

1. Draw a picture of a single OSTEON and color and label the following parts:

- Central canal
- Concentric lamellae – note it would be difficult to color this so just show it with a bracket
- Canaliculi
- Bone matrix
- Osteocyte
- Lacunae

2. Based on your superior knowledge of osseous tissue cells, complete the following story.

Ozzie the _____ (a mature bone cell) works in the Femur, an elongated bone complex called a _____. Ozzie's office is about half way up the Femur. He looks out into the center of the bone and has a lovely view of red bone marrow. Ozzie likes this office because he gets to see _____ being born in the marrow every day. Ozzie's job is to maintain homeostasis in the surrounding bone or _____ tissue. His section of bone is very dense and takes a lot of pressure from the bone above. Ozzie is most likely working in _____ bone. One day Ozzie realizes that he is very low on oxygen and he decides to call his friend Olga the oxygen molecule, to see if she can help out.

Olga has been cruising the body for a while when she gets the call from Ozzie on her "cell" phone. Olga knows she needs to get to Ozzie quick but she can't remember which functional unit or _____ Ozzie works in. She calls Ozzie back and gets directions. When Olga speaks with Ozzie the second time Ozzie sounds desperate so Olga decides she better take the express elevator up a blood vessel in the _____. Once Olga reaches Ozzie's floor she exits the elevator and travels down a narrow, horizontal _____ passageway. The offices on this floor seem to be arranged in concentric circles called _____. Olga passes many offices, each one housing a different mature bone cell, but she can't seem to find the right one. Finally after many twists and turns she comes to a door marked "_____, only Ozzie would so clearly label the space he lives in. Olga knows this is the place so she diffuses through the door and saves the day for Ozzie.