SN EDUCATOR GUIDE

September 26, 2020

Bacteria Can Survive for Years in Space

Student Discussion Worksheet

Directions: After you have read the online *Science News* article "If bacteria band together, they can survive for years in space," or the print version of the article, answer the questions below. In each section, watch the linked video before answering the questions. For the last prompt, come up with a research question that you would like to explore in space. Pair up and share your research question with your partner.

Onboard the International Space Station

Watch the video "A Bridge Above: 20 Years of the International Space Station" and answer the following questions as a class.

1. What is the purpose of the International Space Station, or ISS? Why is the ISS important?

2. Based on the *Science News* article and the video, what are some countries that are involved in the ISS collaboration?

3. Brainstorm some challenges and opportunities that astronauts living on the ISS face.

Science on the ISS

After watching the video "Fruit Punch and Foam: Managing Liquids in Space," answer the following questions on your own.

4. What research were scientists doing in the video? Why is the research important?

5. How did the ISS play a key role in the experiment described in the *Science News* article? What about in the fluidics research featured in the video?

6. How can doing an experiment on board the ISS differ from doing the experiment on Earth? What can scientists learn from doing the same experiment in both places?

7. Use a keyword to search the Space Station Research Explorer website for an ongoing experiment that relates to a concept you are studying or a topic that interests you. Summarize the research. Some possible keyword searches include: bacteria, force, nutrition, combustion, etc.

8. How does the experiment you found compare with the experiment described in the *Science News* article? Name one similarity and one difference.

Get involved

After watching the video Space Station Live: Student Experiments Fly to Station, answer the following question. Share and discuss your answer with a partner.

9. Come up with a research question you would like to explore in space. What would be some advantages and challenges of doing your experiment in space?

Did you know that you can develop a research project and submit it to the International Space Station? Ask your teacher for more information if you're interested!