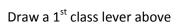
Chapter 22-2 The Skeletal System

Functions of the Skeletal System

■	- bone provides a framework and anchoring
poi	nt for all soft organs, leg bones support body, etc.
	skull protects brain, rib cage protects heart
and	llungs
	Skeletal muscles use bones as levers to
mo	ve the body
	Fat is stored in bone marrow,
min	erals (Ca) are also stored in bone matrix
	od cell formation- occurs in marrow cavities
Cor	npact bone
lots Bone F ■ in fe	ongy bone - composed of
unt	eoblasts form calcium matrix on cartilage (= ossification), il they are trapped (become mature osteocytes)
leav	ce cartilage is completely covered, it is digested away, ving medullary
(art	tilage on the end of bone is kept to help protect joints icular cartilage)
	tilage is also kept along the
	cells along the epiphyseal plate continue to produce bone, which results in lengthening of bone
	epiphyseal plate is completely ossified after adolescense
Bone re	emodeling

Bone is a dynamic tissue, constantly changing in response to stress	
Bone becomes where stress is applied, and where stress is less	
Osteoblasts (a type of bone cell) produce bone matrix wherever stress is detected	
Osteoclasts (another type of bone cell) destroy bone where it is not needed	S
Bone fractures	
fracture-	
fractures mended by bone reduction- the realignment of the broken ends of bones	
closed reduction- physician uses to realign bone	0
open reduction- surgery with/etc is used to realign bone	;
The Skeleton	
Consists of 206 bones	
axial skeleton: consists of the	_
appendicular skeleton: consists of the	_
Joints (= Articulations)	
Iocations where two bones meet	
two main functions:	
\Box holds bones together securely (attached with	
)	
allows mobility	
Types of Joints	

bones may slide past one another
found in
Joints
\Box bones free to move in many directions (shoulder)
Joint
\Box pivots around one axis
□ ex: knee, elbow
Levers 101
lever: a rigid bar that moves on a fixed point
. the point around which the lever
rotates
\Box : the resistance force the lever is
trying to move
L: the applied force to a lever
The arrangement of these three points determines the <u>class</u> of
the lever
1 st Class Levers
The fulcrum is between the load and effort forces



2nd Class Lever

■ The **load** is between the effort and the fulcrum

Draw a 2nd class lever above

3rd Class Lever

The <u>effort</u> force is between the fulcrum and the load Skeleton Lever Examples

Draw a 3rd class lever above

Here's some examples of each lever in the skeletal system!