CHAPTER 1
SCIENCE INQUIRY

Animal Crackers

Goal • Become more familiar with concepts related to ecosystems and interactions.

Materials
– animal crackers
– paper bag
– small plastic bag
– metric ruler
– masking tape

What to Do
Work with another student to complete the activity. Follow the procedure, and then answer the questions. Record your answers individually.

Part 1
Procedure

1. Your teacher will give you a bag of animal crackers. Reach into the bag, and remove a handful of crackers. Use the table at the right to record an inventory of the animal crackers removed by both of you.

2. Place the crackers you removed in the small plastic bag. Each of you will now take one cracker out of the plastic bag. Decide whether the two animals you selected would interact in a relationship of competition, predator-prey, or mating. Record the interaction in the table below.

3. Repeat step 2, 19 more times. When you have finished, put the animal crackers back into the bag.

Handful	Animals	How many?
1		
2		
3		
4		
5		
6		

Selection	Animal 1 selected	Animal 2 selected	Interaction
1			
2			
3			
4			
5			
6			
7			
8			
9			

▶

Animal Crackers (continued)

Selection	Animal 1 selected	Animal 2 selected	Interaction
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

Question

What problems did you run into when deciding what kind of interaction might occur between the two animals? For example, if you selected two lions, how did you decide whether they would be in a competition or mating relationship?

_____

_____

_____

_____

Part 2
Procedure

1. With a metric ruler and masking tape, measure and make a square, 25 cm by 25 cm, on top of a desk. Without looking into the plastic bag, each of you must put 10 animal crackers in one hand. Empty your handful of crackers above the centre of the square.

2. On a separate sheet of paper, draw your square. Show the location of the 20 animal crackers in the square. Draw the outlines of the animals, or draw boxes labelled with the identities of the animals.

3. Calculate the population density for each type of animal in your sample study area. Record your findings in the table at the right.

Animal	How many?	Population density
		____ /cm^2
		____ /cm^2
		____ /cm^2
		____ /cm^2
		____ /cm^2
		____ /cm^2
broken pieces		____ /cm^2

Animal Crackers (continued)

Questions

1. What might the broken pieces represent?

   _____

2. How did you count the animals that landed on or outside the tape square?

   _____

   _____

3. (a) How is this activity a realistic representation of what occurs in nature?

   _____

   _____

   (b) What factors are overlooked?

   _____

   _____

   (c) How would you modify this activity to include these factors?

   _____

   _____