

## The Cell Organelle Worksheet

### PROKARYOTIC CELLS

**Bacteria** are prokaryotes, lacking \_\_\_\_\_ nuclei and organelles. They have a single strand of \_\_\_\_\_ DNA. They come in many shapes and sizes, from minute spheres, cylinders and spiral threads, to flagellated rods, and filamentous chains. They are found practically everywhere on Earth and live in some of the most unusual and seemingly inhospitable places.

Bacteria have been around a very long time, but even older than the bacteria are the \_\_\_\_\_, tiny prokaryotic organisms that live only in extreme environments: boiling water, super-salty pools, sulfur-spewing volcanic vents, acidic water, and deep in the Antarctic ice.

There are two different ways of grouping bacteria:

1. They can be divided into three types based on their response to gaseous oxygen.  
\_\_\_\_\_ bacteria require oxygen for their health and will die without it. \_\_\_\_\_ bacteria can't tolerate oxygen at all and die when exposed to it. \_\_\_\_\_ prefer oxygen, but can live without it.

2. The second way of grouping them is by how they obtain their energy. Bacteria that have to consume and break down organic compounds are \_\_\_\_\_. This includes \_\_\_\_\_.