



Mathematics and Ecology: Through The Window Garden

Guide for Curriculum Unit 92.05.10

by Hermine E. Smikle

This unit was designed to use the concepts of ecology and apply them to mathematics. The main thrust is that the unit can be used as an enrichment exercise, and to provide material that can be used in the cooperative learning-teaching approach. With this in mind the unit is divided into two sections. The first section gives an overview of the topic of ecology and the second section gives the lesson plans.

The lesson plans are designed as examples and ideas on how the readings from ecology can be used. The readings do not exhaust the possibilities that exist, so the user might want to use the references given to find longer articles that could be rewritten to the students reading levels.

If the classroom physical features are conducive to window planters, then the exercise of planting or re-potting flowers could be used as a lesson that will involve the students. For example, they could share in the soil selection and plant and seed selection. The containers that are used as planters could be used to provide practical hands-on material for teaching the topic of area and volume of solids and also for teaching weights and measures.

The readings can also be used exclusively in a science class, and for teachers of self contained classes. The lesson plans give ideas called curriculum coordinates that are suggestions for other topics to which the ideas apply.

One shortcoming of the unit is that it is written from the teachers perspective, so that some adaptation needs to be made for students use. The teachers might need to generate games and problems that the students can work on.

Any comments or ideas will be appreciated.

(Recommended for Mathematics and Science, grades 7-10)

Key Words

Ecosystems Ecology Environmental Science Mathematics Ecology Inherent

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