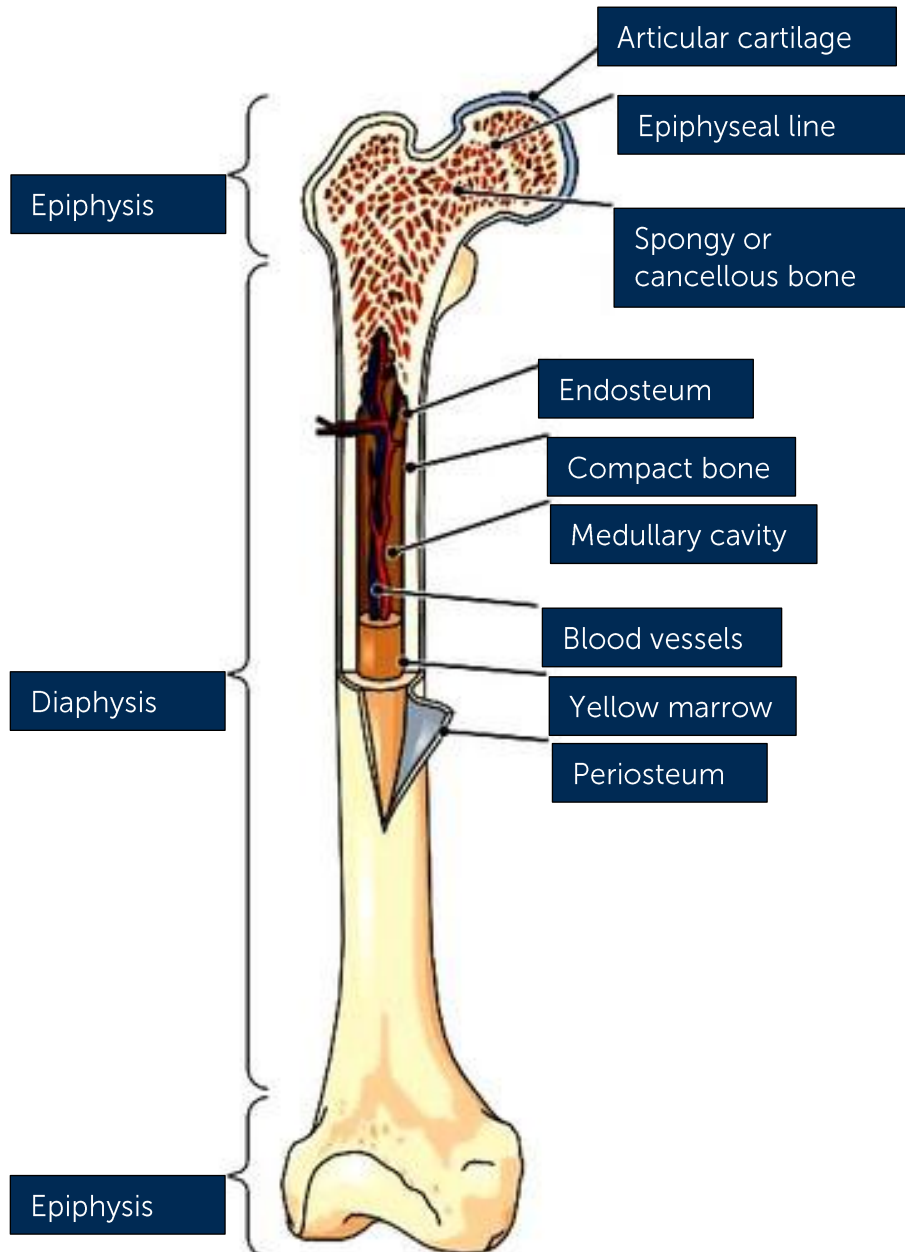


YEAR 11 ATAR HUMAN BIOLOGY
CHAPTER 12 - LONG BONE INVESTIGATION

SOLUTIONS

1. Label the following diagram of a long bone from the human skeleton.



A= Articular cartilage
B=Epiphyseal line
C=Spongy bone
D=Endosteum/medullary cavity/blood vessels
E=Compact bone
F=Medullary cavity/yellow bone marrow/blood vessels
G=Blood vessels/red bone marrow
H=Yellow bone marrow
I=Periosteum
J=Epiphysis
K=Diaphysis
L=Epiphysis

2. What is **one (1)** purpose for A (articular cartilage)? **Provides a tough and smooth surface when one bone rubs against the other at a joint.**
3. What are **two (2)** ways in which the structure of A suits its function?
 1. Tough – won't break under the stress of the body's weight;
 2. smooth – allows ease of movement in the joint.
4. What are **two (2)** functions performed by I (periosteum)?
 1. Provides a tough protective barrier on the outside of bone.
 2. Fibrous structure provides surfaces for the attachment of ligaments and tendons.
5. Describe **one (1)** thing that occurs at J or L (epiphyses)? **Growth; articulation with other bones**
6. What are **two (2)** functions for C (cancellous bone)? **Storage of red bone marrow; strength with light weight; production of red blood cells**
7. What are **two (2)** functions for K (diaphysis)? **Strength for supporting the skeleton; storage of fats; storage of essential minerals**