

# Best Practices of Technology Integration

**Title:** The Path of Water

**Submitted by:**

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**Subject Area:** Science, Language Arts, and Technology

**Intended Grade Level(s):** Grade 3

**Description:** The purpose of this lesson is to explain the sources and uses of water. Before this project, children need to be taught about the hydrosphere and how human activities interact with it (through books, posters, videos, and charts). Students will have the opportunity to present science information to their classmates with the aid of technology by using Kid Pix Slide Show presentations which they will create.

**Narrative:** This project is designed so students can learn about the sources of water, the path it takes to get to homes and businesses, and the ways we use water. Students will begin by expanding their awareness of the hydrosphere as they research the water cycle, the sources of our water, and identifying some positive and negative effects of human activities on water. This is accomplished through investigating, research in the computer lab, and the use of books such as The Magic School Bus at the Waterworks by Joanna Cole, Dr. Seuss' McElligott's Pool, and Where Does Water Come From? by C. Vance Cast. There will be group discussions and cooperative group work where sharing takes place. Students create their own water fact booklet consisting of short descriptive narratives and illustrations to indicate their understanding of water sources, its uses, and how it gets into their homes and businesses. The culminating project is to create and narrate a Kid Pix Slide Show consisting of 5-6 slides which will trace the path of water from its source to where it can be used in daily lives.

**Technology Rationale:** Already at third grade, technology can be a powerful and interesting research tool. By using on-line and CD-ROM materials, students are able to find accessible and appealing information. In addition, with computer technology, students can see their work published in a public forum on the World Wide Web.

**Curriculum Benchmarks:**

**MI.SCI.I.1.E.1** Generate reasonable questions about the world based on observation. (Key concepts: See Using Scientific Knowledge. Real-world contexts: See Using Scientific Knowledge.)

**MI.SCI.II.1.E.2** Show how science concepts can be interpreted through creative expression such as language arts and fine arts. (Key concepts: Poetry, expository work, painting, drawing, music, diagrams, graphs, charts. Real-world contexts: Explaining simple experiments using paintings and drawings; describing natural phenomena scientifically and poetically.)

**MI.ELA.3.EE.5** Employ strategies to construct meaning while reading, listening to viewing, or creating texts. Examples include retelling, predicting, generating questions, examining picture cues, discussing with peers, using context clues, and creating mental pictures.

**Total amount of time for lesson:**

\*Preparation time prior to the computer lab - Approximately 10-12 hours for class reading of informational texts, small group work, class discussions, and pre-writing activities.

\*Media Center Lab Time: Approximately 3-4 hours for researching and the creation of Kid Pix pictures, the slide-show presentation, and recordings.

**Materials/Hardware/Software:**

- \*Encyclopedias
- \*Classroom and library reference books
- \*Grolier's Multimedia Encyclopedia
- \*Bookshelf '95
- \*Kid Pix Studio Deluxe
- \*Power Macintosh 5400/120

**Teacher Preparation:**

Basic lesson plans were used to help kids understand and explain the paths that water can take so we can use it efficiently.

**Prerequisite Student Skills:**

A prior knowledge of drawing in Kid Pix Deluxe is preferable to reduce time spent creating each slide.

**Student Activities/Procedures:**

- 1.) Introduce the activity to the students explaining what they will be doing, why they are learning about our water system, and what the final products will be.

- 2.) Students will need to increase their knowledge by using informational texts, (science texts, trade books: Magic School Bus at the Waterworks, Where Does Water Come From, etc.).
- 3.) Demonstrate the electronic research materials that students will be able to use to locate information in pairs or cooperative groups.
- 4.) Students can begin to work on their own Water Fact Booklet which will contain a minimum of ten water facts and illustration.
- 5.) Give enough time for each student to conduct research at their own rate.
- 6.) Periodically regroup to discuss what students have discovered.
- 7.) Completed fact booklets will be turned in to the teacher for evaluation.
- 8.) When the teacher is satisfied that the information needed for a slide show presentation has been learned by the students, the students will begin the preplanning of each slide by use of a hard copy.
- 9.) Each slide will include a detailed illustration, labels, and a sentence to describe the path of water, and arrows to indicate the direction of the flow.
- 10.) Students do self and peer editing of rough draft slides, making changes in red ink. Their teacher will give final input and approval to their draft.
- 11.) Students will then reproduce and save their illustrations on the computer using Kid Pix Deluxe.
- 12.) Once all 5-6 picture frames have been completed they can be transferred in Kid Pix Slide Show. On completing of their illustrations, students will narrate the information needed on each slide.
- 13.) Each slide show will be saved in a form which can be shared with the class, and the teacher can then load into a web site published on the Internet.
- 14.) Following the completion of the slide show, students will create posters showing various methods of conserving water.
- 15.) Students will present and describe their poster to the class.
- 16.) The students will display their completed projects around the school to inform other classes of ways they can help to conserve water .

**Assessment/Evaluation:**

Completing and presenting a concise, factual, and narrated “Path of Water” slide show

will be considered to be the accomplishment of the project goals. Additionally, each student will demonstrate his/her knowledge of positive and negative interactions on the water supply by use of a poster.

**Follow-up Activities:**

\*Have students complete and give reports on positive effects of human activities on our water.

\*Set up opportunities for the students to present their slide show to other classes or in a program for parents.

\*Students have the opportunity to publish their work on a web page.