

Introduction

Bones and their associated tissues make up the skeletal system. In addition to learning about the individual bones themselves, it is important to understand where they are located within the body and how they work together to produce movement. In this activity you will locate different bones on the human skeleton and then identify various joints in the human body.

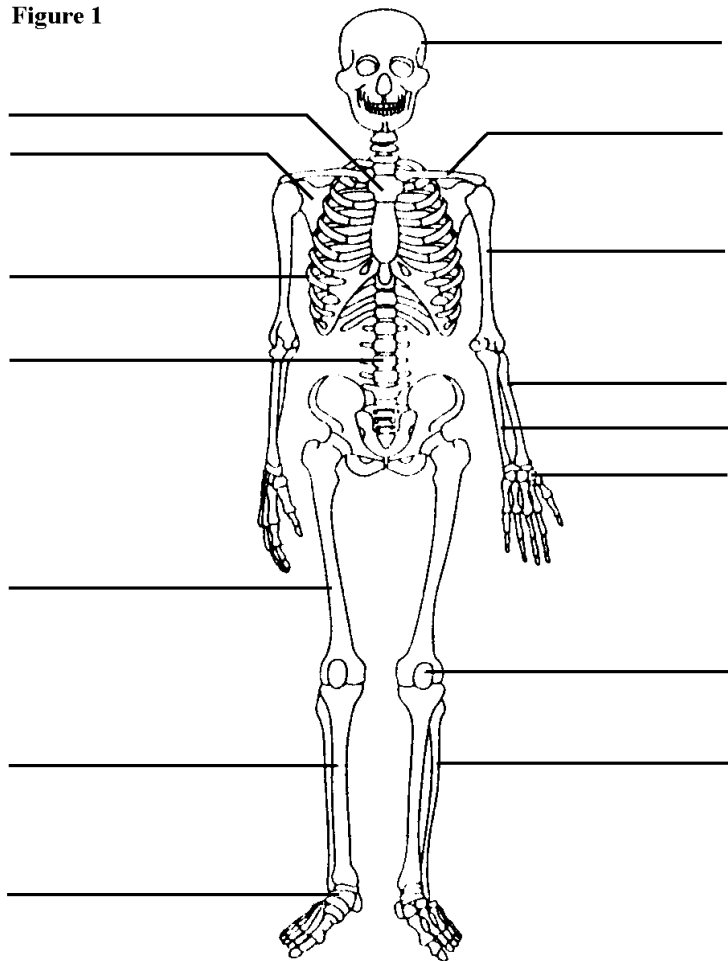
Procedure

- The following list contains the names of various bones of the human body, but the names are written in code! Decode these names and locate each bone on the skeleton. Write the name of the decoded bone on the correct blank next to the skeleton.

KEY TO CODE: The correct letter is the letter that directly precedes the given letter in the alphabet. Example: B = A, S = R.

- TUFSOVN _____
- QBUFMMB _____
- VMOB _____
- DSBOJVN _____
- SJCT _____
- UJCJB _____
- WFSUFCSB _____
- IVNFSVT _____
- DMBWJDMF _____
- GJCVMB _____
- TDBQVMB _____
- GFNVS _____
- SBEJVT _____
- UBSTBMT _____
- DBSQBMT _____

Figure 1



Background Information

Joints are places where two bones come together. They allow the bones to move without damaging each other. Joints make the human body capable of a wide variety of movements, ranging from extensive movement to no movement at all. Depending on their type of movement, joints are classified as either **immovable**, **slightly movable**, or **freely movable**. In addition, movable joints are divided even further depending upon the actual type of movement that occurs in that joint. The list on the following page contains five different types of movable joints.

Procedure

1. Using information from Figure 1 and the results of your own experiments with the way each of these joints moves, classify each joint in the chart as one of the six types of movable joints.
 - a. **Ball and socket joints** circular motion, free movement in all directions
 - b. **Hinge joints** bending in only one direction, back-and-forth motion
 - c. **Pivot joints** rotating motion, side-to-side movement
 - d. **Gliding joints** sliding motion of one bone in two directions
 - e. **Saddle joints** irregular motion of the thumb

Joint	Kind of Movement	Type of Joint
1. Ankle joint		
2. Elbow joint		
3. Joint between ulna and radius		
4. Hip joint		
5. Knee joint		
6. Neck joint		
7. Shoulder joint		
8. Thumb joint		
9. Toe joint		
10. Wrist joint		

Analysis and Conclusion

1. Starting at your shoulder, list the five types of movable joints found associated with the arm.
2. Starting at your hip, list the three basic types of movable joints found associated with the leg.
3. Where will you find immovable joints?
4. Biologically speaking, define a joint.
5. Vertebrae are said to be slightly moveable joints. Why would you not want them to be free movable joints?