

RESOURCES

POWERPOINT® PRESENTATION

CONTENT:

This PowerPoint presentation introduces the digital microscope. It discusses the purpose, operation and integration of the digital microscope in the classroom. The presentation includes examples of curriculum integrating the digital microscope. It then asks for group participation.

DESCRIPTION:

1. The PowerPoint presentation consists of ten slides. You can see this PowerPoint presentation online in your browser.
2. If you have Microsoft PowerPoint, you can download the PowerPoint file so you can actually show it as a PowerPoint presentation from your own computer in the classroom. If you download this PowerPoint file, you can make changes, insert your own course information, and use it as you would ANY PowerPoint.
3. If you do not have Microsoft PowerPoint, you can download PowerPoint Viewer® (Windows) or PowerPoint Viewer® (Mac), which will allow you to share this presentation with an audience, but will not allow you to edit it in any way.

Speaker Notes: Each slide in the downloaded and online versions contains Speaker Notes which you can use in class as lecture notes when you show the PowerPoint presentation.

USES:

1. You can use the html version, online, during class time if you have a computer and presentation system that has Internet access. Use it as you would any lecture presentation material.
2. You can download the PowerPoint to your hard drive or CD-ROM for use on your laptop or classroom computer. You open and run the PowerPoint file just as you would any other PowerPoint presentation.

ACTIVITIES

1. Explore and Discuss

- Ask participants to form groups of two or three.
- Have participants read the article *Bugscope: Magnifying the Connection Between Students, Science and Scientists*.
- Have participants explore the Bugscope website

2. Discuss and Record

Ask participants to discuss how they might introduce and incorporate Bugscope with their students to further enhance the experience of using the digital microscope.

- Have groups record their ideas.
- Ask groups to report back to the large group

3. Reflect

Ask participants to reflect upon what they saw and discussed. Have the participants journal their reflections. Ask volunteers to share their thoughts.

WEB QUEST

If some participants are not familiar with WebQuests, ask them to visit the WebQuest page. Ask the participants to read the Overview page on the site. Demonstrate how to search for curriculum resources.

1. Explore and Discuss

- Ask participants to form groups of two or three.
- Have participants review the lesson plan from this module: "Insects: Grades Pre-Kindergarten through Second Grade" (PDF)
- Have participants visit the "WebQuest: An Insect's Perspective, A Science & Literacy WebQuest for Grade 2" designed by Ginger Tyson

2. Discuss and Record

Ask participants to discuss how they might introduce and incorporate this WebQuest with the Insects lesson sequence. Ask participants to discuss how the WebQuest might be adapted so that it would be appropriate for pre-kindergarten through first grades and/or grades 3 to 5.

- Have groups record their ideas.
- Ask groups to report back to the large group

3. Reflect

Ask participants to reflect upon what they saw and discussed. Have the participants journal their reflections. Ask volunteers to share their thoughts.

SUGGESTED READINGS

GLEF Articles, Videos, and Radio Shows:

- *Appropriate Assessments for Reinvigorating Science Education*
- *Bugscope: Magnifying the Connection Between Students, Science and Scientists*
- *Building a Bridge to Science and Technology*
- *Invigorating Science Teaching with a High-Tech, Low-Cost Tool* and accompanying video segment "New Tech Teaching Tool"
- *Student Researchers* and accompanying video segment
- *Sharing Research through Multimedia* and accompanying video segment
- Science Centers and Informal Learning Radio Showsegment with Dr. Rob Semper, executive associate director of the Exploratorium

External Links:

- Ask a Microscopist
- Digital Blue™: QX3 Plus Computer Microscope Product Info
- ISTE Curriculum Integration Lessons
- The WebQuest Page

Recommended Text:

Edutopia: Success Stories for Learning in the Digital Age

The George Lucas Educational Foundation

Published by Jossey-Bass, A Wiley Company

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ISBN: 0-7879-6082-9

The following Web site(s) appear on this page:

Online PowerPoint presentation: www.glef.org/modules/EL/EL_PowerPoint.htm

Download PowerPoint presentation: www.glef.org/modules/EL/EL_PowerPoint.ppt

PowerPoint Viewer (Windows): <http://office.microsoft.com/downloads/2002/ppview97.aspx>

PowerPoint Viewer (Mac): www.microsoft.com/mac/download/office98/powerpoint98viewer.asp

Bugscope: <http://bugscope.beckman.uiuc.edu/>

Bugscope: Magnifying the Connection Between Students, Science and Scientists article: www.glef.org/modules/modarticle.php?id=Art_771&mod=el

WebQuest: <http://webquest.sdsu.edu/>

WebQuest Site Overview: <http://webquest.sdsu.edu/overview.htm>

"Insects" Lesson Plan (PDF): www.glef.org/modules/EL/pdfs/EL_insects.pdf

WebQuest: An Insect's Perspective: <http://projects.edtech.sandi.net/grant/insects/>

Appropriate Assessments for Reinvigorating Science Education article:
www.glef.org/modules/modarticle.php?id=Art_883&mod=el

Building a Bridge to Science and Technology article:
www.glef.org/modules/modarticle.php?id=Art_1052&mod=el

Invigorating Science Teaching with a High-Tech, Low-Cost Tool article and accompanying video segment "New Tech Teaching Tool": www.glef.org/modules/modarticle.php?id=Art_942&mod=el

Student Researchers article and accompanying video segment:
www.glef.org/modules/modarticle.php?id=Art_632&mod=el

Sharing Research through Multimedia article and accompanying video segment:
www.glef.org/modules/modarticle.php?id=Art_633&mod=el

Science Centers and Informal Learning Radio Showsegment with Dr. Rob Semper, executive associate director of the Exploratorium: www.glef.org/php/radio.php?id=R52

Ask a Microscopist: www.msa.microscopy.com/Ask-A-Microscopist/Ask-A-Microscopist.html

Digital Blue™: QX3 Plus Computer Microscope: www.playdigitalblue.com/products/qx3/info/

ISTE Curriculum Integration Lessons: http://cnets.iste.org/students/s_book.html

Edutopia: Success Stories for Learning in the Digital Age: www.glef.org/products/edbook.php