**Cell Differentiation Notes**

1. Do all \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells look the same? \_\_\_\_\_\_! Cells can \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to perform different functions.

**Nerve Cell**

  

**Bone Cells**

**Red Blood Cells**

2. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is the process of a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** changing from a less specialized type becoming a more specialized type.

3. Although each \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (body) cell has the same DNA, only specific parts of the DNA are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The parts of the DNA that are activated determine the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and specialized \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a cell.

4. Because all cells contain the same DNA, all cells initially have the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to become any type of cell; however; once a cell differentiates, the process cannot be reversed.

5. Red blood cells function to transport \_\_\_\_\_\_\_\_\_\_\_\_ and remove carbon dioxide and waste products from cells. Muscle cells function to allow \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to occur. Nerve cells have the ability to conduct \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ impulses to maintain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the body. Bone function to provide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Watch the Amoeba Sisters Video about Cell Differentiation:

[**http://tinyurl.com/gou2yom**](http://tinyurl.com/gou2yom)