

Integrated Media Literacy Project

Understanding Cells (Intermediate – Secondary Grades)

Project Description

Using slideshow creation software ([e.g. Keynote, PowerPoint, or Impress from Open Office (<http://www.openoffice.org/download/>)] and Voicethread (www.voicethread.com) students can compile research about cells, and then build multi-media projects including slides, images, and voice recordings that present their research with accompanying narration. The presentations created in VoiceThread are interactive and students will gain research, communication, organization and citation skills.

Before the Project

- Research and Learning: Classes should review the project outline, deciding on their research focus and criteria (in our case, cells and their component parts) and begin their research as time permits.
- Technical and Media Setup:
 - Teachers should create an account, run, and familiarize themselves with Voicethread prior to the lesson to ensure ease of use and answers to possible questions about its strengths and limitations. For example, students can upload images, videos, documents and PowerPoint presentations, then can record narration to accompany each slide. However, the length of the narration becomes the length of time each slide appears in the presentation. Students can also leave comments on each other's presentations, but these comments (in text, video or voice recording) play/appear upon each slide, and lengthen the amount of time each slide remains on the screen. We recommend that teachers watch Voicethread's short video tutorials to gather ideas for how best to use Voicethread for this and other projects.
 - Students and teachers should ensure that they have voice recording capabilities on their computers (sound cards and microphones), or if this is not available, should instead briefly test the phone recording application within Voicethread.

First Online Session

- Teachers can start their session by reviewing the project outline, research criteria, and rubric. Students should also review proper methods of referencing their online and traditional information sources, as well as techniques for confirming that information is both true and complete.
- Students must create a VoiceThread account; first name, last name (pseudonym), and a valid e-mail are required for registration.
- After creating accounts, a basic demonstration should be given to show students what they are working towards as a way to understand how they should plan their research and design

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before using the medium. Teachers can either create a sample slideshow, or play an existing VoiceThread online to illustrate its capabilities to students.

- Students can start their projects by organizing slides in their slideshow software based on their research criteria. For example, they could include one slide each for the cell membrane, nucleus, and each cell component; alternately, they could create one slide each to explain the overall structure, functions and types of cells, depending on the specific curriculum being studied. Student research can start with previously explored materials, including textbooks, handouts and experiments, or can explore cells using online sites, including:
 - Science for Kids: <http://scienceforkids.kidipede.com/biology/cells/>
 - Biology4Kids.com: http://www.biology4kids.com/files/cell_main.html
 - Neok12: <http://www.neok12.com/Cell-Structures.htm>
- As part of their planning, students should leave blank slides for video clips and images they find online. While researching their topics, students should start to enter information into their slideshow and include references at the bottom of each slide. Any media used should be copyright free, from websites such as:
 - http://commons.wikimedia.org/wiki/main_page
 - <http://search.creativecommons.org/>
 - <http://www.flickr.com/>
 - <http://www.pics4learning.com/>
 - <http://www.picdrome.com/>
- The lesson can end with students starting to compile their information and create a Works Cited reference list. Depending on students' age and computer access at home, teachers can also ask students to continue their project work at home.

Second Session

- Teachers can start this session encouraging students to review a number of sample presentations to gather ideas for their own projects.
- Students should also use this class to continue work on their slideshows, preparing a script to comprise the narration for their VoiceThread project.
- Once student slideshows are complete, students can save them as PDF files for upload to VoiceThread. Students should be strongly encouraged to review their work for grammatical and factual errors, and should be reminded that making changes to their slideshows will require significant work after this point (re-uploading their work to VoiceThread and revising their VoiceThread projects significantly).
- While working to add videos, images and web-links to their VoiceThread presentations, students can revise and finish their narration, ensuring that it is informative and coherent, yet also concise, so as to avoid an overly long amount of time spent on each slide.
- Students should be encouraged to work on their projects independently and at home, recording narration in a quiet space.

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Third Session

- Students should log into their Voicethread account and undertake the last tasks to complete their project. They should be sure to play their projects in their entirety and make any last revisions before playing their work in front of the class.
- If and when time permits, student presentations can be shared for online viewing or can be played for the whole class. During the screening students can take notes for possible test questions and can ask clarifying or probing questions about the topic to gain a better understanding of cellular biology.
- To engage students in reflecting about their online learning, ask students:
 - What research strategies did you use to complete your project? How did you organize yourself (and, if applicable, your project team)?
 - How did you verify the information you were gathering? How were you able to confirm its truthfulness and completeness?
 - Did using Voicethread as a tool for your project assist you in learning about cells and their functions and structure? Why or why not?
 - What other ways could you use Voicethread for your science projects? How could you make use of the interactive comments feature for other topics of study?

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