Odyssey of the Eyes
Advanced Level

Purpose

To help students understand the connection between remote sensing technology, computer imagery and land cover assessment and to demonstrate how a satellite sensor relates information to a computer

Overview

Students translate their maps into digital code and exchange the digitized versions of their maps with students in another school or classroom for translation into a color map. Each group of students recreates the original image's land cover types.

Student Outcomes

Science Content

Science and Technology

Clear communication is an essential part of doing science.

Communications involves coding and decoding.

Tables, graphs and symbols are alternative ways of representing data.

Geography

Primary

Maps and satellite-produced images

Enrichment

Image display is accomplished by conversion of stored data to a user-defined color-coded image.

Scientific Inquiry Abilities

Observe, interpret and classify an image using the data given.

Analyze how the image interpretation might differ between groups.

Level

All

Time

Three to four class periods

Materials and Tools

Graph paper

Colored pencils

Digitized map/image produced from Part 2 of *Odyssey of the Eyes Intermediate Level*

Internet (optional)

Preparation

Assemble the materials.

Contact another classroom or school to exchange digitized maps with.

Prerequisites

The *Odyssey of the Eyes Beginning* and I*ntermediate Levels* are necessary to complete this activity.

Note: This activity presents concepts similar to those in steps 8, 9, and 10 of the *Relative and Absolute Directions Learning Activity* in the *GPS Investigation.*

What To Do and How To Do It

1. In the previous activity, *Odyssey of the Eyes Intermediate Level*, students translated their map models into a digitized code. Type this digitized code into a word processor. Use "0" to begin and end each line of the map. Allow the numbers to "word wrap" on the screen so that the map pattern is not visible in the message.

Example:

011111220011111330024643400246444002556550044444440011111220011111330011111330
011111220011111330011111330024643400246444002556550044444440011111220011113
300246434002464440025565500246434002464440025565500444444400111112200255655
00444444400111112200111113300111113300111112200111113300111133002464340024644
4400255655004444444001111220

2. Include the key (from the *Odyssey of the Eyes Digitized Data Sheet)* to translate the codes to colors.

   Example:
   1 violet
   2 indigo
   3 green
   4 yellow
   5 orange
   6 red

3. Exchange keys and digitized codes with students in another class or school. This exchange can be done on the Internet, by exchanging disks between schools or classes, or just by exchanging hard copies of the information.

4. Once your students receive the code from the other school or class, translate it into a color map using the key. Your students will produce a false color image.

5. Return the completed maps to the sending school for verification.

Discussion

1. What are the dominant land cover types on your false-color image?
2. Can you recreate a sketch of a map or a model of the area from the false-color image?
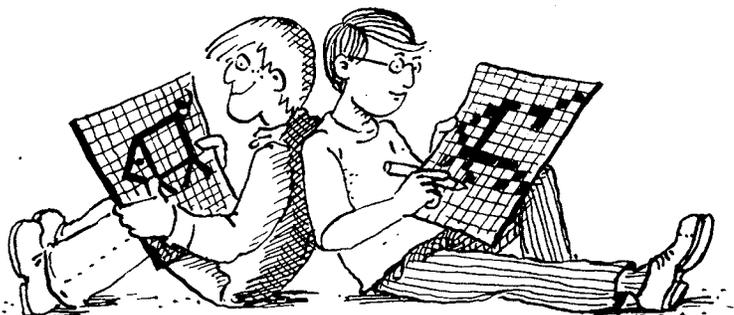
Source: Jan Smolik, 1996, TEREZA, Association for Environmental Education, Czech Republic