

# **ACTIVITY 3D: HEALTHY BONE REMODELING — THE OSTEO BLASTER/CLUSTER WHEEL - STUDENT WORKSHEET**

## **HEALTHY BONE REMODELING**

After listening carefully to the description of healthy bone remodeling, complete the following statements as you review the events depicted in *The Osteo Blaster/Cluster Wheel* that you have constructed. Refer to the key for help with terms.

1. During the Activation Phase, the \_\_\_\_\_ are attracted to the remodeling sites.
2. The pre-osteoclasts become fused and form \_\_\_\_\_ osteoclasts.
3. During the Resorption Phase, the osteoclasts dig out a cavity called a \_\_\_\_\_ pit.
4. As the pit is being dug out, an important mineral, \_\_\_\_\_, is absorbed into the blood for use by the body.
5. After the pit is completed, the \_\_\_\_\_ disappear.
6. In the Reversal Phase, \_\_\_\_\_ cells appear along the burrow or pit.
7. The cells along the pit prepare the surface for new bone \_\_\_\_\_.
8. During the Formation Phase, the osteoblasts are \_\_\_\_\_ to the surface of the pit or burrow.
9. The osteoblasts busy themselves with replacing the removed bone tissue with a new soft matrix, or \_\_\_\_\_.
10. This phase must be called the \_\_\_\_\_ Phase because the new matrix becomes mineralized with calcium and phosphorus thus creating new bone.
11. The remodeling site (now new bone tissue) remains \_\_\_\_\_ until the next bone remodeling cycle begins.

*Now, use your wheel to try to teach someone else about normal bone remodeling and the balance between the work of the osteoclasts and osteoblasts in bone tissue.*