

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.

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](#)