Name:_____
Date:_____Core:_____

What Goes Around Comes Around

According to most stories we hear there are many ways to catch a cold including touching a door knob, letting your feet stay wet, staying outside in cold weather without a hat, or you can simply be around anyone who sneezes. With all these idea about how we get sick it can be confusing to tell what is real and what is made up. There are simple steps we all know about how to prevent sickness but sometimes these can be the most powerful.

Arguably the most important simple step we can take to prevent getting sick is simply to wash our hands. Billions and billions of germs are transmitted (passed) from person to person every day by simply touching the world around you. These labs will investigate how germs are passed as well as the importance of washing hands.

Lab 1- Powder Power

In this lab you will "shake hands" with all the groups participating in this lab. You will "shake hands" with other people by emptying the contents of your cup of powder into the other persons cup. Then that person will empty everything in their cup into your cup again. Finally you will even out the powder so that both cups contain the same amount of powder again.

Be sure to shake hands with at least 3 other people in the room and record the names of the people you shake hands with in the table below in the order you shake hands with them.

1.	**2.**	**3.**
4.	**5.**	**6.**

<u>After</u> everyone participating in the lab has finished "shaking hands" select one individual from each lab group act as the doctor for the group. The doctor will then grab a container marked "diagnosis test" and one pipette. After returning to the group the doctor should place exactly three drops of the diagnosis liquid into each person's cup including their own. **Be sure to return the diagnosis liquid.**

After the doctor returns to the group they will decide if each person is sick. If an individual is sick their cup will contain bubbles. The group should then fill out the table below with their data.

Name of group member	Observation (cup after testing)	Sick? Yes or No

Name:_____
Date:_____Core:_____

Powder Power- Summary

1. **How did this activity show what happens in the real world? In what real world settings do you think you would find this many people shaking hands?**

2. **How important do you think it is to wash your hands frequently? Why?**

Powder Power- Analysis

1. Talk with your group and try to determine who started the illness, be sure to look back at your hand shaking chart. **Who do you think it was?** _____

Typhoid Mary is a famous story about a cook who was a **carrier** of the disease typhoid fever. As a **carrier** Typhoid Mary did not have the disease herself but she *carried* it around with her and passed it along as she cooked food for people. Think about that story and the method you just used to try to determine who started the disease. **Why do you think it is important to wash your hands even if everyone around you looks healthy?**

Name:_____
Date:_____Core:_____

Lab 2- Glowing Germs

Earlier today random students were asked to use a special lotion that will model the germs on their hands. These students could not see the lotion once it was rubbed in but it was still on their hands and they spread it around everywhere they went in the school. You will now walk around the area your teacher sets in order to find the "germs" they left behind. When they touch an object with the lotion on their hands it will light up when a UV light shines on it. Walk around and shine the UV light on objects or places you expect germs to turn up. Record where you find the "germs" in the space below and then answer the questions.

Locations	**Observation**

Name:_____
Date:_____Core:_____

Glowing Germs- Summary

1. Where did you find the most germs? Did this surprise you? Why or why not?

2. Why could this model of spreading germs be inaccurate? What possible flaws could there be in modeling spreading diseases this way?

Glowing Germs- Analysis

1. Money is often named as one of the objects that spreads the most germs, why do you think this is? What are some other objects you think could spread germs widely? Why?

Name:_____
Date:_____Core:_____

2. You have just been appointed as the head of the Center for Disease Control's (CDC's) committee to help prevent the spread of disease. **What are the first steps you would take to help prevent the spread of various diseases in America? What questions would you ask? What data would you want to collect? How would you handle informing the public about your plan?**

Name:_____
Date:_____Core:_____

Read about it

Use the Save the Last Word for ME activity in order to discuss the three articles at this station. Each member of the group should read each of the articles and then the group will discuss them as a whole following the Save the Last Word for ME instructions and then summarize each round of conversation in the boxes below:

Round 1	
Round 2	
Round 3	
Round 4	
Round 5	
Round 6	
Round 7	