Activity #30  It’s Catching!

Challenge Question:

Initial Thoughts:

Evidence:
There are many places in your community. In this activity you may go to any of the places or events listed below:

- Fast food restaurant
- Music store
- Home
- School dance
- Football game
- Shopping mall
- Movie theatre
- Video arcade

<table>
<thead>
<tr>
<th>Table 1: My movements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Times</td>
</tr>
<tr>
<td>Initial (Day 0)</td>
</tr>
<tr>
<td>Day 1</td>
</tr>
<tr>
<td>Day 2</td>
</tr>
<tr>
<td>Day 3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 2: Class Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of People Infected</td>
</tr>
<tr>
<td>Initial(Day 0)</td>
</tr>
<tr>
<td>Day 1</td>
</tr>
<tr>
<td>Day 2</td>
</tr>
<tr>
<td>Day 3</td>
</tr>
</tbody>
</table>

Graph 1:
**Analysis Questions**

1. Use your graph of the class results to answer the following questions:
   a. What happened to the number of people infected with the disease over time?

   b. How does this compare to your initial prediction?

2. Think about how the infectious disease was spread from person to person in your community. If you were trying to avoid catching the disease, what could you do? Use evidence from this activity to support your answer.

**Summary:**

In the beginning of Activity # ___ I thought the answer to the challenge question was…..

but now I think (or still think) ……

My evidence for this is ……
Activity #32   Who Infected Whom?

Challenge Question:

Initial Thoughts:

Evidence:
Draw Part One: #4 here after your group has drawn it on the whiteboard

Hypothesis: I believe that __________and ____________ (pick 2 people) are the carriers of this disease.

Pink=Positive for disease

<table>
<thead>
<tr>
<th>Name</th>
<th>Symptoms? (yes or no)</th>
<th>Disease Test Results</th>
<th>Is this person a carrier? (yes or no)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

Analysis Questions (echo the question)
1a. Based on your test results, draw a web showing your proposed path of disease spread. In your web, identify who is infected, the dates that he or she became sick, and whether the person is a carrier.
1b How does this web compare to your original hypothesis?

2a. Who was (or were) the carrier(s) of the disease?
   
   b. What evidence do you have to support your answer?

**Summary:**
In the beginning of Activity # ____ I thought the answer to the challenge question was…..

but now I think (or still think) ……

My evidence for this is ……
Activity #46  Disease Fighters

Challenge Question:

Initial Thoughts:
Evidence:

Red Blood cells-

White Blood cells-

The Immune Response is….
Part 1: Record your data table here. Use a **straight edge** and label each column and row.

<table>
<thead>
<tr>
<th>Description of the two types of cells</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ratio (of white to red)</strong></td>
</tr>
<tr>
<td><strong>Shape</strong></td>
</tr>
<tr>
<td><strong>Size</strong></td>
</tr>
<tr>
<td><strong>Cell Structure</strong></td>
</tr>
</tbody>
</table>

**Analysis Questions (echo the question)**
Part 1: Blood Type and the Immune Response
1. Each patient required one pint of blood. The hospital received one pint each of type A, B, and O blood. Explain whether the hospital had enough of the right type of blood for each patient.

2. What prevents your body from accepting transfusions of certain types of blood?

Part 2: Blood Cells:
3. Think back to all the work that you have been doing on cells. Compare and contrast different types of cells by copying and completing the table below:

<table>
<thead>
<tr>
<th>Cell Type</th>
<th>Cell Shape</th>
<th>Cell Membrane?</th>
<th>Cytoplasm?</th>
<th>Nucleus?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bacteria</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protist</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant (elodea)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animal (cheek)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animal: red blood cell</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animal: white blood cell</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Summary:
In the beginning of Activity # ___ I thought the answer to the challenge question was…..

but now I think (or still think) ……

My evidence for this is ……
Immune System Study Guide

Infectious Disease
Know the key terms and ideas
   Pathogen, Infectious disease, toxin
What causes infectious disease?
What are the four major types of human pathogens?
List the 4 main ways in which pathogens can be transmitted or spread.

The Body's Defenses
Know the key terms and ideas
   Inflammatory response, phagocyte, immune response, lymphocyte, T cell, antigen, B cell, antibody, AIDS, HIV
Barriers help trap and kill most pathogens we come into contact with—what are the human body’s barriers?
What happens during the inflammatory response? Is it a specific response or a general response?
Describe the immune response, is that specific or general?

Preventing Infectious Disease
Know the key terms and ideas
   Immunity, active immunity, passive immunity, vaccination, vaccine, antibiotic.
How are passive and active immunity similar and different?
How do vaccines work to convey active immunity?

Noninfectious Disease
Know the Key terms and ideas
   Noninfectious disease, allergy, allergen, histamine, asthma, insulin, diabetes, tumor, carcinogen.
How do allergies develop?
What are symptoms and consequences of diabetes?
Understand cancer.

Cancer and the Environment
Know the key concepts
   How can the risk of cancer be reduced?
   Name three environmental carcinogens.