

## **Kinds of Animals and Their Needs– Grade 2, Level 1**

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### **Lesson Overview**

In this lesson, students will learn what animals need to live and grow and how their environment helps them to meet those needs. Through research and discussion, the students will understand that animals can be classified into categories (mammals, birds, amphibians, reptiles, fish and insects) based on similar characteristics.

### **Alignment**

#### **Standard/Indicator Addressed**

2.L.5: The student will demonstrate an understanding of how the structures of animals help them survive and grow in their environments.

2.L.5A.1 Obtain and communicate information to classify animals (such as mammals, birds, amphibians, reptiles, fish, or insects) based on their physical characteristics.

#### **Science and Engineering Practices**

2.S.1A.8 Obtain and evaluate informational texts, observations, data collected, or discussions to (1) generate and answer questions about the natural world, (2) understand phenomena, (3) develop models, or (4) support explanations. Communicate observations and explanations using oral and written language.

2.S.1A.1 Ask and answer questions about the natural world using explorations, observations, or structured investigations.

**Performance Indicators:** Students who demonstrate this understanding can:

2.S.1B.1 Construct devices or design solutions to solve specific problems or needs: (1) ask questions to identify problems or needs, (2) ask questions about the criteria and constraints of the devices or solutions, (3) generate and communicate ideas for possible devices or solutions, (4) build and test devices or solutions, (5) determine if the devices or solutions solved the problem, and (6) communicate the results.

### **Lesson Plan**

**Time Required** – 8 days (1 day equals 45 minutes)

**Disciplinary Vocabulary** – survivor, deserted island, sorting, similar, mammal, bird, amphibians, reptiles, fish, insects, characteristics, research, environment, basic needs, classifications

**Materials Needed:**

- Bags of “Survivor Game” cards (see lesson preparation – 1 per pair of students)
- Picture or poster of an island
- Pictures of animals from each of the six classifications (mammals, birds, amphibians, reptiles, fish, and insects)
- “Animal Research” sheets (1 per student)
- Poster/chart paper (1 per group of 3-4 students)
- Crayons
- Markers
- Non-fiction texts/books, videos, websites, etc. on animals for student research
- Student science notebooks
- Pencils

**Formative Assessment Strategies:** Student dialogue, Check for Understanding, brainstorming, student notebooking, research

**Misconceptions:**

Young children have many misconceptions about the animal kingdom. Some common misconceptions include:

- People are not animals.
- Things are living only if they can move, breathe, eat and drink.
- Birds, fish, insects, worms are not animals.
- All animals can move from place to place
- All animals are four-footed or furry.
- All animals are wild.
- Animals are large and are found in zoos, on farms and in homes as pets.
- All animals live on land.
- Insects cannot live in water.
- Spiders are insects.
- Fish do not need air and they sleep with their eyes closed.

**Safety Note(s):**

- Be aware of any students who have sensitivity to sunlight and limit their exposure in the sun.

## Engage

1. Divide the class into pairs and tell them that they will be playing the “Survivor Game”.
2. Show the children a picture of an island and discuss with them what an island is.
3. Spend a few minutes explaining what survivor and deserted mean.
4. Tell students to imagine that they will have to live alone on a deserted island for a month.
5. Ask students to think about what they might need to take with them in order to survive.
6. Give each pair of students a bag of survivor items (described in the teacher preparation under instructional considerations).
7. Have the pairs to sort the cards into two groups—the items they would need on the island to survive and the items they don’t need to survive.
8. After pairs have sorted their cards, allow students to share which items they selected for the “need” pile and why they chose those items.
9. Explain to the children that for the next few days they will investigate what different animals need to survive and how animals can be sorted into groups based on how they are similar.

## • Explore

- Explain to the children that animals can be sorted into groups and that all the animals in each group are alike in some ways. Show the children examples of each of the groups (mammals, birds, amphibians, reptiles, fish, and insects) and use the characteristics from the Science Support Document (on page three of this module) to describe the animals.
- Divide students into small groups (three to four students). Assign each group an animal from one of the six groups (mammals, birds, amphibians, reptiles, fish, and insects). Try to choose an animal that students will be familiar with (preferably one that is native to South Carolina) and that correlates with books, videos, technology and/or other resources that you have readily available.
- Give each group a picture of the animal that you have assigned that group.
- Explain to students that they will become “research scientists” to find information about what their animal needs in order to survive, how its environment helps it meet those needs and the type of animal that it is.
- Ask students to brainstorm how scientists might “research” to find information. Use this as an opportunity to introduce a variety of research strategies.
- Give each student a copy of the “Animal Research” sheet to complete as they are doing their research. Tell the students that everyone in the group should complete the sheet. Encourage them to tape the sheets into their science ,

- Have students read texts/books, watch videos, visit the school library, conduct online searches, etc. to help them find the answers to the questions on their “Animal Research” sheet.
- Have the students prepare a chart/poster to present the information they find to the class. Instruct them to include an illustration (drawing or photo) of the animal in its environment. Let them know that they will also need to include the information from their research sheet on the poster. Tell the students that everyone in the group should have a part in the presentation of their poster to the class.
  - Have students discuss questions like those below: (You may want to post these on the board/poster, etc.)
  - To which group of animals does your animal belong? What makes you think so?
  - Where might this animal live?
  - What do you notice about this animal that helps it to live in this place?
  - What might this animal eat? Why?
  - What other things do you notice about this animal?
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- Ask students to brainstorm how scientists might “research” to find information. Use this as an opportunity to introduce a variety of research strategies.
- Give each student a copy of the “Animal Research” sheet to complete as they are doing their research. Tell the students that everyone in the group should complete the sheet. Encourage them to tape the sheets into their science notebooks for easy access throughout the research period.
- Have students read texts/books, watch videos, visit the school library, conduct online searches, etc. to help them find the answers to the questions on their “Animal Research” sheet.
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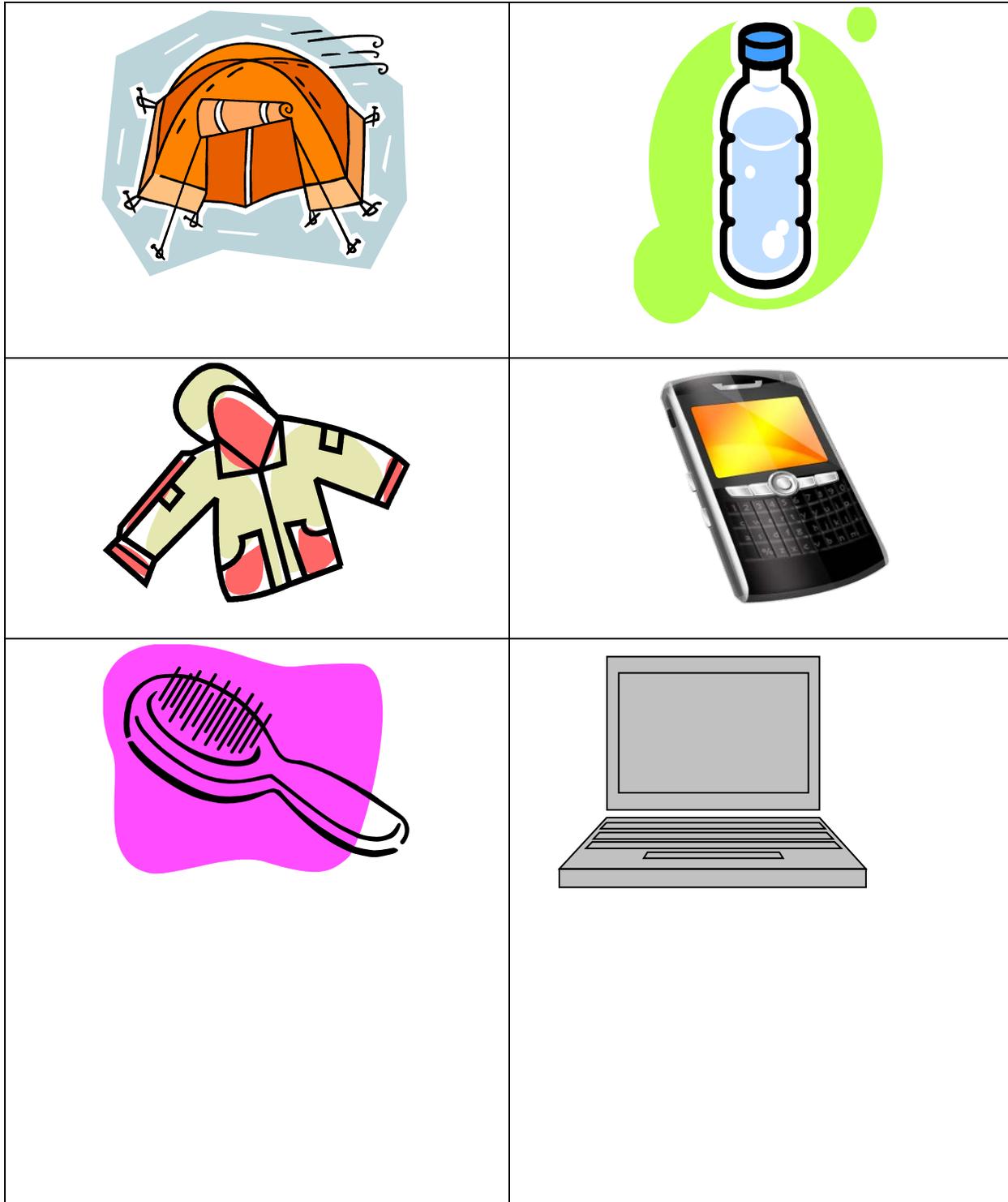
## Explain

- Once the research is done and posters are completed, have each group present their posters to the class.

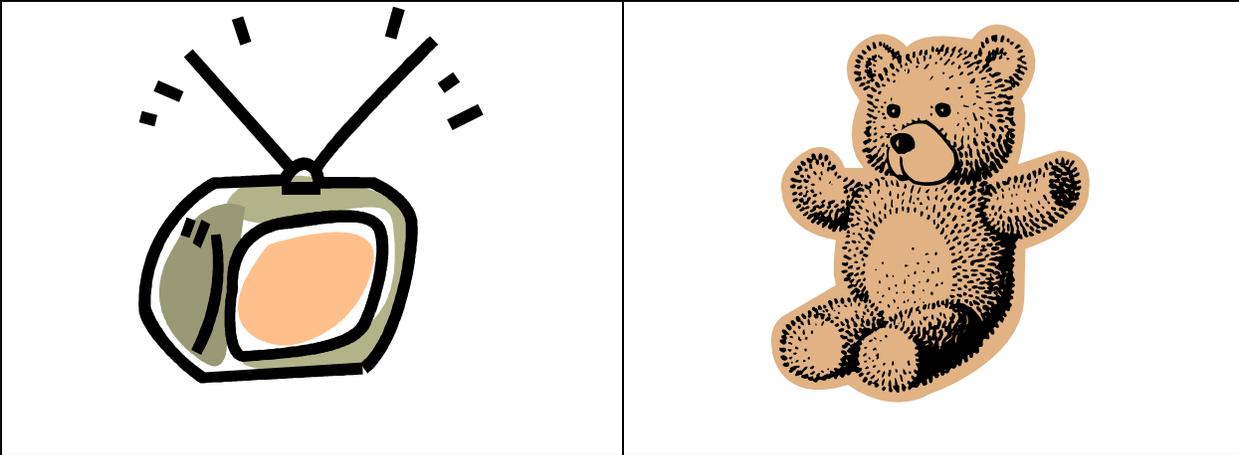
- When a group has finished their presentation, allow other students to ask questions about the presenting group’s animal.
- After all groups have presented their posters, review the basic needs of animals with the class. Include how the animal’s environment provides for those basic needs.
- Review the classifications of animals (mammals, birds, amphibians, reptiles, fish, and insects) and the characteristics of each group.
- Using the sample pictures from step one under the explore phase of this module, have the students to identify the kind of animal (mammal, bird, amphibian, reptile, fish, or insect) each of the pictures show and what that animal’s basic needs are.

### Survival Cards









## Animal Research Sheet

Name of Animal:	
Describe the animal.	
Is it a bird, fish, mammal, reptile, amphibian or an insect?	
Where does it live?	
What things in its environment help it to live and grow?	

What does it eat?	
How does it protect itself?	
What other interesting facts did you find about this animal?	