

# Birthstone Project with a Multimedia Twist

## English Language Arts

### Middle Grades 6–8

#### Purpose

English language arts, science, and technology come together in a meaningful way through research and writing about personal birthstones. Students focus on planning and pacing to build their study skills.

#### Description

This lesson sequence is designed to be an interdisciplinary project for an English language arts teacher, an earth science teacher, and if possible, a technology teacher. The lessons focus on English and language arts as the vehicle for expression and analysis of valid material. Students learn about their birthstones as well as the mineral industry through online research, writing, and development of an electronic presentation.

#### Activities

##### PREPARATION

- ▶ Develop a timeline to keep track of deadlines.
- ▶ Distribute a traditional calendar to students and parents with all project deadlines clearly noted. All students cross-reference their research assignments and deadlines in their student planners.
- ▶ Create a "traveling folder" for students to hold their reports as they carry them from class to class. (This simple device cuts down on the "I lost my paper" excuse.)
- ▶ At the project's midway point, notify parents a second time via computerized phone call, e-mail, or message on the homework hotline.

##### SCIENCE CLASS PROCEDURE

- 1 Have books, charts, and periodicals available in the science classroom. Research begins as students discover and identify their birthstones. Internet research is combined with traditional materials in studying the stones within the context of the earth sciences.
- 2 If possible, create a phony site with misinformation. Point students in its direction, with the teaching objective that they learn to question and challenge the information they gather and its source.
- 3 Students fill in their research outline for an essay to be written later. As part of the research phase, emphasize taking notes for a bibliography.

ENGLISH LANGUAGE ARTS STANDARDS	NETS PERFORMANCE INDICATORS GRADES 6–8
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ELA 1, 8	7
ELA 11	10
ELA 5, 6, 8	

##### ENGLISH LANGUAGE ARTS PROCEDURE

- 1 Students write a narrative essay titled "Circumstances of My Birth." This autobiographical piece requires students to do some basic research, and its purpose is to generate interest in and enhance the success of the research writing task. This piece will act as a prologue, in each student's own voice, to the formal research paper and is particularly effective when recorded in the

ELA 4, 5, 8	8
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writer's voice as part of a multimedia presentation. Students write the first drafts of their introductions in class, stressing their personal connections to their birthstones. Following the research outline helps students learn the basic report format.

## TECHNOLOGY INTEGRATION PROCEDURE

- |  |                        |          |
|--|------------------------|----------|
| 1 Students word process their handwritten research outlines.   | ELA 5                  | 8        |
| 2 Students continue to use search engines on the Internet to locate gemstone Web sites. They develop a file of scanned or downloaded birthstone images, and find short computer animations of birthstone formation. At this point, introduce and explain the concepts of copyright and intellectual property. Students can use a digital camera to produce original graphics. These resources are saved for use in students' multimedia presentations. | ELA 8, 11<br>IL 3      | 7, 8, 10 |
| 3 Using word-processing software, students create their first paragraphs by expanding their outlines. Voice-rich material, handwritten in English class, is added. Students use this basic procedure to develop all essays over approximately two weeks.   | ELA 5, 8<br>IL 3       | 5        |
| 4 Once students have completed all their paragraphs, they assemble them into a formally formatted report (bound on the left). Teach advanced word-processing skills so that students can develop title pages, table of contents, page numbering, and bibliographical information.  | ELA 5, 8               | 5        |
| 5 After completing their reports, students begin their multimedia stacks. Use a rubric with performance expectations. Students design, animate, and test cards that present significant research text. Require that students do a bibliography card.   | ELA 7,12               |          |
| 6 After completing the multimedia stack, students produce a Web page that includes text from the formal report, links to the stacks, and an interactive "Webliography" of sites with pertinent gemstone information. Students also create a cross-reference to other student-created sites for the same birthstone.  | ELA 7,12               | 4        |
| 7 Organize a technology night for students to demonstrate and explain their presentations. Self-evaluation techniques that stress connections to NETS for Students and student performance can be shared and promoted.   | ELA 4, 6, 8,<br>11, 12 | 2        |

## SCIENCE AND TECHNOLOGY PROCEDURE

- |  |        |
|--|--------|
| 1 Conduct a mineral lab to let students gather firsthand data about birthstones. Students analyze the results of the mineral lab and compare their results using a database. Information from the mineral lab is used in the second draft in the appropriate sections of the research reports. | ELA 8  |
| 2 The final deadline for typed research outlines is reached after approximately two weeks. Students submit their research outlines, which include endnotes and a bibliography. Outlines are reviewed by the teaching team and scored in science class for accuracy and completeness.           | ELA 10 |

## Tools and Resources

### SOFTWARE:

- ▶ Word-processing, database, presentation, Web page creation

### WEB SITE:

Kingsbury Middle School (student samples):  
<http://dcsd.k12.nv.us/kms/barbwire/kms.htm>

### OTHER:

- ▶ Research outlines, rubrics, print research materials, materials to perform mineral scratch tests

## Assessment

Develop grading rubrics in science, English, and technology that reflect each discipline's emphasis. Distribute and explain these rubrics in all classes. For the revision of the first typed draft, emphasize sentence fluency, mechanics, and personal voice.

Using the same rubrics supplied to students, have each team member read and assess a final word-processed draft of each research paper.

## Credits

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## Comments

*Most reports gather dust once they have been turned in and graded. The Birthstone Project just keeps building. Word-processed files and computer graphics are now used in a HyperStudio-based multimedia production. Students are taught the programming basics of HyperStudio, learn how to save their word-processing files to a text format, and learn how to import graphics from other programs and the Internet. Students also create HyperStudio stacks. Once again, rubrics are used to help students understand grading criteria.*

*As we looked at how we wanted to assess students' work and provide feedback, we decided to write comments in separate colors to distinguish our remarks. Each class counted the assignment as a major term paper. We returned papers and grading rubrics to students. (A major goal for this year's rotation is to streamline and simplify our grading.)*

*The completed stacks are shared with the community at a school board meeting. Birthstone multimedia presentations also became the centerpiece of a back-to-school night in the technology lab. The level of excitement generated by going from the traditional report to a multimedia production is extraordinary. Many of the students we "lost" during the more traditional phase of the project were willing to make up their missed work so that they could participate in the multimedia project. The entire teaching team is invigorated and enthused by the interdisciplinary process. Student motivation is very high. All teaching team members, while exhausted, feel renewed.*

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