Microbes are living organisms smaller than your eyes can see. They are the oldest form of life on Earth and they live just about everywhere including in, and on your body. They can even live in really hostile environments like icy glaciers, the bottom of the ocean, and hot springs in Yellowstone National Park. Scientists at Montana State University (MSU) are researching how microbes from Yellowstone may help us find alternatives for gas and fossil fuels, or help us find life on other planets.

Some kinds of microbes, called extremophiles, thrive in places that are freezing, super hot, deep underground, or at the bottom of the ocean. These environments that are “extreme” on Earth are similar to what is “normal” on other planets or moons. Therefore scientists think if we find life in the universe it will resemble the life on Earth living in the extreme environments (extremophiles).

On the back of this page there are some pictures of real microbes that live in environments such as Yellowstone National Park and some cartoons of microbes. Try drawing your own cartoons of microbes and making a Shrinky Dink.

**BAKING DIRECTIONS**

A toaster oven is ideal for baking Shrinky Dinks. However, your conventional oven will shrink your masterpiece just as well.

Step 1: PRE-HEAT Oven to 325°F (163°C).

Step 2: Cut a rectangle shape out of a brown grocery bag and turn one corner up. (Turned up corner will make it easy to remove from tray or cookie sheet)

Step 3: Place Shrinky Dinks pieces, colored side up, on the brown paper on a tray or cookie sheet. Put into PRE-HEATED OVEN.

Step 4: WATCH as your SHRINKY DINKS shrink. Bake approximately 1 to 3 minutes. The pieces will curl up, then lay flat again. After that, allow an additional 30 seconds of baking time to complete the process.

Step 5: Remove paper from tray or cookie sheet and lightly press FLAT with folded paper or a pad of paper – until pieces have cooled.

**NOTE: SHRINKY DINKS WILL NOT WORK IN A MICROWAVE OVEN!**

For more information on microbes in Yellowstone, visit abrc.montana.edu and hydrogen.montana.edu where you can view interactive maps of Yellowstone. For more fun activities and information on MSU science visit www.montana.edu/outreach
Above are photos of microbes found in Yellowstone National Park. Trace one of the cartoons of microbes below or make your own.