

BIO 340
Spring 2010

Microorganisms You Should Know (MYSK)

Objective: Scientific information is meaningless if you can't communicate this information to different audiences. It is particularly important in today's society that scientists communicate effectively with non-scientists because these non-scientists have to make important decisions that are based their understanding of science: if they understand the science underlying these decisions, then they'll make better decisions. Scientists have the responsibility to explain science so that non-scientists understand it. **MYSK** (pronounced "misk") will help you sharpen your writing and presentation skills so that you can communicate accurately and effectively with a non-scientist audience. **MYSK** will also give you an appreciation for the diversity and importance of microorganisms in our world.

How to do a MYSK: This is an optional project. If you choose to do a MYSK, you will sign up to research one microorganism that will be discussed at some point during this course. Find out about this organism's taxonomy, morphology, metabolism, its ecological role in our world and its relevance to the lecture on the assigned day. Prepare a brief written summary of information that is appropriate and engaging for an audience of college-educated non-scientists. ***This summary should be entirely in your own words!*** Present this summary to the class (which will be a proxy for your target audience) on the assigned day (see attached schedule). Your presentation should ***last no more than 5 minutes*** (I will be ruthless on time) and will occur at the beginning of the class (class starts at 11:30 a.m.; if you are not ready to go at 11:30 then you will forfeit your presentation). You will hand in to me your written summary and your sources of information (bibliography) upon completion of your presentation. Make sure that you provide a full citations for each source, including on-line sources (a URL is not a full citation). Also, **at least one day in advance** of your presentation you should provide me with one or two digital images of your organism in the form of a Powerpoint slide that can be displayed while you are giving your presentation—make sure that the URL for each image is on the slide.

Evaluation and Credit: Your presentation, written summary, and image(s) will be evaluated on a 10 point scale. All points that you earn will be ***added*** to your next exam. For example, if you get a 96% on your next exam and get a "7" on your MYSK, then your exam score will be changed to a 103%. Also, your MYSK will factor into the discretionary component of your grade, so although you have the option of doing a bad job on your MYSK, I don't recommend that course of action. **If you do not turn in your sources of information with your text, then you will get a "0" on your MYSK.** For good advice on how to give a good presentation, please refer to <http://ctl.centre.edu/learning/software/presentation.html>.

Resources: You can use any *legitimate, scientifically accurate* source of information. This includes your textbook, appropriate web sites (including links that are on the Bio 340 webpage), books, encyclopedias, journal and newspaper articles, and materials on reserve in the library. ***Do not use Wikipedia or any other user-edited source.*** Your sources should include print sources—do not rely solely upon Internet sources.

Sources On Closed Reserve in the Library:

A Field Guide to Bacteria by Betsey Dexter Dyer

A Field Guide to Germs by Wayne Biddle

Microbial Inhabitants of Humans : their ecology and role in health and disease by Michael Wilson

Garden of Microbial Delights : a practical guide to the subvisible world by Sagan & Margulis

Magnificent Microbes by Bernard Dixon

Microbes and Man by Bernard Dixon

Power Unseen : how microbes rule the world by J.R. Postgate

The Outer Reaches of Life by J. R. Postgate

The Surprising Archaea : discovering another domain of life by John Howland

Bergey's Manual of Systematic Bacteriology Vols 1-4 (1984)

Bergey's Manual of Systematic Bacteriology Volume 1 (2001)

Bergey's Manual of Systematic Bacteriology Volume 2 (2004)

Bergey's Manual of Determinative Bacteriology (1974)

MYSK Presentation

Name: _____

MYSK Score (to be added to your next exam): _____

1. Content

- Information presented clearly? Accurately?
- Organized, logical flow of information?
- Up-to-date information?
- Material properly introduced? Concluded?
- In own words?
- Clear image(s)?

2. Delivery

- Indicative of an understanding of the topic?
- Clear articulation?
- Lively and enthusiastic?
- Effective use of time?
- Tone of voice/projection
- Eye contact with audience
- Effective use of pointer?

3. References

- Scientifically accurate?
- Reliable sources?
- Sufficient number of sources?
- Images (proper citation? effective?)

4. Overall presentation skills

- Distracting verbal or physical mannerisms?
- Appropriate dress?

5. Additional comments:

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Name	Date Covered	Student
<i>Saccharomyces cerevisiae</i>	2/10	
<i>Streptococcus</i> sp.	2/12	
<i>Salmonella typhi</i>	2/15	
<i>Neisseria meningitidis</i>	2/17	
<i>Legionella pneumophila</i>	2/19	
<i>Beggiatoa</i> spp.	2/24	
<i>Halobacterium salinarium</i>	2/26	
<i>Clostridium botulinum</i>	3/1	
<i>Pseudomonas aeruginosa</i>	3/3	
<i>Micromonospora</i> spp.	3/5	
<i>Bacillus</i> spp.	3/8	
<i>Mycobacterium tuberculosis</i>	3/10	
<i>Rhodobacter</i> spp.	3/12	
<i>Escherichia coli</i>	3/17	
<i>Hemophilus influenzae</i>	3/19	
<i>Rickettsia prowazekii</i>	3/29	
<i>Shigella dysenteriae</i>	3/31	
<i>Thermoproteus</i> spp.	4/2	
<i>Methanopyrus</i> sp.	4/5	
<i>Chlamydia trachomatis</i>	4/7	
<i>Agrobacterium tumefaciens</i>	4/9	
<i>Yersinia pestis</i>	4/12	
<i>Clostridium difficile</i>	4/14	
<i>Propionibacterium</i> spp.	4/16	
<i>Giardia intestinalis (lamblia)</i>	4/21	
<i>Entamoeba histolytica</i>	4/23	
<i>Plasmodium</i> sp.	4/26	
<i>Candida albicans</i>	4/28	
<i>Cryptococcus neoformans</i>	4/30	
Tobacco Mosaic Virus	5/3	
Varicella-Zoster Virus	5/5	
Parvoviruses	5/7	
Potato Spindle Tuber Viroid	5/10	

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