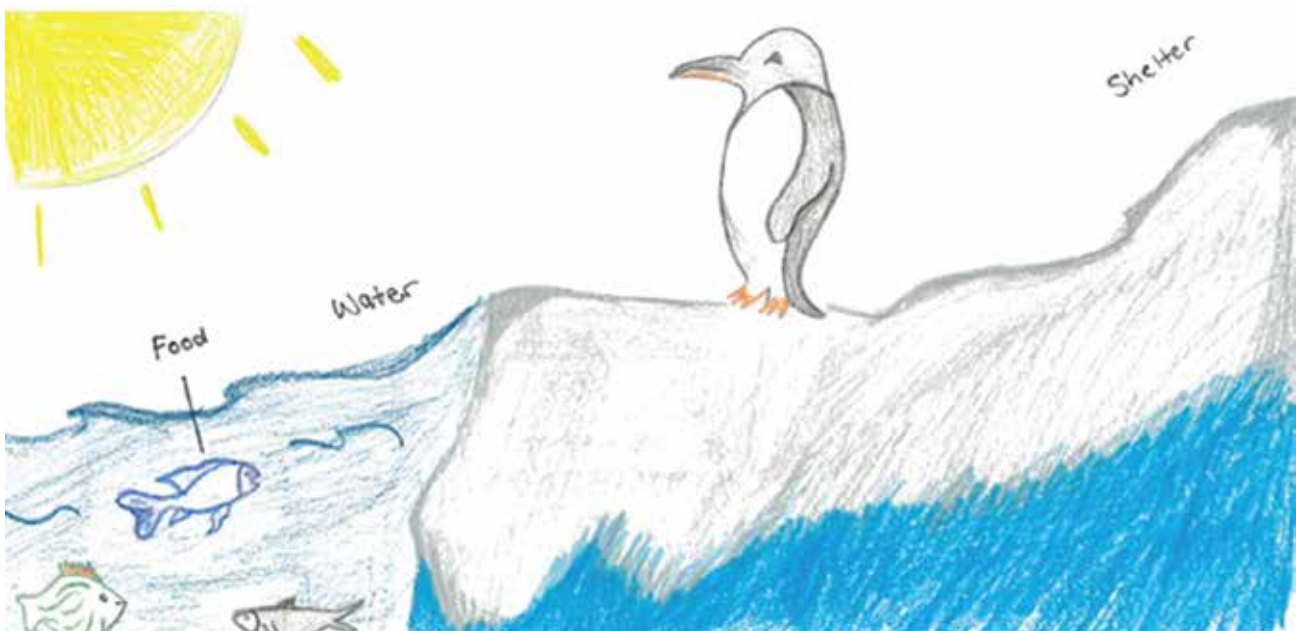
Where I live is a good habitat because _____

Where _____ (favorite animal) lives is a good habitat because

Where I Live



Penguin Habitat
(Favorite Animal)



Finish the sentences below:

Where I live is a good habitat because I am meeting my basic needs.

This habitat has shelter, food, water and oxygen. My house is my
shelter. My food is in my fridge. My water comes from the sink. My
house has air in it.

What to look for

- Identification of the 4 basic needs: Food, water, shelter and oxygen
- Understanding of how these basic needs are being met: Where are they finding food, water, shelter, and oxygen?

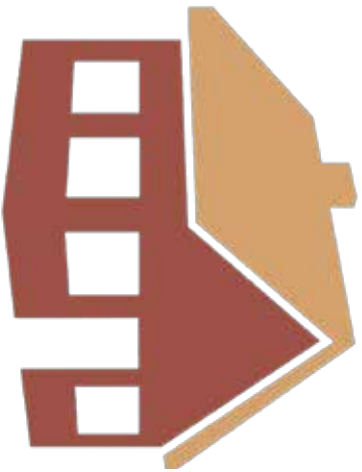
Where _____ (favorite animal) lives is a good habitat because

Answers will vary based on the animal selected.

What to look for

- Identification of animal's basic needs
- Understanding of how these basic needs are being met: Where are they finding food, water, shelter, and oxygen?

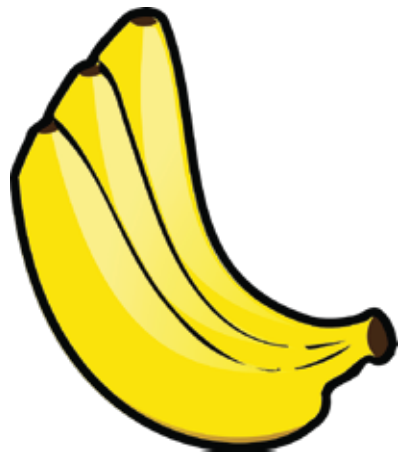
Shelter



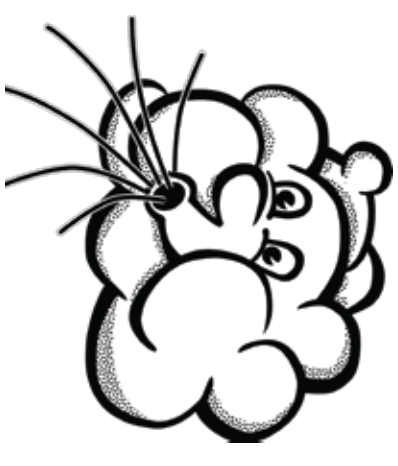
Water



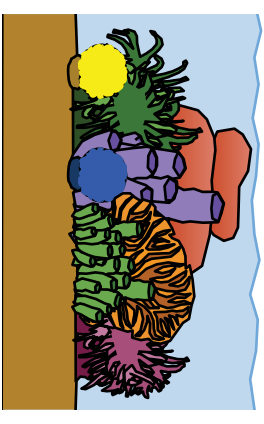
Food



Oxygen



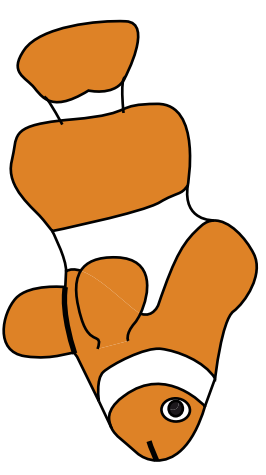
Habitat



Survival



Living



Basic Needs



Non-living



Freshwater



Saltwater



VOCABULARY MATCHING

Name: _____

Draw a line from the phrase to the word that matches it.

1. Living things eat this.

Oxygen



2. Living things need this liquid.

Shelter



3. This protects living things from weather or danger.

Saltwater



4. Living things get this from air or water.

Living



5. This is where living things are found.

Water



6. This thing needs food, water, oxygen and shelter.

Freshwater



7. These are the items that that all living things need to stay alive.

Non-Living



8. This thing does not need food, water, oxygen and shelter.

Food



9. Water found in lakes and rivers.

Habitat



10. Water found in the ocean.

Basic Needs



STUDYING FISH

Name: _____

FISH

Example of a fish:

Circle the words below that are basic needs of a fish:

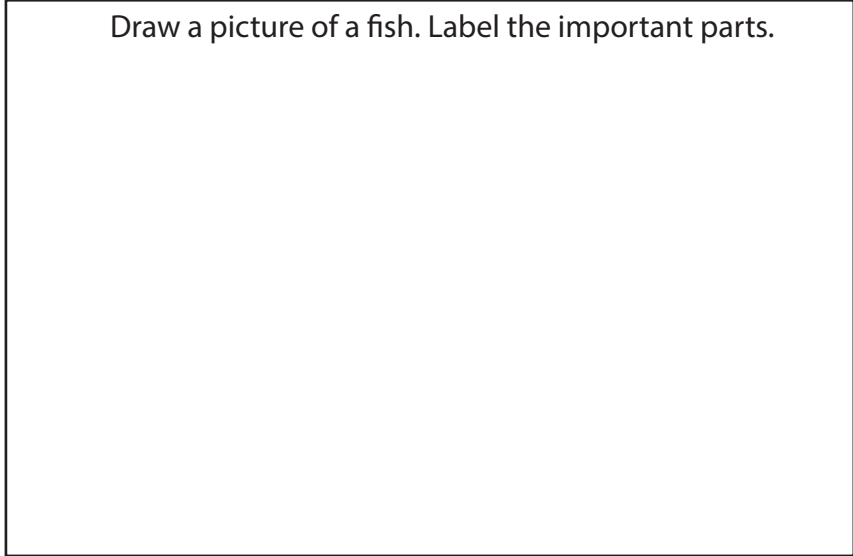
Food

Water

Shelter

Oxygen

Draw a picture of a fish. Label the important parts.



STUDYING FISH

Name: _____

FISH

Example of a fish:

Circle the words below that are basic needs of a fish:

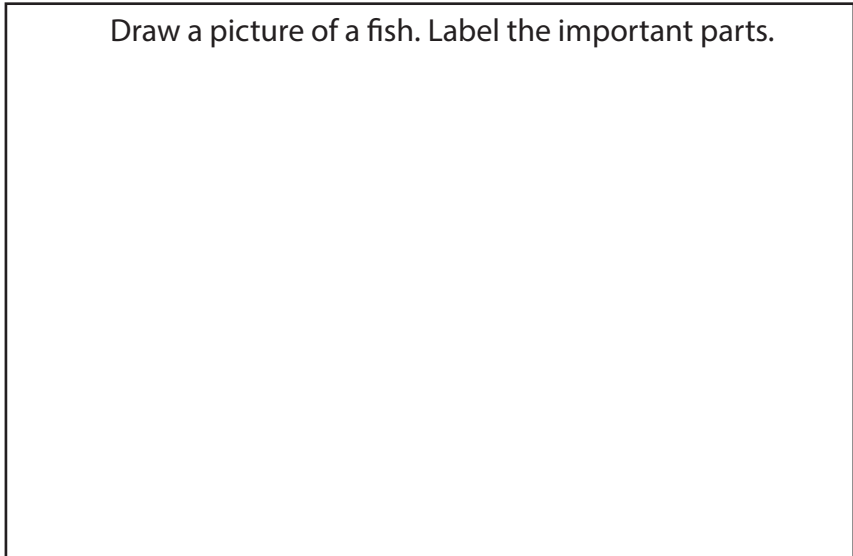
Food

Water

Shelter

Oxygen

Draw a picture of a fish. Label the important parts.



STUDYING FISH

Name: Answer Key

FISH

Example of a fish:

Moorish Idol

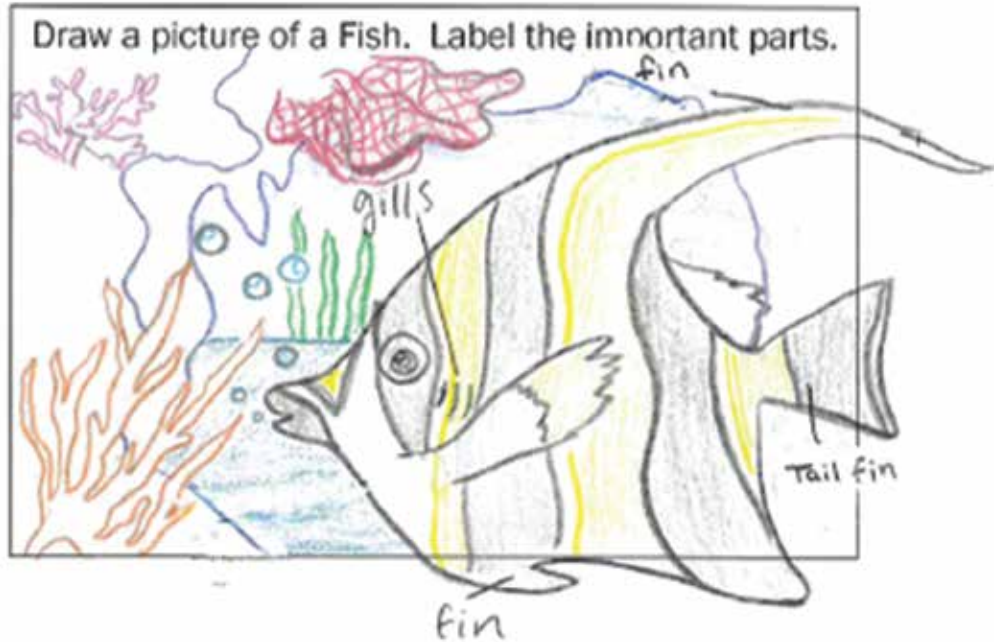
Circle the words below that are basic needs of a fish:

Food

Water

Shelter

Oxygen



Any fish that students talked about or remember from the Aquarium could be used for this portion of the lesson.

STUDYING FISH

Name: _____

FISH

Example of a fish:

Red-Bellied Piranha

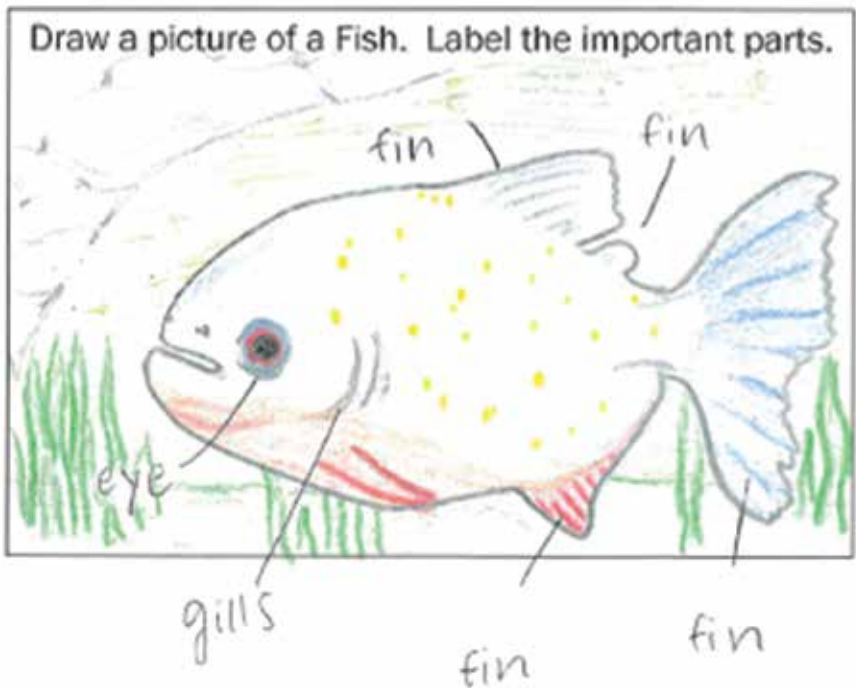
Circle the words below that are basic needs of a fish:

Food

Water

Shelter

Oxygen



EXPLORING ANIMAL GROUPS

Name: _____

BIRD

Example of a bird:

Circle the words below that are basic needs of a bird:

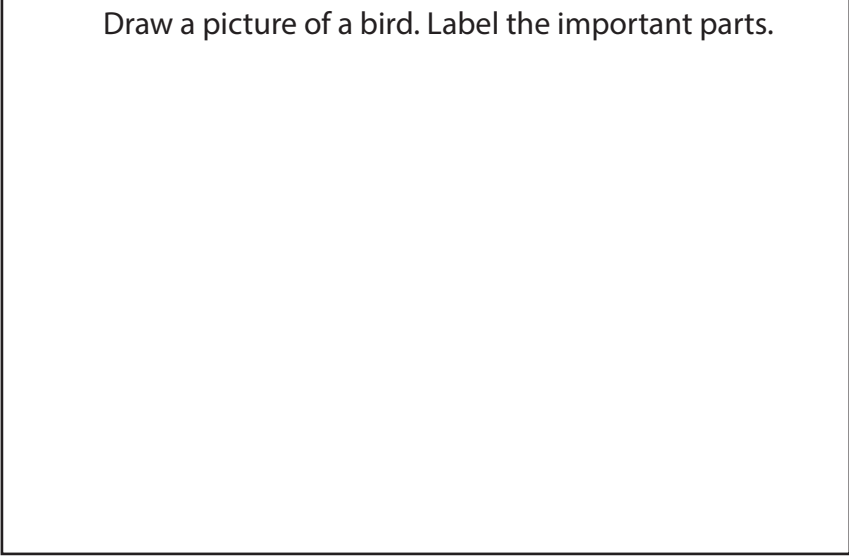
Food

Water

Shelter

Oxygen

Draw a picture of a bird. Label the important parts.



AMPHIBIAN

Example of an amphibian:

Circle the words below that are basic needs of an amphibian:

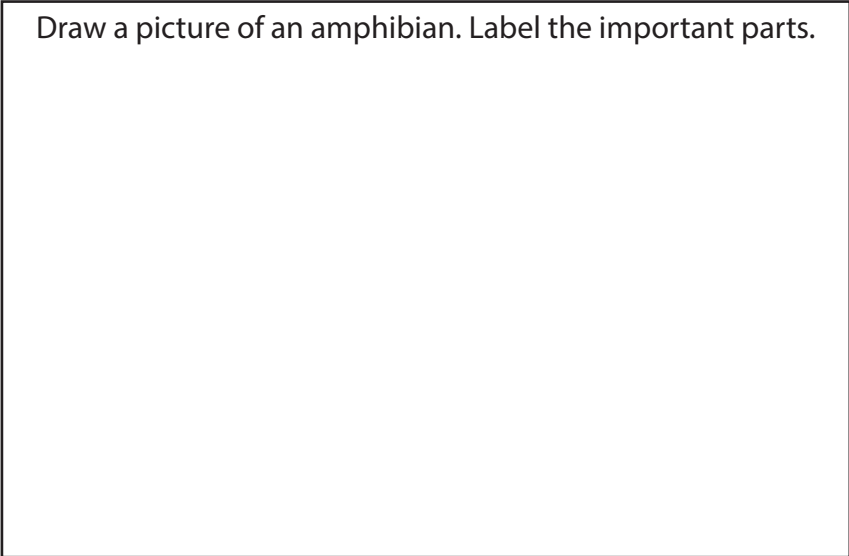
Food

Water

Shelter

Oxygen

Draw a picture of an amphibian. Label the important parts.



REPTILE

Example of a reptile:

Circle the words below that are basic needs of a reptile:

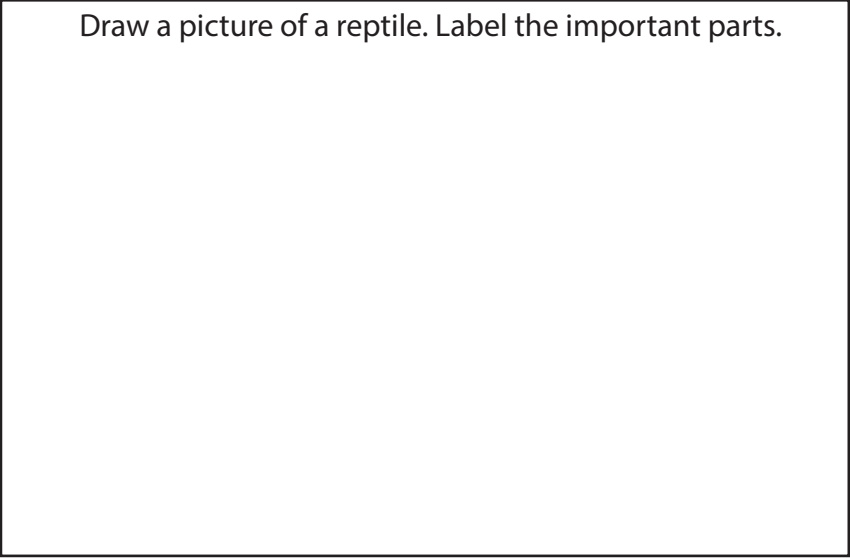
Food

Water

Shelter

Oxygen

Draw a picture of a reptile. Label the important parts.



MAMMAL

Example of an amphibian:

Circle the words below that are basic needs of a mammal:

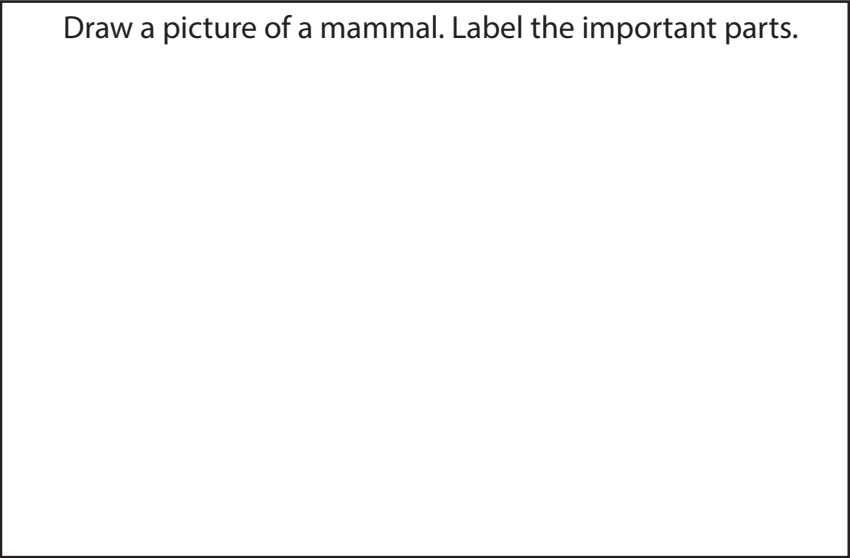
Food

Water

Shelter

Oxygen

Draw a picture of a mammal. Label the important parts.



EXPLORING ANIMAL GROUPS

Name: Answer Key

BIRD

Example of a bird:

Parrot

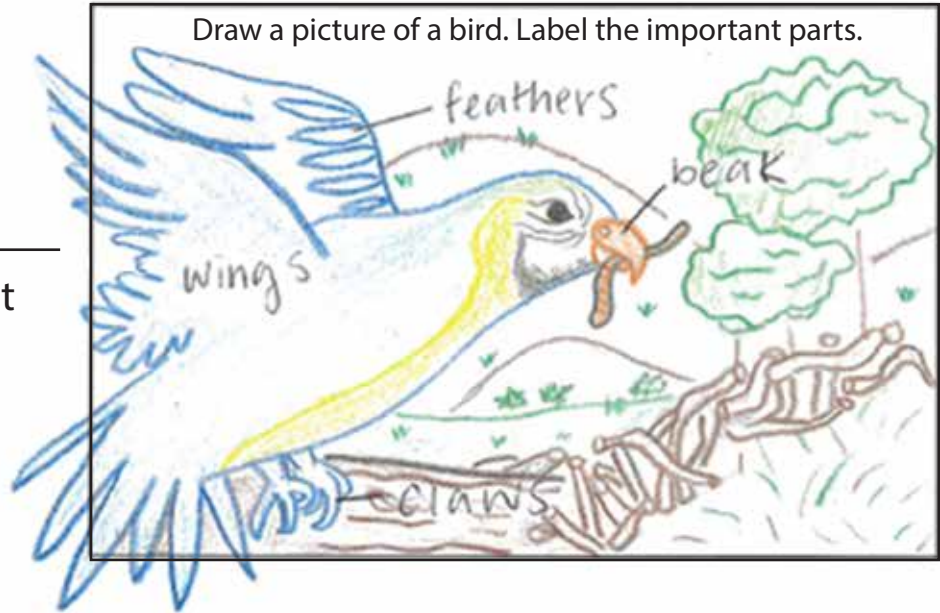
Circle the words below that are basic needs of a bird:

Food

Water

Shelter

Oxygen



AMPHIBIAN

Example of an amphibian:

Red Eye Tree Frog

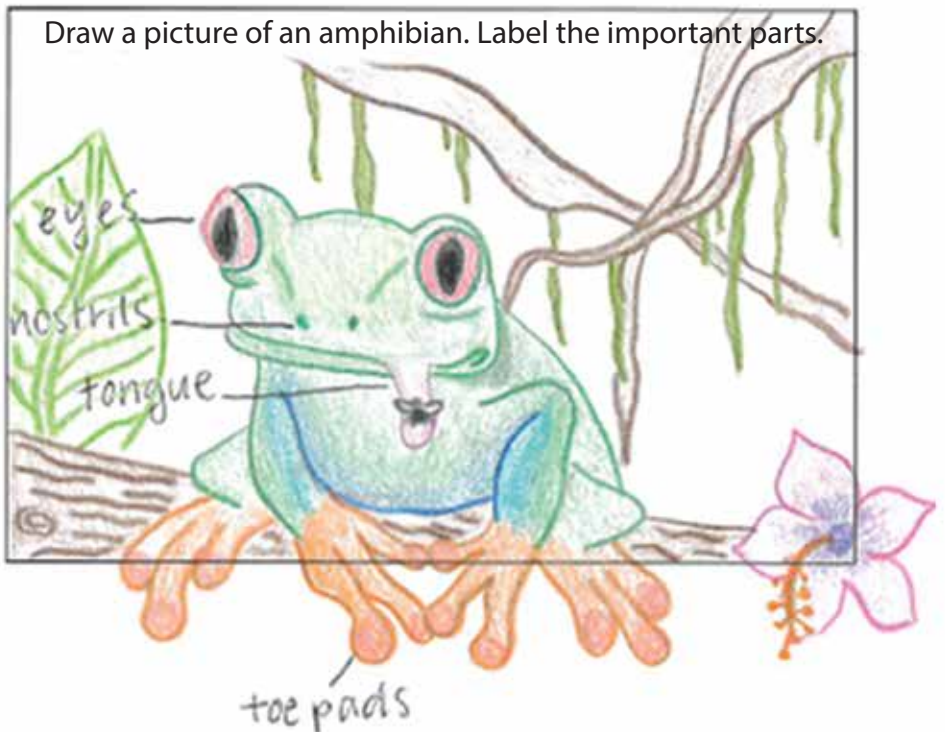
Circle the words below that are basic needs of an amphibian:

Food

Water

Shelter

Oxygen



REPTILE

Example of a reptile:

Chinese Water Dragon

Circle the words below that are basic needs of a reptile:

Food

Water

Shelter

Oxygen



MAMMAL

Example of an amphibian:

Capuchin Monkey

Circle the words below that are basic needs of a mammal:

Food

Water

Shelter

Oxygen





BIRDS



AMPHIBIANS



REPTILES





MAMMALS

BIRD FACTS

- Birds are found in habitats around the world. Birds are warm-blooded.
- Birds' beaks have different shapes. This help birds eat different types of foods. Birds can eat seeds, fruit, insects and fish.
- Birds make nests. Birds lay their eggs in nests.
- Birds are covered in feathers. Feathers help many birds fly. Not all birds can fly.

REPTILE FACTS

- Reptiles are cold-blooded. Many reptiles can be found lying in the sun to warm their body.
- Reptiles are covered in scales. Some reptiles have shells.
- Reptiles can live on land and in the water. Reptiles use lungs to breathe.
- Snake, turtles, alligators and lizards are all reptiles.

AMPHIBIAN FACTS

- Amphibians spend part of their life in water and part of their life on land.
- Amphibians spend their lives in or near water. This keeps their skin moist.
- Frogs and salamanders are both amphibians.
- Amphibians are cold-blooded. They use their environment to warm or cool their body.

MAMMAL FACTS

- Mammals are found around the world. Mammals can live on land and in water.
- Baby mammals drink milk.
- Mammals have fur or hair on their body.
- Mammals are warm-blooded. Mammals can control their body temperature.

ANIMAL BASIC NEEDS

Name: _____

My animal: _____

Circle the animals group your animal belongs in:

Bird

Fish

Mammal

Reptile

Amphibian

Circle the basic needs for your animal:

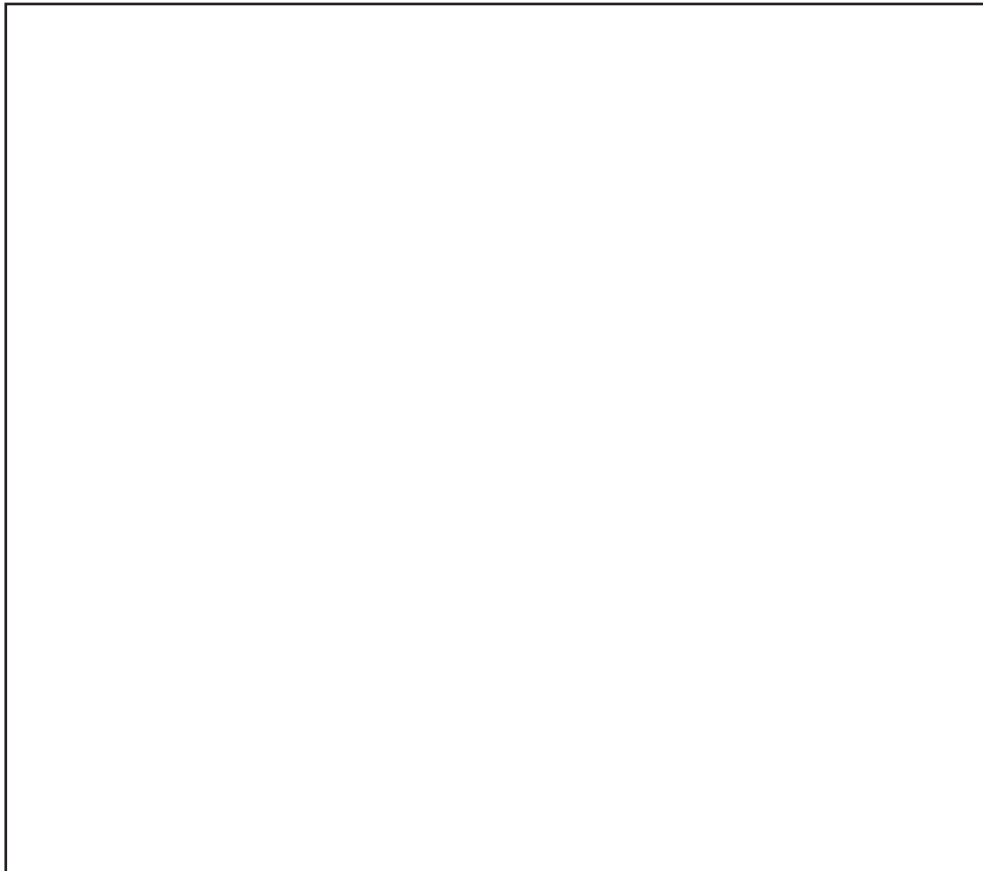
Food

Water

Shelter

Oxygen

Draw a picture of your animal. Show how it meets its basic needs.



ANIMAL BASIC NEEDS

Name: Elise

My animal: Timber Rattlesnake

Circle the animals group your animal belongs in:

Bird

Fish

Mammal

Reptile

Amphibian

Circle the basic needs for your animal:

Food

Water

Shelter

Oxygen

Draw a picture of your animal. Show how it meets its basic needs.

