

Name: _____ Period: _____ Date: _____

Lesson 8a: How do antibiotics affect bacteria when they are put together?

What do we already know?

In the previous lesson we learned several things about antibiotics and how they work. We also came up with some ideas of what we need to investigate next.

Making predictions: Answer the following questions in the box below.

- If we check the Petri dish and food coloring in a few minutes, will all of the food coloring remain in the filter paper disk? What do you think will happen?
- How will we be able to tell?

Observations: Answer the following questions about the food coloring demonstration in the box below.

- Briefly describe the movement of the food coloring once the filter paper disk was placed on the agar.
- What happened to the strength of the color over the 5 minute period?

In your small groups, brainstorm some ideas that could test our next question: How do antibiotics affect bacteria when they are put together?

Given the procedure, identify the following;

Independent Variable: _____

Dependent Variable: _____

Control: _____

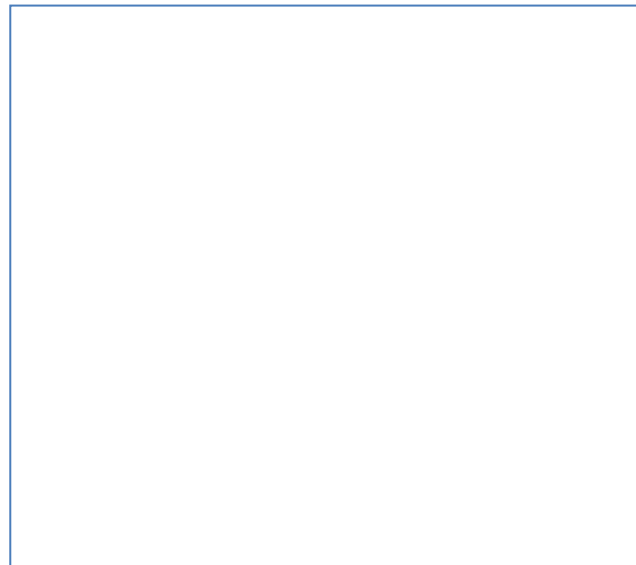
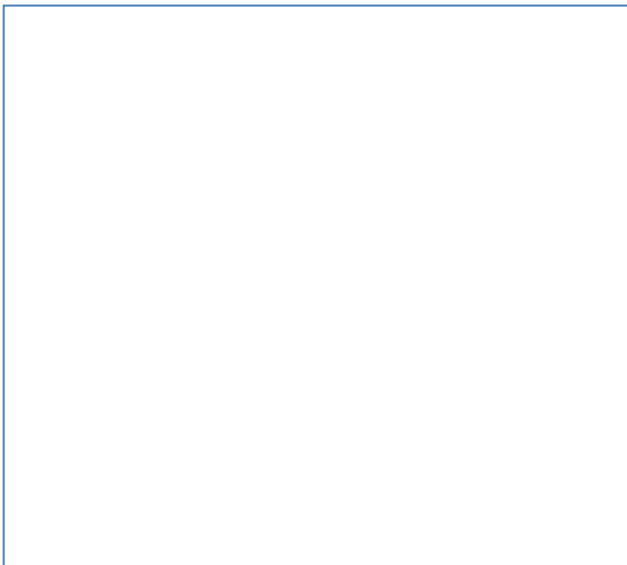
Constants: _____

Making Predictions:

Draw what your Petri dish looks like as you left it initially in the left box and then what you think you will see in a few days in the right box. When drawing your predictions, make sure to consider the differences in antibiotic strength and address the differences you might notice within the different dishes. Make sure you label your drawings and include your reasoning (why do you think you will get these results?) on the lines below.

Petri dish set up at the start

Prediction of Petri dish in a few days



Reasoning:

Preparing for Your Data Collection:



Design a data table in order to keep track of the results of your investigation. Keep in mind what you are going to measuring, how you are going to measure that, how often you are going to observe your plates, etc.

Next Steps: Think about what we have learned so far about Addie's case and consider the following prompts. Please have these completed and ready to share at the beginning of the next class.

1. Now that we have thought through the setup of an investigation and made some predictions about what we might see, how could the results of this experiment possibly help us in understanding Addie's case? Relate your predictions to Addie's case.

2. Once we look at the results from this experiment a few days from now, why might some groups want to see what happens when you apply another dose of antibiotic at that point?

