

## Activity 1

### Activity 1: What is the Category of Natural Context?

**1. Target Word:** *hallux*

There are many similarities and differences between mammals and birds. The bone structure of a bird's wing bears an uncanny resemblance to the bone structure of the human arm. The hallux, or big toe, of most mammals aligns with the other toes; in birds, the comparable digit usually turns backward.

**Context Category:** \_\_\_\_\_

**2. Target Word:** *sere*

When they visited the desert retreat, Judy and her mother enjoyed swimming, playing tennis, and having spa treatments in the cactus gardens. Because of the effects of the sere weather, they had moisturizing facials every day. Even so, they were happy to return to their beachfront home.

**Context Category:** \_\_\_\_\_

**3. Target Word:** *equanimous*

We were having our annual staff luncheon at the local Italian restaurant, Giuseppe's Trattoria. The food was excellent, and our large group was having a wonderful time. Gaetano, the owner, was equanimous when several of his relatives dropped in unexpectedly.

**Context Category:** \_\_\_\_\_

**4. Target Word:** *elated*

Winners of the pre-trial race were preparing for the final contest. As Roberta watched her husband take his starting position, her heart began to beat violently under her sweatshirt. She knew he had a good chance to win this one, and if he lost, she would be elated.

**Context Category:** \_\_\_\_\_

## Activity 2: Studying Penguins with Fuzzy Robots

Humans usually turn to robots when they need help getting to places that are hard to reach, like the moon or Mars. Scientists have built a robot to explore colonies of penguins. A team of scientists has designed a **robot** that looks like a fuzzy baby penguin. Because it is **disguised**, the machine can get up close to real birds in their surroundings without disturbing them.

Animals often become stressed or scared when a human gets close. Their hearts may start beating very fast and they react with alarm. These reactions are dangerous for the birds. It means that scientists have a difficult time studying the animals. Scientists have a hard time collecting information about penguins when the animals act in these ways. To gather the information that scientists need, humans must get very close to the birds. Sometimes, humans get within 2 feet of penguins. So, the robot becomes a very useful tool for researchers.

Scientists used the robot with penguins in Antarctica. They found that these birds were very interested in the robot. Researchers studied 158 different birds. About half of the birds did not even notice the robot. The rest of the penguins were either scared of it or moved closer to check it out. The scientists used a friendlier robot with these birds. This robot was dressed up like a fuzzy baby penguin on wheels. The adorable spying penguin was a hit with the live birds. All the adult and baby penguins got very close when it approached. Some penguins even tried to talk to the disguised fuzzy “baby” robot.

It is exciting to think about the different ways robots can help us to learn more about how and where animals live. Maybe robots in the future might be able to follow around swimming and flying creatures too.

Word	Category of Natural Context	Conceptually Central to Understanding the Text	Previous Experience & Exposure	Important to Know 5 Years from Now	Teach? Yes or No