Giraffe Space Use

Virtual Classroom Extension

Objective

This activity is designed to help your at-home student(s) recognize themselves as scientists and think critically about problem-solving. The goal is to help students practice critical thinking skills. As with all lessons provided, please feel free to adapt them according to your students' abilities. Take these ideas, make them your own and your at-home students will have a greater chance at success.

Materials

Paper, writing utensil.

Background Information

The study of animal behavior is called ethology and it can help scientists better understand animals which provides valuable knowledge to inform how to best care for them in zoos, as well as inform conservation efforts to help the species overall. When scientists conduct animal observations, they use something called an ethogram. Ethograms are a list of observed behaviors an animal might exhibit and when used, they help to ensure consistency between many scientists conducting the research.

There are many different ways to collect animal behavioral data. For this activity, you will use a process called "point scan sampling." At predetermined intervals (like every 30 seconds, for example), you will record what the animal is doing at that exact moment in time. This provides a snapshot as to the animal's behavior and when combined with many other data sets, scientists can begin to make conclusions about the behavior of that animal or group.

Procedures

1. Watch the giraffe space use Virtual Classroom video (https://resourcelibrary.clemetzoo.com/Area/21) to learn about how scientists at Cleveland Metroparks Zoo study how giraffes use their habitat space.
2. Discuss with your students what an ethogram is and why it's important for scientists to collect animal behavioral information. Also discuss why a zoo or aquarium might be interested in how an animal uses the space it lives in.

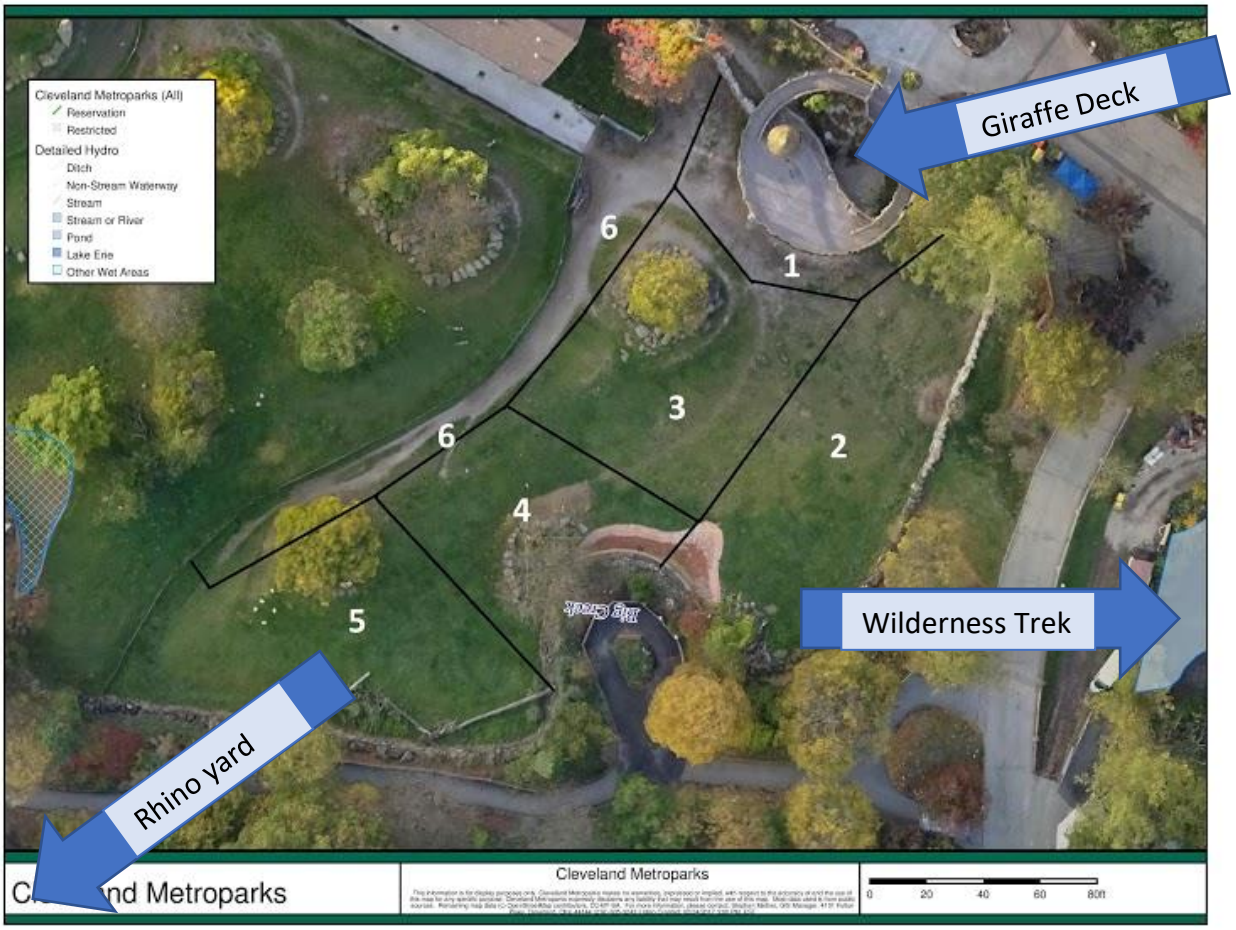
3. Have you student list all the behaviors they think a giraffe might do. Some behaviors may include walking, running, eating, interacting with each other, standing still, etc.
4. Explain to your students that they will be acting like scientists to help discover how giraffes use their habitat space. They will be collecting data to answer two main questions, what areas of the habitat do the giraffe use, and what are they doing in those areas?
5. Before your students can collect data, they need to be able to accurately identify the sections of the habitat so that everyone collecting data are using the same labels. On the attached worksheet is an aerial picture of the habitat space, along with lines and numbers that outline and label each section.
6. Have your students watch the video again, this time with the sound off to prevent distractions.
7. Students should pick a giraffe. Every thirty seconds, students should record which section of the yard the giraffe is in and what that giraffe is doing. If the giraffe they chose is off camera, they can choose a different giraffe.
8. Students should start recording data at the "0 second" time in the data sheet as soon as the camera switches from the scientist to the giraffes.
9. After the last data point has been collected (10 minutes), students should count the number of times their giraffe in each section of the habitat. They should also count the number of times the giraffe did each behavior. Students can use the attached grid at the end of the lesson to create a bar chart to show their data.

Ohio's Learning Standards

Science Content Standards
Grade 3 Life Science Topic: Behavior, Growth and Changes **3.LS.2:** Individuals of the same kind of organism differ in their inherited traits. These differences give some individuals an advantage in surviving and/or reproducing.

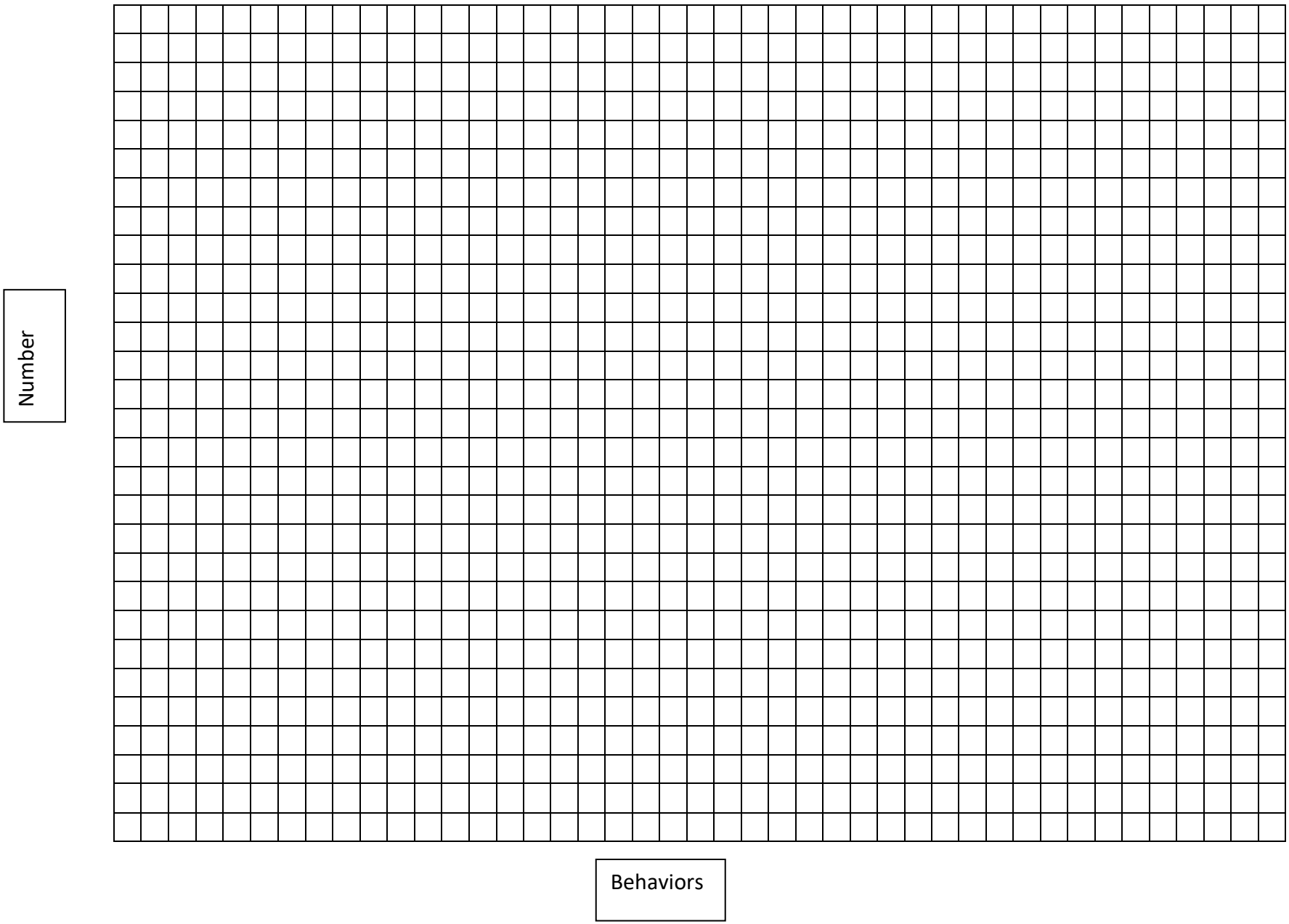
Giraffe Space Use

In order to monitor how giraffes use their habitat, it is important to determine how each area of the habitat will be identified. Below is an image of the giraffe habitat and how scientists at Cleveland Metroparks Zoo identify each section.



Time	Location number in giraffe habitat	Behavior of giraffe
0 min		
0.5 min (30 sec)		
1 minute		

1.5 min		
2 min		
2.5 min		
3 min		
3.5 min		
4 min		
4 .5 min		
5 min		
5.5 min		
6 min		
6.5 min		
7 min		
7.5 min		
8 min		
8.5 min		
9 min		
9.5 min		
10 min		


Number
Behaviors