

Eukaryote Diversity Show and Tell

Overview:

We spend many labs looking at the differences between rather similar Prokaryotes. This is the Laboratory where we devote some time to the different groups of Eukaryote microbes. In the past I have set out a variety of different examples of live specimens and prepared slides for students to observe in lab. In those types of labs students are passive participants with little input into the selection of organisms or which properties we spend time studying. The results have always been disappointing.

So this semester we are going to be more interactive and students will have a lot of creative input.

Objective:

Through this activity students will get to employ a variety of skills including research and writing, collaboration with other students, and presenting/communicating information to others.

Each group will select one category of eukaryotic microbes. Students will have 4 weeks to research their organism(s) and prepare for an in-class show and tell activities. Some guidelines are provided regarding the format of the in Class show and tell activities, and a grading rubric is provided, but student groups can select what information about their organisms they focus on.

Tree of Life

The tree of life project is a peer reviewed collaborative internet project which aims to provide a hierarchical organization of all life on earth.

<http://tolweb.org/Eukaryotes/3>

We will use the tree of life project as our reference material to determine the eukaryote organisms that will be researched and presented in class. To obtain more detailed information about your organisms you will need to search for other sources.

Research: WebAccess activity

Each individual in your team will research and write a report on one organism from your assigned group. You will write a short, but detailed summary of your organism(s) providing details on; taxonomic classification, metabolism, and interactions (positive, or negative) with humans. Not more than 250 words. (15 points)

You will also compile a list of references and these need to be cited in the text, and organized into a reference section using the APA format, (or Harvard System for webpage references) used for the Formal Lab Write up. (5 points)

You will submit your summary and your references as week 9 online assignment.

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Materials;

Prepared Slides: For each organism a selection of prepared slides will be available. There will be some opportunity to browse through available slides and select which slides you want to use on the show and tell day.

Live Specimens:

For some categories (Protozoa such as Ciliates and Amoebas) live specimens will be available, (students will need to place a request so that we can order the organisms in advance) students will be able to make wet mount slides of your organisms.

BYO Specimens:

For other groups (Fungi, and Algae) it might be possible to bring in specimens you find in the wild. We may have preserved specimens for some worms (*Taenia* for example). If no specimens are easily found you can always make your own. Using craft materials construct a model organism.

Handouts:

You print a summary of the information on your powerpoint of poster board – you would require 8 copies- one for each group, plus one instructor copy.

Posterboard Display:

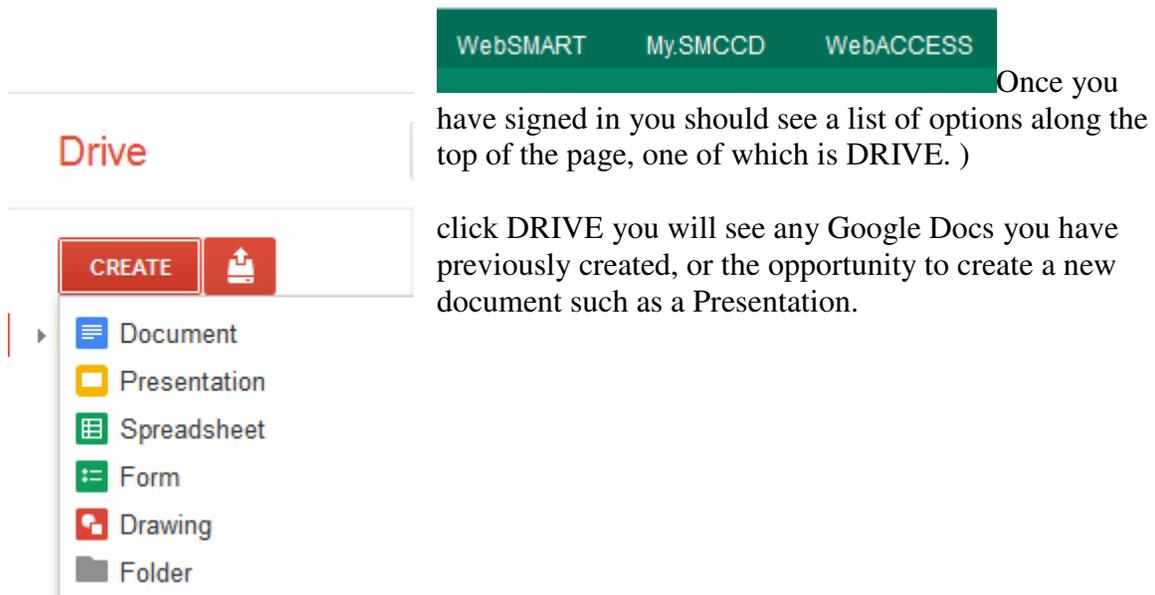
A poster can provide people with information that they can view themselves. It will also allow people to view your information when you groups is not giving a presentation.

Powerpoint

During the Show and Tell demonstration one of the things you will ‘show’ other students is a Powerpoint presentation of your organism. You can incorporate images, animations, and/or movie clips.

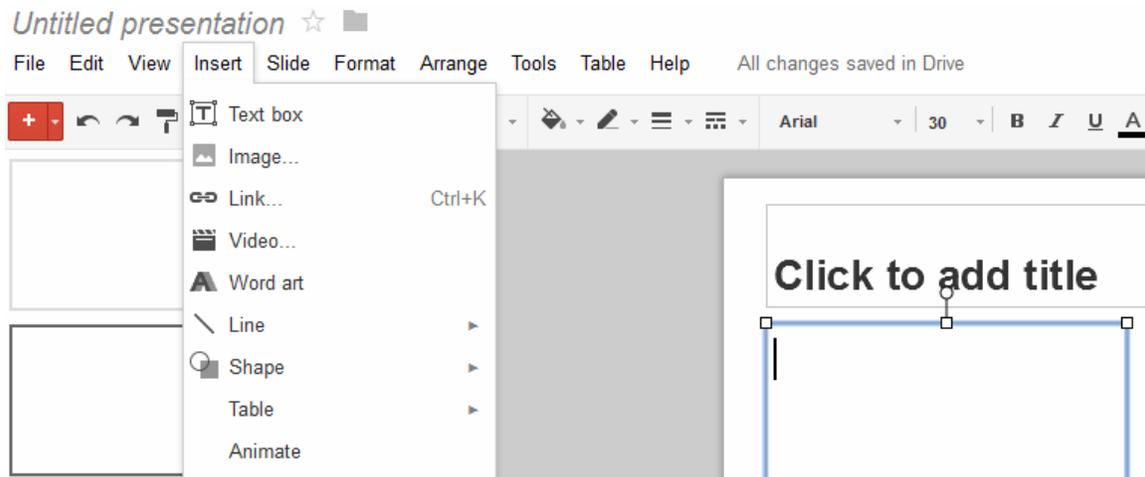
As all Cañada College students have a my.smccd.edu gmail account one option would be to create a Google Doc presentation and share this with your group members.

On the college home page you can click on the My.Smccd tab to access your account.



The image shows a screenshot of the My.SMCCD website navigation bar at the top, with three tabs: WebSMART, My.SMCCD, and WebACCESS. Below this is a screenshot of the Google Drive interface. The 'CREATE' button is highlighted, and a dropdown menu is open showing options: Document, Presentation, Spreadsheet, Form, Drawing, and Folder. The text 'Once you have signed in you should see a list of options along the top of the page, one of which is DRIVE.)' is overlaid on the right side of the Drive screenshot. Below the Drive screenshot, the text 'click DRIVE you will see any Google Docs you have previously created, or the opportunity to create a new document such as a Presentation.' is displayed.

From the menu you will have numerous options such as add slides, add images etc. if you are unfamiliar with how to use PowerPoint there are numerous online tutorials that can lead you through the basic steps you need to add slides, formatting, and adding images. For example <http://www.youtube.com/watch?v=iYhDZ7yjM3w>



Microsoft have their own tutorial too: <http://office.microsoft.com/en-us/powerpoint-help/slides-text-and-notes-RZ001129842.aspx?section=2>

Google Docs have a simple, but limited, version of PowerPoint. If you have your own version, or use one of the computers at the Learning Center or Library, you will have many more creative choices. You will need to bring the presentation to Lab on some form of USB drive on the day of the Show and Tell.

Presentation Guidelines:

Although your group will create a presentation you will not be giving a lecture to the class. Your presentation will run on one of the Laptops on the table as the other students visit your station. Therefore, you will set up the presentation to run automatically, a time limit can be set for each slide, and you can select the style of transition between slides. Aim to have a presentation that cycles through in about 3-4 minutes, so it will loop while you are discussing your organisms with other students.

Microscope Demonstration:

Each group will also have at their disposal either live specimen, or prepared slides which you can center and focus for the convenience of the other students. Set up one or two different microscopes with the slides centered and focused for optimum viewing.

Facts on Demand:

In addition to all of your materials each student will need to be able to answer questions on any aspect of your category of organisms. You can prepare notes to refer to, but you should not be dependent on your notes to answer every question.

Format:

There will be eight stations for eight different groups of Eukaryote Microbes. Each group will be at their station for two eight minutes blocks to answer questions and show off their specimens. For the other times groups must travel to the other stations and complete the Data Sheet for each category of microbes. They will also evaluate the displays of the other student groups.

Time	Groups		
9:47- 9:54	1 and 2	Ascomycota	Basidiomycota
9:56-10:03	3 and 4	Alveolates	Archaeplastids (Red and Green Algae)
10:05-10:12	5 and 6	Euglenozoa	Heterpkontophyta
10:14-10:21	7 and 8	Trematoda	Cestoda
10:23-10:30	2 and 6	Basidiomycota	Heterpkontophyta
10:32-10:39	3 and 7	Alveolates	Trematoda
10:41-10:48	4 and 5	Archaeplastids (Red and Green Algae)	Euglenozoa
10:50-10:57	1 and 8	Ascomycota	Cestoda

Group Assessment

On the day of the show and tell each Student Group will give two 8 minute presentations. During the presentation the other groups will have the opportunity to watch, observe, ask questions and learn about each category of microbes. They will take notes, and also complete a Data Sheet for each category of microbes.

Inter-Group Assessment:

You will grade the display of the other groups out of 20 using the Grading Sheet. All of the grading sheets will be collected and you will receive an average grade.

Intra-Group Assessment:

An anonymous Peer Group Assessment will be completed by each student. You will list the names of all individuals in your group and describe what each individual did to contribute to this group project.