Life Sciences Learning Center

Not Vaccinated?

Part 1: Listening

In the Monk County School District, only 34% of students aged 5 to 11 and 62% of students aged 12-17 have received two doses of a COVID-19 vaccine. Less than 32% of the older students have received the booster dose recommended for greater protection against COVID-19.

The board of education for the Monk County School District recognizes that students under the age of 18 need permission from their parent or guardian before they can be vaccinated. A team of high school students has volunteered to develop a program to encourage parents to have their children vaccinated against COVID-19.

To begin the program, the high school students thought it was important to listen to parents explain why they chose to not have their children get vaccinated to protect them from COVID-19.

1. Make a list of reasons why some parents might choose to not have their children vaccinated.

2. The team of students wants to create a program to encourage people to have their children vaccinated. Why do you think the team thought it was important to begin the program with parents' reasons for not having their children vaccinated?

Part 2: Vaccines make a difference

The students on the program planning team decided to first focus on how childhood vaccines had been important in protecting children from dangerous diseases. They found information about diseases that could result if children did not receive the usual recommended childhood vaccines.

- 1. Read the **Disease Descriptions** page to learn what it would be like to have the each of the diseases listed on the right. As you read the information on each disease, complete the chart below:
 - Put an "X" in front of the diseases that you had when you were a child.
 - Put an "X" in front of the diseases if you know someone other than you who had the disease.

lpox
heria
ľ

2. Summarize the main trend or pattern that you observe in the data table on the right.

Deaths in the United States Due to Vaccine Preventable Diseases

Disease	Before 1900 Average Deaths Per Year	Deaths Reported in 2019		
Measles	530,217	1,287		
Pertussis	200,752	15,662		
Mumps	162,344	3,509		
Smallpox	29,005	0		
Diphtheria	21,053	2		
Polio	16,316	0		

Source: https://www.cdc.gov/vaccines/ed/surv/downloads/VPD-morbidity-slide1-mmwr-508.pdf

3. Why do you think we rarely see widespread outbreaks of these diseases in the United States?

4. What actions could people take to prevent widespread outbreaks of COVID-19?

For more information about diseases that may be prevented by vaccines, see this website:

14 Diseases You Almost Forgot About

https://www.cdc.gov/vaccines/parents/diseases/forgot-14-diseases.html



Part 3: Understanding herd immunity

One of the students thought they should use a video that he found that modeled the spread of COVID-19 in a community.

View the video using your computer, phone, or tablet. *Mute the video sound so that you do not disturb your classmates*.

Video: Model How Herd Immunity Works http://www.youtube.com/watch?v=hZ6IJOLalyI

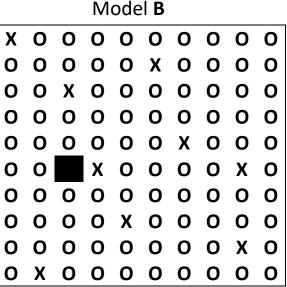
- 1. What color domino represents:
 - A person who is sick with COVID-19
 - A person who is <u>not</u> immune to COVID-19
 - A person who is immune to COVID-19
- 2. What does a yellow domino falling over represent?
- 3. State two ways that a person could become immune to COVID-19.

4. **Herd immunity** (or community immunity) occurs when a high percentage of a community is immune to a disease (through vaccination and/or prior illness). Explain how the model in the video illustrates how herd immunity can slow or stop the spread of COVID-19.

Another student made two diagrams to model how herd immunity could slow or stop the spread of COVID-19. These models are shown below.

KEY: = Sick X = Immune to Covid-19 O = Not Immune to Covid-19

Model A											
X	X	X	X	X	X	X	0	X	X	X	O
0	X	X	X	0	X	X	X	X	X	0	O
X	X	X	X	X	X	X	X	X	X	0	O
X	X	X	X	X	X	X	X	X	X	0	O
X	X	X	0	X	0	X	X	X	X	0	O
X	X		Х	X	X	X	X	X	X	0	0
X	X	X	X	X	X	X	X	X	X	О	O
X	X	X	X	X	X	0	X	X	X	0	0
X	X	X	0	X	X	X	X	0	X	0	0
X	X	X	X	X	X	X	X	X	X	0	X



- 5. Which model (A or B) represents a community with herd immunity? Explain why you chose that answer.
- 6. Explain why it would be difficult for COVID-19 to spread in the model that you selected.
- 7. Based on your experience with the video of the dominoes and the diagrams of models A and B, explain how herd immunity can slow the spread of COVID-19.
- 8. Children younger than 6 months should not be given COVID-19 vaccines. COVID-19 vaccines may also not be effective for people with immune systems that do not work properly. Explain why herd immunity is important these people.

Part 3: COVID-19 Vaccine Myth Busters

Myths and rumors may affect people's willingness to get vaccines. For example, some people believed the myth that vaccines cause autism. This myth has been "busted" because research by many scientists has shown that there is no link between autism and vaccinations.

Students on the program planning team created a card matching activity with accurate COVID-19 vaccine facts to help stop common myths and rumors. The statements on the yellow **Myth** cards represent some common myths about COVID-19 vaccines. The blue **Fact** cards summarize facts that could be used to dispel ("bust") the myth.

- 1. Work with your partner to match the yellow Myth cards with the appropriate blue Fact card.
- 2. For each of the yellow myth card numbers below, write the letter on the matching blue fact card.

1___ 2___ 3___ 4___ 5___ 6___ 7___ 8___

- 3. Describe another possible reason why some parents might think that the COVID-19 vaccine is not safe for their children.
- 4. Do some research to find out if your answer in question 3 is a myth or a fact. Summarize the results of your research. Cite the source for the results of your research.

The students used this information from the CDC (Centers for Disease Control) to make their **Myth** and **Fact** cards:

Myths and Facts about COVID-19 Vaccines

https://www.cdc.gov/coronavirus/2019-ncov/vaccines/facts.html



Part 4: Where are free COVID-19 vaccines available?

The students on the program planning team knew that people are more likely to get their children vaccinated if they can find <u>free</u> COVID-19 vaccines that are offered at convenient places and at convenient times. The program planning team will use internet resources to identify sites appropriate for the participants in their community.

- 1. Help the planning team find possible locations where free COVID vaccines are available at convenient locations near your home. Try these websites:
 - Find Covid-19 Vaccines https://www.vaccines.gov/search/
 - An internet search using "Free Covid vaccines near me"
- 2. Provide information on <u>two</u> locations near your home or school that give <u>free</u> COVID-19 vaccines. For each location, include the website, location address, distance from your home/school, hours that vaccines are available, and whether an appointment is needed.

3. Some people do not have computer skills/access or language skills to schedule appointments for vaccinations. What ideas do you have for ways to help these people get their family members vaccinated?

4. Some vaccine locations offer only one kind of COVID-19 vaccine. Are all COVID-19 vaccines currently available in the United States safe for children? Do internet research to answer this question. Provide the website for your information source.