Paradigm Shift: Parallels Between the Gutenberg Bible/Printing Press Innovations and the Innovations Made Available by Personal Computers and the Internet

Subject: World History, Language Arts

Grade Level: 6-12

Rationale or Purpose:
The production of the Gutenberg Bible had many far-reaching implications for society. The invention of movable type allowed for the mass production and dissemination of a variety of reading materials, which produced a paradigm shift in the entire culture. Similarly, the boom of personal computers and the Internet over the past two decades has produced burgeoning amounts of information worldwide. This lesson will offer students the opportunity to juxtapose two periods in time, look for similarities and differences and long-term effects, and make predictions about future innovations.

Materials:
Research Guide (handout #1)
Helpful Internet Resources (handout #2)
Project Requirements (handout #3)

Lesson Duration: 2 weeks, divided as follows:
      Introduce topic, overview project, assign groups & topics: 1/2 class period
      Group Research and projects: 5 1/2 class periods
      Group Presentations: 3 class periods

Objectives: World History
(2) History. The student understands how the present relates to the past. The student is expected to:
      (A) identify elements in a contemporary situation that parallel an historical
          situation; and
      (B) describe variables in a contemporary situation that could result in different
          outcomes.
(23) Science, technology, and society. The student understands how major scientific and mathematical discoveries and technological innovations have affected societies throughout history.
(25) Social studies skills.
      (B) locate and use primary and secondary sources, such as computer software, databases, media and news services, biographies, interviews, and artifacts to acquire information

Objectives: Technology
(6) Evaluates acquired electronic information.

(C) demonstrates the ability to identify the source, location, media type, relevancy, and content validity of available information

(9) Uses technology applications to facilitate evaluation of work, both process and product.

(B) resolve information conflicts and validate information through research and comparison of data

Objectives: Language Arts

(4) Writing/inquiry/research. The student uses writing as a tool for learning.

(B) use writing to discover, organize, and support what is known and what needs to be learned about a topic;

(C) compile information from primary and secondary sources in systematic ways using available technology

(7) Reading/comprehension. The student comprehends selections using a variety of strategies. The student is expected to:

(E) analyze text structures such as compare and contrast, cause and effect, and chronological ordering for how they influence understanding

(G) draw inferences such as conclusions, generalizations, and predictions and support them with text evidence and experience

(13) Reading/inquiry/research. The student reads in order to research self-selected and assigned topics.

(B) locate appropriate print and non-print information using text and technical resources, including databases and the Internet

(D) produce reports and research projects in varying forms for audiences

Activity:

Step 1: The teacher divides the class in half. Each half will focus on one of the following:

- o   The significance of the Gutenberg Bible and movable type on culture, society, and intellectual development as well as the explosion of information that they brought to the world

- o   The significance of personal computers and the Internet on culture, society, and intellectual development as well as the explosion of information that they brought to the world

Step 2: Next, the teacher will divide each half into groups of no more than 4 students each, and assign each group one of the broad topics (above) to research.

Step 3: Students within each group will select roles to complete: facilitator (keeps group on task), scribe (completes writing/computer tasks), materials specialist (ensures group has needed materials for project) or reporter (completes speaking tasks).

Step 4: Expert Group: Student groups will research assigned topic on either the Gutenberg Bible or the computer, using websites and library resources found in the materials list.

Step 5: Student Expert Groups will complete a multimedia presentation, video, or poster of their research efforts.

Step 6: The teacher will provide each group with a list of websites and/or take class to the library/computer lab to complete research.

Step 7: Presentations: Teach content learned from research efforts by presenting a multimedia presentation, video, or informational poster to the class.

Closure:
A concluding discussion would offer students and the teacher the opportunity to synthesize information gained from student presentations and pose questions for future study.

Extension:
This lesson is intended to expose students to the parallels between Gutenberg's press and the innovation brought about by computer technology. Teachers might consider expanding the scope to include hands-on activities (examples: working as a scribe, making block prints, illuminations, and rubrications, or more modern activities like building a web page). Also, a more in-depth study of particular areas of interest would encourage students to note the cultural impact of these two innovations as they are applied to their daily lives.

Activity by:
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Research Guide (handout #1)

1.   How did this technology help in the distribution of information to the larger public?

2.   How was this technology made available? Did pioneers (innovators) collaborate as they created the technology?

3.   How did this technology facilitate language or cultural tolerance?

4.   What types of verbal skills were necessary in order to use the technology your group is focusing upon? Was a specialized vocabulary or grammar necessary in order to benefit from this technology?

5.   How did this technology impact the following?
     a.   economics, business, industry
     b.   schooling
     c.   culture
     d.   government
     e.   religion
     f.   medicine/technology/higher education

6.   Were their problems concerning the freedom of speech in regard to this technology?

7.   What type of "paradigm shift" was brought about by this technology?

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Internet Resources (handout #2)

<u>Gutenberg Project Websites</u>

Harry Ransom Center:
http://www.hrc.utexas.edu/exhibitions/education/modules/gutenberg

http://www.hrc.utexas.edu/exhibitions/permanent/gutenberg

Gutenberg Museum:
http://www.gutenberg.de/english

Catholic Encyclopedia:
http://www.newadvent.org/cathen/07090a.htm

Gutenberg Digital:
http://www.gutenbergdigital.de/gudi/start.htm

<u>Invention of Computer/Internet</u>

Early history of computers and networking:
http://www.computerhistory.org/about_us.html

Computer Innovation Timelines:
http://www.computerhistory.org/timeline
http://inventors.about.com/library/blcoindex.htm
http://www.ox.compsoc.net/~swhite/history/timeline.html

Internet/Networking Development Timeline:
http://www.computerhistory.org/exhibits/internet_history

Steve Jobs v Bill Gates:
http://news.bbc.co.uk/1/hi/programmes/worlds_most_powerful/3284811.stm

New Vocabulary Created by Computer/Internet Use:
http://www.netlingo.com/inframes.cfm

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Group Project Requirements

Project 1: Multimedia Presentation

Complete slides as follows: introduction, table of contents, 3-5 content slides, works cited slide in correct MLA format. Correct spelling and grammar is expected on all slides. Presentation must include a written storyboard or outline, along with color, backgrounds, sound, pictures, and video or animation with appropriate transitions.

Project 2: Video

Complete video as follows: introduction, contents credits, 3-5 minutes of content, works cited credits in correct MLA format. Correct spelling and grammar is expected on all written parts. Video must include a written script or outline with appropriate music or sound effects.

Project 3: Poster

Complete poster as follows: project title, neatly colored illustrations, summary of research details, an artistic element that makes poster 3-D or tactile in some way, and a section for works cited in correct MLA format. Correct spelling and grammar is expected on all written parts. Poster must be exceptionally neat, artistic, and creative in appearance.