

# Measuring an Ecosystem

## Summary

This is a lab in which students randomly choose a plot of land and measure the biotic organisms contained within in. They relate this to food chains and the energy pyramid.

## Main Core Tie

Science - Biology

[Standard 1 Objective 1](#)

## Time Frame

1 class periods of 60 minutes each

## Group Size

Small Groups

## Materials

1. [student page](#)  
(attached)  
hula hoops  
colored pencils  
large field outdoors

## Student Prior Knowledge

Students should have an understanding of feeding levels, food chains and food webs, and energy pyramids.

## Instructional Procedures

Divide students into group of 4 and give each group a hula hoop.  
Take students to a diverse area outside of your school (a nature center works well).  
Students should bring their labs and colored pencils with them.  
Instruct students to randomly throw the hula hoop. The best way is for them to turn around and throw it over their head.  
They should then draw and count and classify the organisms in their hula hoop.and answer analysis questions.

## Assessment Plan

### Sample Scoring Guide:

Data recorded.....10 points  
Questions correctly answered.....20 points  
Drawing colored, keyed, detailed.....15 points  
Student is on task and cleans up properly....10 points  
Conclusions are complete, solid ideas in complete sentences....20 points

## Answers to questions:

to get a random sample, so that you don't choose the cool yucca

producers, but answers will vary

producers

usually but not always

producers=most biomass, top of pyramid (tertiary consumers)=least

more energy from producers than consumers

food chains will vary

it provides a constant addition of energy for the producers through photosynthesis

because it is being used up, you gain energy by consuming something, a plant cannot get

energy from an insect because a plant doesn't consume it

No! otherwise the process would not occur

### Bibliography

Lesson Design by Jordan School District Teachers and Staff.

### Authors

[Utah LessonPlans](#)