Name:
Date:
Class:

## Homologous Structures

PROCEDURE:

1. Carefully examine the bone structure sheet on Lab Sheet 1. Bones are not drawn to scale. All are forelimbs of mammals. Look for key structural features that give telltale clues about which mammal the bones are from. Fill in the missing information based on your observation. Then, use color pencils and shade in homologous bones on Lab Sheet 1.

| Bone Set | Key Structural Features | Proposed Animal Source |
|---|---|---|
| A | | |
| B | | |
| C | | |
| D | Five Separate Digits or Fingers: Hand like structures; long, thin upper and lower arm segments | |
| E | | |
| F | | |
| G | | |

2. Examine the skin and/or fur-covered limbs on Lab Sheet 2. These are limbs from the same seven mammals whose bones you studied in part 1. Describe the relationship between each limb structure and it's normal function. For example, number 1 is a mole. The mole's forelimb is structured with short, strong levers and sharp claws for digging (since the mole lives underground). In your lab notebook, name each of the other mammals and similarly describe the relationship between the structure and function of their forelimb.

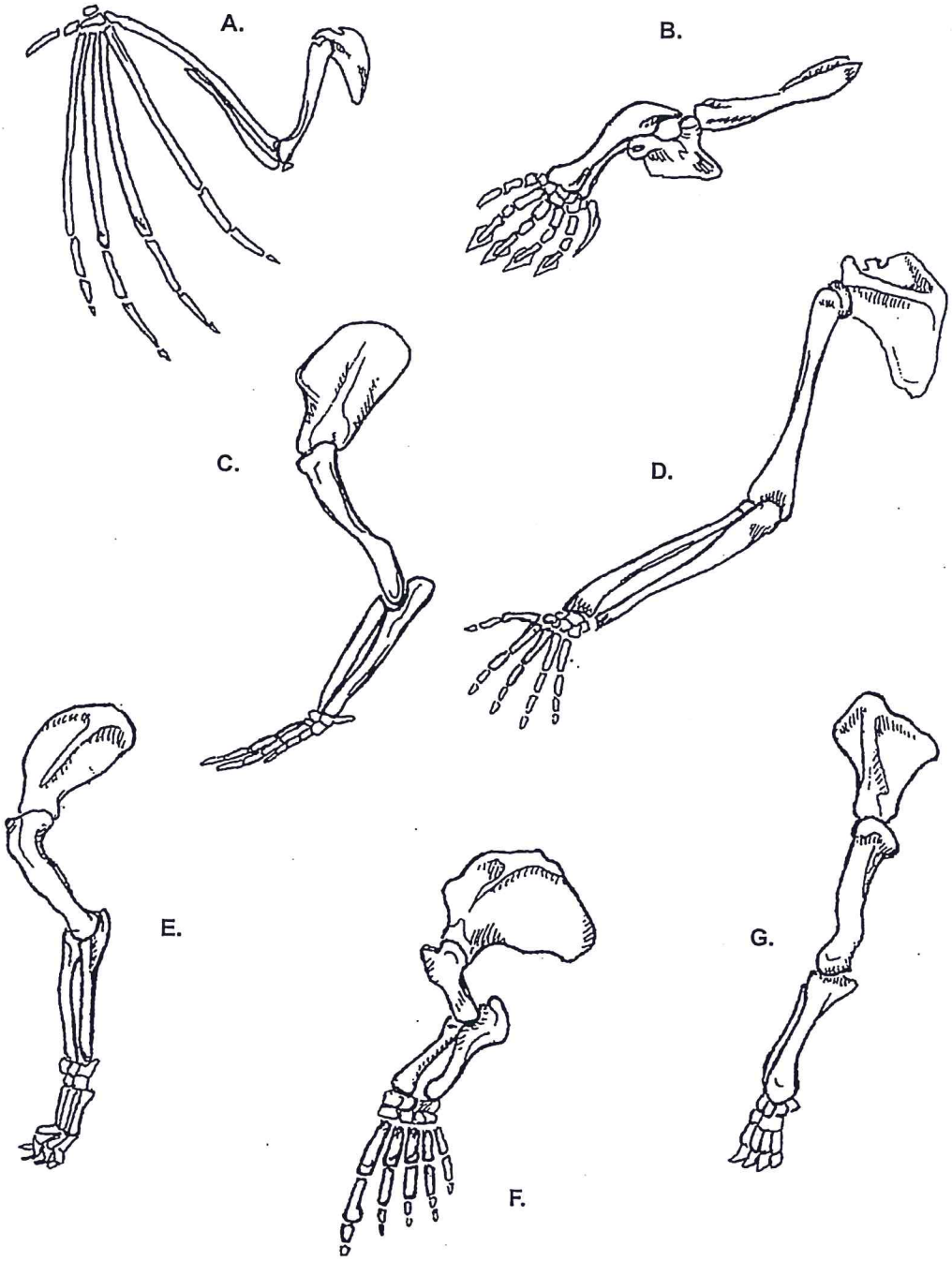
| NUMBER | Organism | Function of Limb Structure |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |

**Questions:**

1. Describe any similarities seen among the bone-sets of these mammals? Be as specific as you can.

2. Considering the illustration on Lab Sheet 2, Propose a general statement explaining why the limbs of these seven mammals show such different outward appearances while maintaining the similarities seen in the bone structures and patterns seen on Lab sheet 1.

**LabSheet1**



**LabSheet2**