



Have you "Heard" Immunity

Dr. B answers 3 questions about herd immunity:
What is it? How do we develop it? Why does it work?



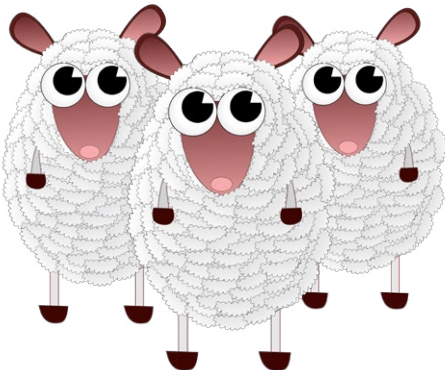
Watch the
show!



<https://www.youtube.com/watch?v=ZXpzEtJYvDc>

Quick Questions

1. What do you think of when you hear the word "immunity"?
2. Had you heard of "herd immunity" before watching this video?
3. Who should get immunized to achieve herd immunity? Why?
4. Are there people who should not get immunized? Who? Why?



Deep Dives

1. Herd immunity is especially important to protect people who are particularly vulnerable to illness. This includes elderly people, babies, people with compromised immune systems, and people undergoing treatment for disease. Imagine there is an epidemic sweeping your region. You are in charge of determining who will get vaccinated first. You face several problems. Here are three:
 - a. Some of the most vulnerable people can get vaccinated, but others cannot due to their medical conditions. For herd immunity to protect them, they need the people around them to be vaccinated.
 - b. Healthy people can get the vaccine, and many of them want it immediately. But there isn't enough to go around.
 - c. Healthy people can get the vaccine, but some have reasons why they won't get it.

How would you go about vaccinating people in order to protect your entire community?

2. Some people cannot be vaccinated for medical reasons, and others choose not to be vaccinated for religious reasons. But there are also people who want to be vaccinated but are unable to do so. Maybe they live somewhere remote and don't have access to medical care. Or maybe they cannot get to a vaccination center due to disability, work schedules, or lack of transportation. Still others do not have internet access to even know where to go to schedule an appointment. How could organizations or government policies help people who want to get vaccinated but have barriers to access? Is there a one-size-fits-all policy that would help, or do different problems require different solutions?
3. The discussion of herd immunity has opened conversations of social responsibility vs. personal rights. Vaccinations provide both personal and community-wide protection. Who should determine the rules or laws regarding vaccination policies? Should citizens be compelled to comply with vaccine mandates for the good of the community? Or should personal liberties outweigh community considerations? Should there be exceptions? How do we protect others while maintaining independence?

Engaging in Science Discussions



Recommended Grade Level: Middle and High School

Objective: To engage in open-ended discussions about critical science topics. While leading these discussions, it is important to ensure that everyone is heard, and everyone is treating one another with respect. There is no “right answer” during these discussions, and it’s okay to respectfully disagree.

Additional Notes: We recommend having these discussions multiple times with the same group of participants. This provides the opportunity to explore different topics and improve one’s abilities to have successful conversations about STEM topics. Quick Questions are optional and are recommended to be used as warm-up questions.

Materials: TV or projector Paper and writing utensils

TIMELINE (30 – 40 MINUTES)

5 min	10 min	5 min	10 min	10 min <i>(optional)</i>
Intro + prompts	Watch segment	Think/write time	Share with partner	Small groups

Intro (5 min) Before starting, select one Deep Dive question. Tell the group you will be asking them a question that has no right or wrong answer. After they watch the clip, they will have time to think about and write their response. They will share their response with a partner or small group. Now share the question you selected.

If participants are new to these sorts of discussions, you may want to review the following concepts:

- When you are sharing your responses, provide reasoning and evidence. Reasoning is your own thinking behind your answer. Evidence is facts that support your answer, such as historical facts or scientific facts. You may also have experiences from your own life that support your answer.
- When listening to your classmates, ask questions. The purpose of questions is to better understand their thought process, not to challenge them. Some ways to frame questions are: “I didn’t understand X.” “Could you explain Y again?” “What do you mean by Z?”
- If someone asks you questions, provide clarification. Explain your reasoning and evidence. Remember that there are no right or wrong answers.

Watch the segment (10 minutes)

Think/write time (5 minutes): Participants write down their answers

Share with a partner (10 minutes): Pair up participants. Each person has 5 minutes to share their response and answer questions from their partner. Then switch so each partner gets a turn.

(Optional) Small groups (10 minutes): Put participants in groups of 4 for share-outs and conversations.

(Optional) Homework prompts: Expand your response into a report, picture, poem, essay, short story, song, or performance. Or, write your own discussion question for the group.