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EDIT 610 Multimedia Authoring
Design Document

Analysis: What can you do to make your class better?

Topic: The Water Cycle

The cycle of evaporation and condensation that controls the distribution of the earth's water as it evaporates from bodies of water, condenses, precipitates, and returns to those bodies of water.

Target audience

This lesson is part of an elementary science unit on Environmental Education which is designed for students in the third grade. In the third grade, science covers three general topics: Life Science, Physical Science and Earth Science. This 6-week unit will encompass learning various aspects of the students' environment. Students will learn about the natural resources that surround them and how they can help to conserve these resources. They will also learn topics such as the water cycle, acid rain, recycling, and Earth Day. Students will need to have prior knowledge of living things and general knowledge of the earth and its physical settings. Throughout this unit, the students will learn new terminology, use technology, pose questions, and seek answers.

Instructional Goal:

Students identify and describe the four main components in the water cycle including Evaporation, Condensation, Precipitation and Collection and distinguish between the functions of each area. Students will discuss how people affect their local and global environment and examine how they can improve it.

Technology Infrastructure:

Upon completion of this unit, students will create a culminating project using the new information that they have learned and present the project to their classmates. They use various resources to support the implementation on this project including the school's computer lab, Internet access, and videos.

Timeframe:

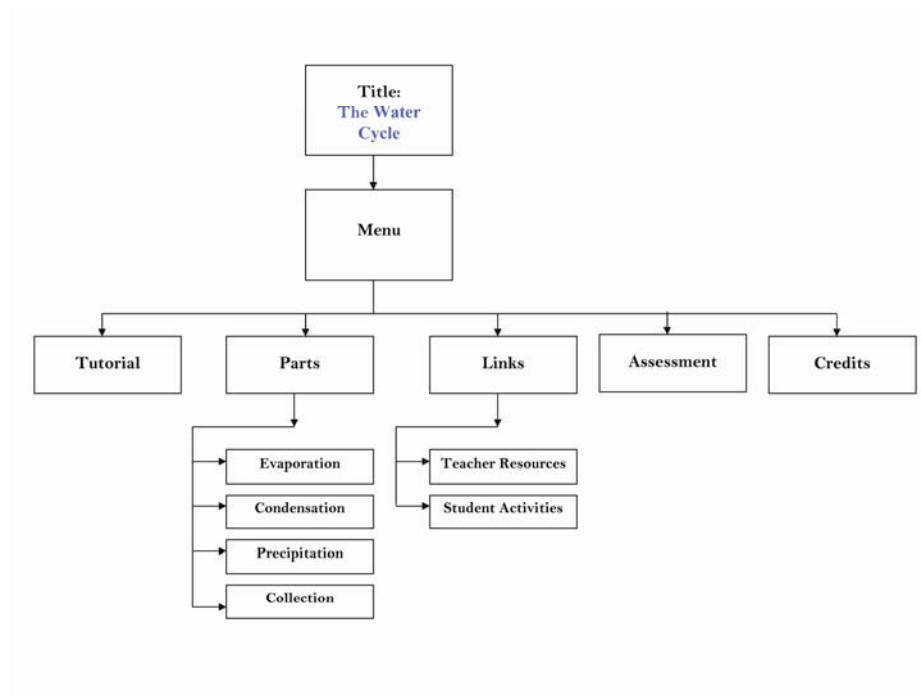
Analysis	September 30th
Content	October 8th
Flowchart	October 8th
Prototype	November 21st
Test	December 1st
Revision	December 7th
Completion	December 12th

Design: How can you make your class better?

Content and Scope:

The earth has a limited amount of water. That water keeps going around and around. This way of the Earth using and recycling its water supply is called *The Water Cycle*. This lesson is designed so that students can complete the tasks within approximately 30-45 minutes. Students will complete the tutorial followed by researching the four main parts of the water cycle including evaporation, condensation, precipitation and collection. They will take the assessment quiz and then participate in several student activities.

Flowchart:



Assessment Methods:

Student assessment will be directly linked to the Instructional Goals of the lesson. Following the activities students will take part in a quiz, which evaluates how well the student has comprehended the material and a questionnaire which measures the effectiveness of the lesson.

Hardware Description:

Platform – Macromedia Flash MX 2004

Hardware – 1 PC per student, Headphones

Software requirement – Flash Player, Internet Browser (resolution 800 x 600), Windows 98, 2000 or XP, 256MB RAM recommended

Instructional Objectives:

After viewing the tutorial, the student will be able to explain and demonstrate that water vapor moves between the earth's surface and its atmosphere in a continuous cycle.

Given the description of the 4 main parts of the water cycle, the student will be able to identify the states of water as it moves through the water cycle.

Upon completing all areas of the lesson, the student will be able to infer what variables affect the processes of the water cycle including how people affect their local and global environment and examine how they can improve it.

Interactions & Interface Design:

The lesson flows logically from one page to another in order to encourage students' exploration of the content. Colors enhance the student's enjoyment of the lesson and audio, animation and video also aids in student's motivation. All buttons remain consistent in order to reduce the students' cognitive load while navigating the site. At any point, the student has the ability to go back to a previous page or return home.

Development: Does the material meet the learning objective?

Media content:

The pictures and images are designed using Flash. All audio and video files included in this project, obtained through various sources, are listed on the credits page of the document.

Formative evaluation: Do learners achieve the learning objectives & Do they like the course?

Design Buddy & Expert Review:

Throughout the development, this program receives peer-review and expert-review of each area. Suggestions are taken into consideration and changes will be made accordingly.

Program Revisions:

In order to improve on its next implementation, following the launch of the project, modification and/or revisions will be made to the program based upon the student reviews, field trials, and peer and expert review.

Summative Evaluation: What is the learner's learning performance & How effective is this tool?

Following the activities students will take part in a quiz, which evaluates how well the student has comprehended the material which measures the effectiveness of the lesson. The program will also be tested in a field trial with a similar target audience prior to launch.