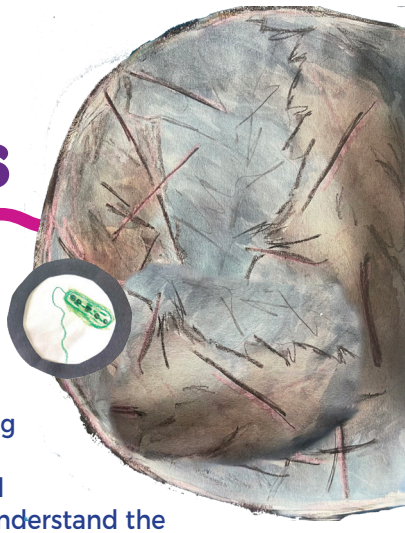
Exploring Interfaces

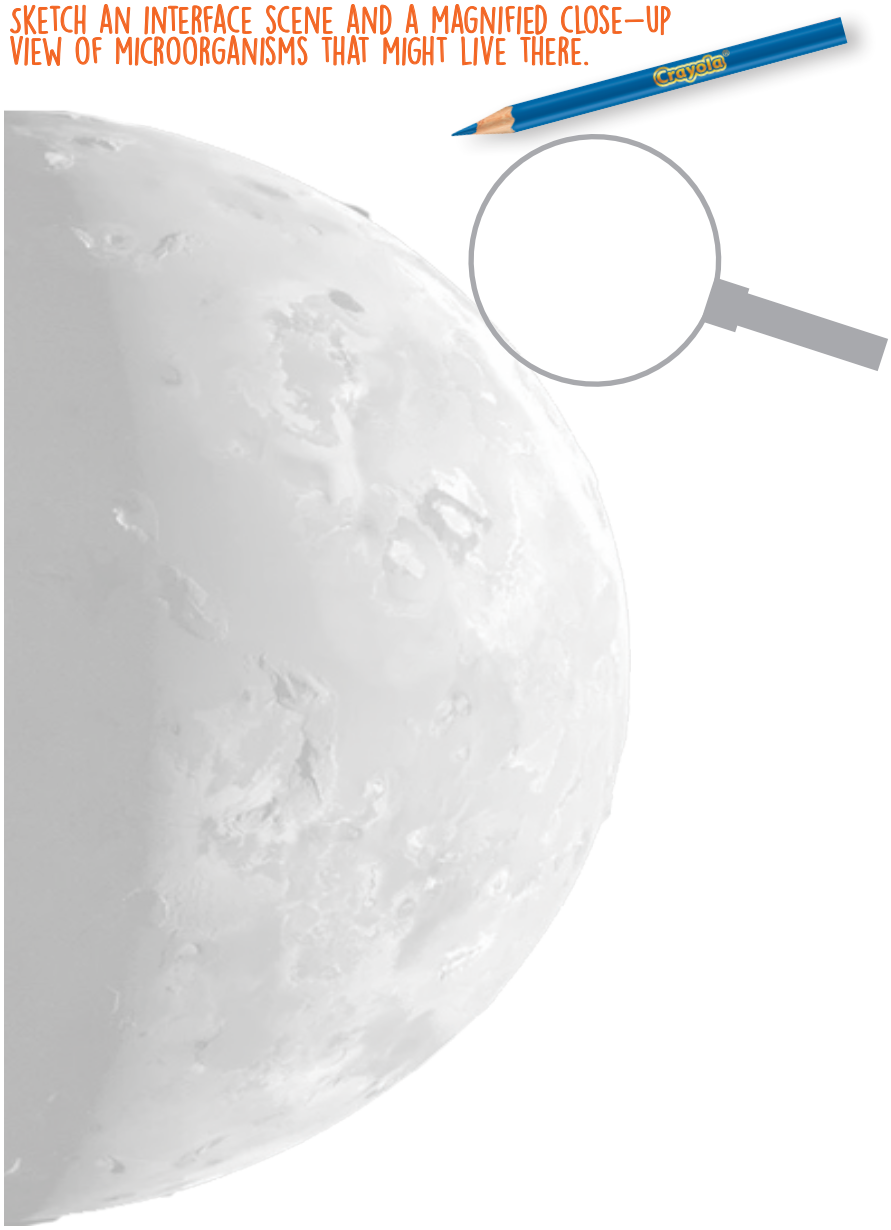
FLOWS LIKE WATER



RESPOND to the Europa Clipper mission which is searching for habitability, meaning the conditions that could support life. Astrobiologists study the origin of life forms, including the simplest one-celled organisms; the evolution of multicellular life; and the possibility of life on other planets. They use creative problem-solving skills to understand the conditions in which life could arise. Imagine you are an astrobiologist who studies the origin, evolution, and distribution of life in the universe.

CREATE a sketch that demonstrates an astrobiologist's understanding that life could emerge in the interfaces where water meets rock/land. Interface areas provide a flow of energy and nutrients that are most likely to support life—even the most basic form of microscopic, single-celled organisms such as bacteria. Draw a colorful interface scene where ocean and underwater landforms meet. Add a magnified close-up of some microorganisms that might be able to live there.

SKETCH AN INTERFACE SCENE AND A MAGNIFIED CLOSE-UP VIEW OF MICROORGANISMS THAT MIGHT LIVE THERE.



CONNECT your role as an astrobiologist with a list of what you hope to learn from the Europa Clipper mission. Discuss why the journey to Europa will take five and a half years. Identify some of the many benefits of space exploration.

PRESENT your sketches, then compare and contrast the images classmates drew. No one knows for sure what astrobiologists will find, so lean into your imagination.

Note for teachers and parents:
For more creative inspiration and hands-on explorations go to **Crayola.com/CreativityWeek**
To share student artwork on social media please post using **#CrayolaCreativityWeek**

Photos of Europa and mission updates are available at NASA.gov.

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Thinking Sheet