

Researching and Categorizing Traits of Organisms

Summary

The students read a variety of texts about similar species and create a comparative chart. Students will then create a physical model of an imaginary species with similar characteristics.

Additional Core Ties

English Language Arts Grade 5

[Reading: Informational Text Standard 1](#)

English Language Arts Grade 6

[Reading: Informational Text Standard 1](#)

Time Frame

2 class periods of 45 minutes each

Group Size

Small Groups

Materials

Reading materials on Types of Protists / Types of Birds (attached and web sites)
Graphic organizer to summarize information (attached)
Variety of materials for building models (such as clay, pipe cleaners, craft sticks, etc.)
Art paper for drawing

Intended Learning Outcomes

4. Communicate Effectively Using Science Language and Reasoning

d. Use reference sources to obtain information and cite the source.

Intended Learning Outcome - Linked to Standards

The students will research and identify traits of similar species and build models to illustrate those traits.

Instructional Procedures

Activate Prior Knowledge: What do you think the word "adapt" means? What does "adaptation" mean?

Try to get this out of the students: Adaptation in plants and animal refers to the way they can adjust or change to be able to live where and how they do. Many animals and plants can live only in certain places.

Use the "Compare and Contrast Chart" under a document reader or make a large one. As a class, fill in the chart as much as they can about a bird that they know about. (The hummingbird works great here because most students have seen this bird and one of the charts has a picture of its feet so I can introduce how to use the information charts.)

Show [Secretary Bird Stomps On Snake! YouTube video](#) (Easiest way to get there is type in: Bird Adaptations 5 videos, and then select: Secretary Bird Stomps On Snake!) It is important that it is this video because it gives all the information needed to fill in the chart. This video is 2:19 minutes long.

Fill in the second column using the Secretary Bird from the YouTube video. The third column is left blank at this time, but will be filled in when they start to create their own bird.

Students are given a variety of texts including pictures, multi-media, print source, etc. of birds.

They are given time to read, highlight, and mark-up texts. (*This is the hard part for the teacher. Gather a variety of texts, books and/or internet. I have different types of texts printed off about the bluebird, seagull and bald eagle. I also choose these birds because the bluebird is common, the seagull is the state bird and the bald eagle is the national bird. These birds are also very different from each other.*) After filling in the chart, you can go back to the Bird Adaptations 5 videos and watch the short segment on the bluebird.

Students use the texts to complete a second "Compare and Contrast Chart."

As a whole class visit [Project Beak: Adaptations: Build A Bird](#) web site and build a bird.

Students plan their bird by filling in the third column of the chart.

Students will draw or build a bird.

Student will present their drawing or model to the class, explaining the characteristics and adaptations and how they are specific to an environment. To help the students be prepared for presenting, students will answer the questions found on the "My Bird" question sheet. This activity also helps students be able to reason and defend their reasons.

Strategies for Diverse Learners

Advanced learners: Look at additional features of birds or other organisms using the same categories and provide more challenging reading materials.

English Language Learners: Resources are mostly pictures with labels.

Partner read and discuss what should be highlighted in text.

Extensions

Select a favorite animal. Study its habits and lifestyle in depth and identify as many of its adaptations as you can. "How Do Birds Adapt To Eating" Activity 4.6 from Hands-On Life Science Activities by Marvin N. Tolman Students can make microscope slides using pond water and identify types of protists.

[Build a Bird App](#)

The Adventures of the Bucket Buddies. Science and Children, April, 2004. NSTA

Assessment Plan

Students will present their drawing or model to the class, explaining the characteristics and how they are specific to an environment. Prior to presentation, students are asked to answer the following questions:

What environment does your bird/protist live in?

Why does it have the feet that it does? or How does it move?

What type of food does it eat?

Does your bird/protist have special feathers/body features for a special purpose or does it have special coloring?

What unique physical abilities does your bird/protist have?

How does its body structure help it survive?

Are there any other special adaptations that your bird/protist has that would help it survive?

How is your bird/protist similar to real birds or protists? How is it different?

Are there any characteristics of your bird/protist that you weren't able to show?

Bibliography

*Specifically used in the following lesson

5th Grade

* projectbeak.org/adaptations/build.htm

* Youtube.com (Bird Adaptations 5 videos, Secretary Bird Stomps on Snake!)

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