

Grade 10-12

Distance Learning Module 6: Week of: May 11th – May 15th

Microbiology Techniques Part 1

Infectious Disease - Modified from [Unit #2 - The Agent](#)

Targeted Goals from Stage 1: Desired Results

Content Knowledge:

Microbiology techniques are used to grow bacteria, identify bacterial species, and treat bacterial infections

Antibiotic resistance is a growing threat that is spurred on by the overuse of antibiotics for treatment and prevention of infections.

Vocabulary:

gram-positive, gram-negative, antibiotic, bacterial culture, aseptic technique, zone of inhibition, resolution, field of view

Skills:

Employ the techniques used in infectious disease laboratories.

Expectation:

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Monday: Aseptic Technique and Lab Safety <ul style="list-style-type: none">- Review and take notes on Aseptic Technique Slideshow- Watch the Lab Safety Video- Respond to question on Classroom	Aseptic Technique Slideshow	Respond to question on Classroom “After watching the Lab Safety video from Tufts, list 3 procedures that should be followed in order to follow proper lab safety rules”
Tuesday: Introduction to the Microscope and Oil Immersion	Microscope Handout	Submit Microscope Handout through Classroom

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
<ul style="list-style-type: none"> - Label the parts of the light microscope and research each of their functions - Read about basic and oil immersion microscope procedures 		
<p>Wednesday: Observing Bacteria Under the Microscope</p> <ul style="list-style-type: none"> - View microscopic images of various bacteria - Answer related lab questions 	Simulated Microscope Lab	Submit Simulated Microscope Lab through Classroom
<p>Thursday: Gram Staining Day 1</p> <ul style="list-style-type: none"> - Review and take notes on Gram Staining Slideshow - Complete Gram Staining Virtual Lab and answer related questions 	Gram Staining Slideshow Gram Staining Virtual Lab Simulated Lab Questions	Complete Virtual Lab and submit related questions through Classroom
<p>Friday: Gram Stain Day 2</p> <ul style="list-style-type: none"> - Observe microscopic images of various bacteria - Determine shape - Determine if they are Gram + or - 	Gram Staining ID	Submit Gram + or Gram - identification of microscopic images through Classroom

Week criteria for success (attach student checklists or rubrics):

Assignment	Criteria for Success
Aseptic Technique	Respond to question on Classroom
Introduction to the Microscope	Microscope Handout is submitted through Classroom Microscope is labeled and functions are described
Simulated Microscope Lab	Lab is complete and submitted 80% of responses are correct
Gram Staining Virtual Lab	Virtual Lab is completed Related lab questions are submitted through Classroom
Gram Staining Identification	Gram staining identification is submitted through Classroom 5 out of 7 are identified correctly

Supportive resources and tutorials for the week (plans for re-teaching): links posted in Google classroom)

YouTube Video: How to Use a Microscope

YouTube Video: Gram Staining