

#17: Technology



Laura Backstrom and Joshua Dearing reporting scientific data as part of HAMS participation in the GLOBE Program. HAMS students create charts and graphs of environmental data using computers to incorporate into independent projects.

Goal:

The students will use a computer to write a brief report, keep records, construct charts and graphs, and exchange data with other sources.

Objectives:

1. The students will exhibit an understanding of the integration of the language arts and science by writing a report on their selected topic concerning the environment.
2. The students will use encyclopedias and nonfiction books, booklets, or brochures to locate information about a specific topic.
3. The students will take notes from research material by paraphrasing and selecting essential information.
4. The students will organize information to write a small report about an environmental topic.
5. The students will use computer word processing skills to publish a final product.

6. The students will write in paragraph form and use the rules of capitalization and punctuation.
7. The students will record data using a computer.
8. The students will use Cricket Graph to construct graphs dealing with rainfall data.
9. The students will participate in an interdisciplinary, cross-grade project involving other schools.
10. The students will transmit scientific data as defined in the protocols of the GLOBE Program.
11. The students will incorporate computer created charts and graphs to complete independent survey analysis projects.

Procedures:

After participating in the STREAMS Environment and Ecology Program, students complete this task by using their team teaming class period. If time to complete this assignment becomes a problem, the team uses an existing language arts and science project to obtain the goal of computer usage. The format for completing the paper can be altered to incorporate the use of a computer. The advantage to this is that students participate in a complete writing program over several days. This also gives our learning disability students the opportunity to use the computer in the resource lab and classrooms. Students also create their own rainfall charts using Cricket Graph. Thereafter, they have the option of doing voluntary survey analyses that require total computer usage to complete, i.e., creating survey, survey tally, and the survey analysis that must include computer created charts and graphs. Students also use computers in interdisciplinary, cross-grade, cross-school district projects via the internet and participate in the GLOBE Program where they record and send scientific data by computer as well as manipulate and interpret weather data using technology.

Assessment:

Alternative Assessments, e.g., students 1) complete narrative writing assignment using computer word processing program, 2) create charts using Cricket graph, 3) create and analyze environmental survey using computer technology, e.g., power point presentation

Resources to Implement:

Teacher handouts:

- Huntingdon Borough Rain Data
- Huntingdon County Rain Data

Transparencies:

- Graphing Your Data (teacher created)

Equipment:

- Computers in class or computer lab computers
- Printer (colored printer)
- Cricket Graph program
- Other computer software as desired (e.g., Word 5.0, Works Spreadsheet)
- Overhead Projector/ Screen
- All equipment to participate in GLOBE Program (varies for grade level)



Two sixth grade students, Adam Marko and Rachael Williamson, master Cricket Graph in order to teach classmates how to plot water quality data from their field studies to Muddy Run and other local watersheds.