Name _____
Human Biology Lab Manual Lab Report
Laboratory Exercise 2: Musculoskeletal System

SKELETAL SYSTEM

Activity 1: Identify the macroscopic anatomy of a long bone:

Provide the parts of a long bone from Figure 2.1 of the lab manual:

A.	E.
B.	F.
C.	G.
D.	

Activity 2: Understanding the structures of microanatomy of the bone

1.	6.
2.	7.
3.	8.
4.	9.
5.	

Activity 3: Identify the bones of the axial skeleton:
Provide the names of bones from Figure 2.4a of the lab manual.

A.	C.
B	D,

Activity 4: Identify the bones of the appendicular skeleton:
Provide the names of the bones from Figure 2.4b of the lab manual.

E.	M.
F.	N.
G.	O.
H.	P.
I.	Q.
J.	R.
K.	S.
L.	T.

Activity 5: Identify the bones of the skull:

1.	6.
2.	7.
3.	8.
4.	9.
5.	10.

Activity 6: Identify the locations of the vertebrae in the spine:

Write the type of vertebrae labeled in Figure 2.6.

A.	D.
B.	E.
C.	

Activity 7: Identify the types of ribs:

Write the type of ribs labeled in Figure 2.7.

A.
B.
C.

Activity 8: Identify the bones of the upper limb.

Label the bones of the upper limb in Figure 2.8

A.	E.
B.	F.
C.	G.
D.	H.

Activity 9: Identify the bones of the lower limb.

Label the bones of the upper limb in Figure 2.9

A.	E.
B.	F.
C.	G.
D.	H.

Activity 10: Contraction of Glycerinated Muscle

Record the measurements of glycerinated muscle pre and post exposure to the three solutions.

Table 2.1 Glycerinated Muscle Contraction			
	Slide 1: ATP & Salt Solutions	**Slide 2: ATP alone**	**Slide 3: Salt Solutions Alone**
Initial length (mm)	mm	mm	mm
Final length (mm)	mm	mm	mm
Change in length (mm)	mm	mm	mm

What conclusions can be drawn from your observations of exposing muscle strands to the 3 different experimental conditions?

Why do the muscle strands remain contracted permanently after adding the ATP solutions?

What is the role of the ATP, KCl, and MgCl2 solutions in contraction of glycerinated muscle?

Activity 11: Identify skeletal muscle locations.

Write the location of the skeletal muscle.

1.	8.
2.	9.
3.	10.
4.	11.
5.	12.
6.	13.
7.	14.

Activity 12: Lab Review

1. What are the two types of bone tissue?
2. Which type of bone tissue contains red blood marrow?
3. Osteocytes are found in what structure of the osteon?
4. What bones are part of the axial skeleton?
5. How many bones make up the cranial bones of the skull?
6. What are the names of the wrist bones?
7. What joint movement occurs when a body limb is moved away from the midline of the body?
8. What is another term for a muscle cell/myocyte?
9. What myofilaments form the sarcomere?
10. Glycerinated muscle requires the addition of what solution to cause muscle contraction?
11. What muscle forms the chest muscle?
12. Name the muscle group that is antagonistic to the quadriceps group.