

Leading an Elementary School Science Club: A Service Learning Project for Microbiology Students

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1. Service Learning Description
 - a. Review of juvenile literature
 - b. Brainstorm Topics and Activities as a class
 - c. Students prepare lesson
 - i. Worked in groups of two
 - ii. I met with each group prior to science club session
 - d. Students lead session
 - e. Students write written reflection
2. Science Club Description
 - a. Twenty-four 3rd-5th Graders
 - b. 1 hour after school for 6 weeks
 - c. Classroom management and communication with parents
 - d. Certificates and Giant microbes
 - e. Schedule of weekly activities
 - f. Resources: email me and I will share the following URLs (and more) as bookmarks with you
 - i. Time fillers – coloring sheets, word finds, crossword puzzles
 1. <http://www.nanobugs.com/activities/coloring-book.php>
 - ii. Curriculum and activities –
 1. ASM Classroom and Outreach Activities
 - a. <http://www.asm.org/index.php/education/classroom-and-outreach-activities.html>
 2. Health and Biomedical Science for a Diverse Community – 4th grade unit on Infectious Diseases and Immunology
 - a. http://www.hallofhealth.org/sepa/curriculum/Infectious_Diseases_and_Immunology.html
 3. Microbeworld
 - a. http://www.microbeworld.org/index.php?option=com_content&view=article&id=342&Itemid=209
 4. Cells Alive
 - a. <http://www.cellsalive.com/howbig.htm>
 5. Glogerm
 - a. <http://www.glogerm.com/ideas.html>
 6. Kids Health: How the Body Works
 - a. http://kidshealth.org/kid/htbw/htbw_main_page.html
 - iii. Books
 1. Microcosmos Curriculum Guide to Exploring Microbial Space, Dr. Douglas Zook
 2. Bill Nye the Science Guy's Great Big Book of Tiny Germs

Schedule of Activities

Session	Topic	Activity
1	What are Microbes?	<ul style="list-style-type: none"> ❖ Basic Intro to microbes by mini-lecture and discussion <ul style="list-style-type: none"> ➤ Cells alive ➤ Microbiology Discovery Bag ❖ Start 6-week experiment on decomposition - Microbes: Nature's Recyclers <ul style="list-style-type: none"> ➤ Based on ASM Classroom and Outreach Activities: The Role of Microbes in the Environment
2	Where are microbes found?	<ul style="list-style-type: none"> ❖ Swab the classroom and grow on Petri plates ❖ Start to learn how to use the microscope in preparation for next week by looking at prepared slides.
3	How are microbes studied?	<ul style="list-style-type: none"> ❖ Look at Petri plates from last week – taped shut! ❖ Looked at bacteria using the microscope – heat fixed smear of plaque from teeth
4	How are microbes spread?	<ul style="list-style-type: none"> ❖ Simulated epidemic by handshaking using Glo Germ ❖ Proper hand washing technique– mini-lecture and practice
5	Microbes as pathogens: How does the immune system work?	<ul style="list-style-type: none"> ❖ Watched online videos – Kids Health ❖ Used manipulatives to simulate the immune system ❖ Acted out the roles of the immune system
6	Beneficial Microbes	<ul style="list-style-type: none"> ❖ Mini-lecture and discussion ❖ Results of decomposition experiment