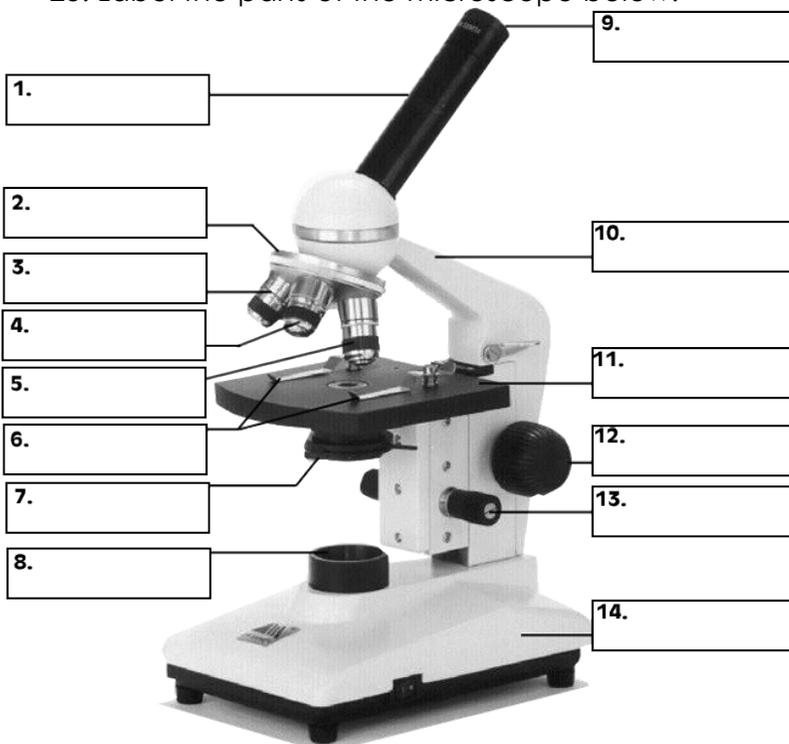


BIO A: Unit 1 RETAKE REVIEW – Intro to Biology A

1. List 4 safety procedures. Which is most important when touching bio-materials?
2. If you are unsure of what to do in the lab, what should you do?
3. Because you may come in contact with organisms you might not see, what safety procedure must be followed?
4. Why did we put our petri dishes into the incubator during the microorganism adventure?
5. I am doing an experiment for which detergent is best for stains. I have 5 white shirts, made of 100% cotton, with ketchup stains. I washed them all on the hot cycle for 45 minutes the first 4 with different detergent and the last I wash on the same cycle with no detergent.
 - a. What is the independent variable in this experiment?
 - b. What is the dependent variable in this experiment?
 - c. What are 3 constants in this experiment?
 - d. What would the control be in this experiment?
6. In Redi's experiment, the jar covered with gauze, contained meat without maggots. What idea does this support? (Biogenesis or Spontaneous Generation?)
7. What was the purpose of the agar in the petri dishes in the microorganism adventure?
8. When using the high power objective lens, which part of the microscope should you never use?
9. Which objective lens should you always use first?
10. What happens to the resolution (amount of detail) as you increase the magnification on the microscope?
11. What happens to the field of view (amount of object you can see) as you increase the magnification on the microscope?
12. Describe the structure of a virus.
13. Identify the characteristic of life in each of the following examples.
 - a. A grasshopper eats grass and converts that to energy so he can grow.
 - b. Maintaining a constant blood pressure of 120 over 80.
 - c. A caterpillar becoming a butterfly
 - d. Needing new antibiotics
 - e. Keeping your body temperature at 98.6deg.
 - f. A tadpole becoming a frog.

14. What is sexual reproduction?
15. What is asexual reproduction?
16. During an experiment measuring the height of a plant in centimeters would be **QUALITATIVE** or **QUANTITATIVE** data?
17. Describing the color of a plant would be **QUALITATIVE** or **QUANTITATIVE** data?
18. Which scientist finally ended the biogenesis vs spontaneous generation debate?
19. Is a virus made of cells?
20. What do we call a population of bacteria that is so large it can be seen with the naked eye?
21. What is spontaneous generation
22. What is biogenesis?

23. Label the parts of the microscope below.



24. What is the correct way to carry a microscope?
25. What are the course and fine adjustment knobs used for?
26. What is the nose piece used for?
27. What are the stage clips used for?
28. What is the iris diaphragm used for?
29. Explain how to make a wet mount using a small piece of plant.

30. Is a virus a living thing? _____ Give 2 pieces of evidence to explain your answer.

Scientists

Fill in the table below.

Scientists	Redi	Needham	Spallanzani	Pasteur
Experiment	Meat – Results: Jar covered did not have maggots.	Heated Gravy- Results: Both open and closed had micro-orgs.	Boiled Gravy- Results: Open flask had micro-orgs. closed did not.	Special Flask- Results: No micro-orgs in the flask until he broke off the neck.
Supported Biogenesis or Spontaneous Gen				
What was wrong with Experiment	XXXXXXXXXX			XXXXXXXXXXXXXX

- 31. Did Needham support biogenesis or spontaneous generation?
- 32. Spallanzani did almost exactly the same experiment as Redi, except he changed one thing.
 - a. What did he change?
 - b. Why did he change it?
- 33. People still thought something was wrong with Spallanzani's experiment.
 - a. What did they think was wrong?
- 34. Explain how the design of Louis Pastuer's flask finally ended the debate.

Experimental Design

Plant growth and fertilizer types.

You are designing an experiment to determine what type of fertilizer is best for plant growth. You get 3 of the same plants (pea plants) that are all 3 inches tall. You pot them all in the same type of pot with the same amount of soil and give them all the same amount of sunlight. You then give one Miracle Grow, one Meijer brand fertilizer and leave one without fertilizer. You feed them the same amount of water and fertilizer daily and record your results.

- 35. Create an appropriate hypothesis for this experiment.
- 36. What is the independent (manipulated) variable?
- 37. What is the dependent (responding) variable?
- 38. What is the control group in this experiment?
- 39. Give two constants for the experiment.

Fertilizer Type	Miracle Gro	Meijer Brand	No Fertilizer
Height of Plants	8 in	6 in	5 in

40. What should the conclusion be (taking into mind your hypothesis)?