



I'm a Survivor!

An *UrbanWatch* Lesson Plan for Elementary Students

Level: Grades 4 and 5

Site: Classroom

Time Format: One 50-minute period

Background

This activity focuses on adaptations and allows students to explore what makes various organisms fit to survive in their environments.

GPS Standards Addressed

S1L1d; S3L1b,c; S4L2a; S5L2a,b

Focus

Life Science, Biology, Adaptations, Evolution, Inheritance, Traits, Genes

Objectives

1. Students will be able to explain what is meant by “survival of the fittest.”
2. Students will be able to describe what adaptations make various organisms “fit.”
3. Students will understand the difference between evolutionary adaptations and physical adaptations.
4. Students will compare and contrast the difference between learned behaviors and inherited traits.
5. Students will learn what genes are and the role they play in the transfer of traits.

Materials

- Pictures of various animals or plants from the *UrbanWatch* curriculum (see pages 3-4) (or from nature books, the Internet, etc.)
- Writing paper (optional)
- Pens, pencils (optional)

Activity Introduction

1. **Write the phrase “survival of the fittest” on the board and ask the class if they know what it means.** When they have responded, ask them to describe what it means to “survive,” and what it means to be “fit.” When they have described these concepts, write the following explanation on the board: Survival of the fittest is a condition where an organism (living thing) is suited to its part of the world and able to live with its neighbors. Also make sure students know what “genes” are and the role they play in inheritance.
2. **Show the class pictures of several animals and/or plants.** Read a passage or two on the physiognomy of each from your library or media center books. Then ask students how they think the physical design of each animal helps it to survive, or live harmoniously, in its natural habitat. Keep in mind that you may need to give them hints on which type of climate each organism lives in. While they are responding, ask students to point out inherited characteristics (traits) like shape, pattern, color, and other survival features.

To stimulate these observations, ask the following:

- Why are plants in the arctic so short?
- Why does a camel have a hump?
- Why does a cactus have such a round shape and thorns?
- Why do trees stretch their leaves toward the sky?
- Why does a desert hare have huge ears?
- Why do some flowers stick outwards like a trumpet?
- Why do sea otters have such thick fur?



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2. Show the class pictures of several animals and/or plants. (continued)

Have students provide an example of when a certain adaptation could be harmful (what if their environment changes?). You can prompt them by providing a scenario such as sudden intense cooling in a desert environment or warming in an arctic environment.

3. Next, ask students to look for similar survival features on themselves and their classmates (this can be just about anything—try not to guide the students on this). What are those features used for? If students need help, some features to look for include thumbs, hair, nostrils, eyebrows, fingernails, skin, teeth, eyes, just about anything!

4. Finally, consider some of the ways we adapt ourselves artificially with the aid of technology. To begin this discussion, write the following survival questions on the board, and ask students to respond to them in a one to two page journal entry.

- How do we keep cool in the summer and warm in the winter?
- How do we improve our vision, teeth or appearance?
- How do we protect our skin from too much sunlight or exposure?
- How does the ability to change help us survive?
- Do these artificial changes make us more or less fit for our habitat?
- Does our ability to change make us more important members of the environment compared to other organisms who do not change themselves artificially?

Going Further

Have each student select an animal or plant from the library books you have chosen. Each student should write a description of his or her organism, including where and how it lives. Students should then note the special features the organism has that allow it to live successfully in its environment. Afterward, take turns reading each essay aloud in class.

Assessment

Students demonstrated their absorption of the “survival of the fittest” theory by comparing human adaptation to that in the animal kingdom, and by recording their observations in a journal.

Adapted by Fernbank Museum of Natural History from Eco-Adventure curriculum.

To learn more about *UrbanWatch Atlanta*, visit fernbankmuseum.org/education/urbanwatch
or contact an *UrbanWatch Atlanta* representative at 404.929.6396
or urbanwatch@fernbankmuseum.org



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Arctic Poppy



Camel

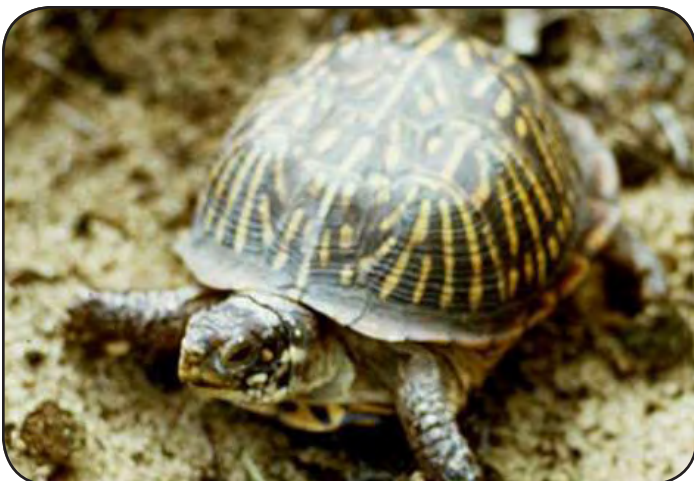


Desert Hare

See more
animal pictures
on page 4!



Sea Otter



Box Turtle



Trumpet Creeper Flower



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Giraffe



Barrel Cactus