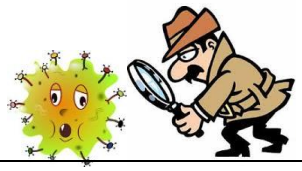
Science 8

Cell Theory VI

Name:
Date:
Block:

1. **Disease Detectives**
2. **Epidemics & Pandemics**



Disease Detectives

Many diseases are caused by pathogens that may be carried by humans. Some carriers of these diseases show the symptoms of the disease (they appear sick), while others show no signs and look perfectly healthy. **The carriers who don't show any signs of the disease are the ones most likely to transmit the disease!!!**

Purpose:

In this activity we will simulate how a disease gets transmitted through a population (our class) and try to locate "patient zero," the original source of the disease.

Procedure:

1. Get a numbered beaker from the teacher. Write down your beaker number in the data section below. The liquid in the beaker represents body cells and fluids. **One of the beakers contains liquid that is "infected" with an imaginary disease.**

2. With your beaker, walk around the room and trade fluids with one other person. You will do this by pouring some of your liquid into his or her beaker and vice versa. **Avoid spills and skin contact with fluids. If there is skin contact, tell your teacher and wash your hands right away.**

3. In your observations table below, record the name and the beaker number of the person you traded fluids with.

4. Repeat step #2 and 3 with one more person. **These steps will be done all together as a class.**

5. Repeat step #2 and 3 with one more person one more time. **These steps will be done all together as a class.**

6. Once you have finished trading fluids, take a seat and the teacher will come around and test your fluid for the presence of disease.

7. Record class data collected and note which beakers were infected.

Data:

Your Beaker #: _____

1st Person of Contact	**2nd Person of Contact**	**3rd Person of Contact**
Name: Beaker #:	Name: Beaker #:	Name: Beaker #:

Class Data:

Beaker #	1st Contact	2nd Contact	3rd Contact	Beaker #	1st Contact	2nd Contact	3rd Contact	Beaker #	1st Contact	2nd Contact	3rd Contact
1				11				21			
2				12				22			
3				13				23			
4				14				24			
5				15				25			
6				16				26			
7				17				27			
8				18				28			
9				19				29			
10				20				30			

Analysis:

1. After three rounds, what is the maximum number of students that *could* be infected?

2. If you did one more round of contact, what is the maximum number of students that *could* be infected?

3. How many rounds of contact would it take for all students in the class to be infected?

4. Looking at the data collected as a class…
    a. How many students were infected?

    b. Which beaker was the original source of the disease? Explain your answer.

Conclusion:

What are some precautions you could take to protect yourself from contracting an infectious disease? Name at least three ways.

Epidemics & Pandemics

From the following list, circle the diseases that you have heard about:

1. Zika
2. Avian flu
3. SARS
4. Ebola
5. Dengue
6. Swine flu/H1N1
7. Plague
8. Mumps
9. Meningitis
10. Small Pox
11. Cholera
12. Yellow fever
13. Typhus
14. Spanish flu
15. Hand, foot and mouth disease
16. MERS
17. HIV/AIDS
18. Leprosy
19. Measles
20. Malaria
21. Influenza
22. Tuberculosis
23. Rabies
24. Pneumonia
25. Bubonic plague
26. Anthrax
27. Infectious diarrhea
28. Whooping cough
29. Tetanus
30. COVID-19

Endemic =

Epidemic =

Pandemic =

What are some factors that would contribute to a disease that is epidemic to become a pandemic?

-
-
-
-

OUR disease: _____

- Epidemic or pandemic?
- Where in the world did it originate? _____ Label it on the map below:

- Describe the disease. What are the symptoms?
- How does/did it spread?
- What was/is the affect on the population?
- Is it still a worldwide problem? If not, what was the solution? Explain.
- How can people protect themselves from getting this disease?

MY disease: _____

- Epidemic or pandemic?
- Where in the world did it originate? _____ Label it on the map below:

- Describe the disease. What are the symptoms?
- How does/did it spread?
- What was/is the affect on the population?
- Is it still a worldwide problem? If not, what was the solution? Explain.
- How can people protect themselves from getting this disease?

After researching your disease, summarize your information on a PowerPoint presentation!

- Use your deltalearns.ca account.
- Share with etsou@deltalearns.ca so that I can view your progress!
- Make sure to include all used references on one of the slides!

	Total	Beginning	Developing	Competent	Accomplished
Content	/4	Information presented is incomplete. Many required elements missing, making the text difficult to follow and understand.	Some information presented is not accurate and well explained. The explanations are not in logical order. There is a lack of information.	Information presented is somewhat accurate and fairly well explained. The explanations are in logical order. The text is comprehensible. All required elements are present.	Information presented is accurate, detailed and well explained. The explanations are in a logical order. The text is easy to follow and understand. All required elements are present and some elements to show further understanding.
Presentation	/4	Messy and incomplete. Not in colour and very few illustrations included. Illustrations do not support information presented. Not attractive. There is a lack of effort	Not very neat or clear. There is a lack of colour and/or illustrations. Some illustrations do not support information presented. Not very attractive. Minimal effort.	Somewhat neat and clear. Illustrations included. Most illustrations support information presented. In colour and somewhat attractive. Demonstrates a good effort.	Detailed, clear, and neat. Many illustrations included. Illustrations support information presented. In colour and attractive. Demonstrates a considerable effort.

Due Date: _____