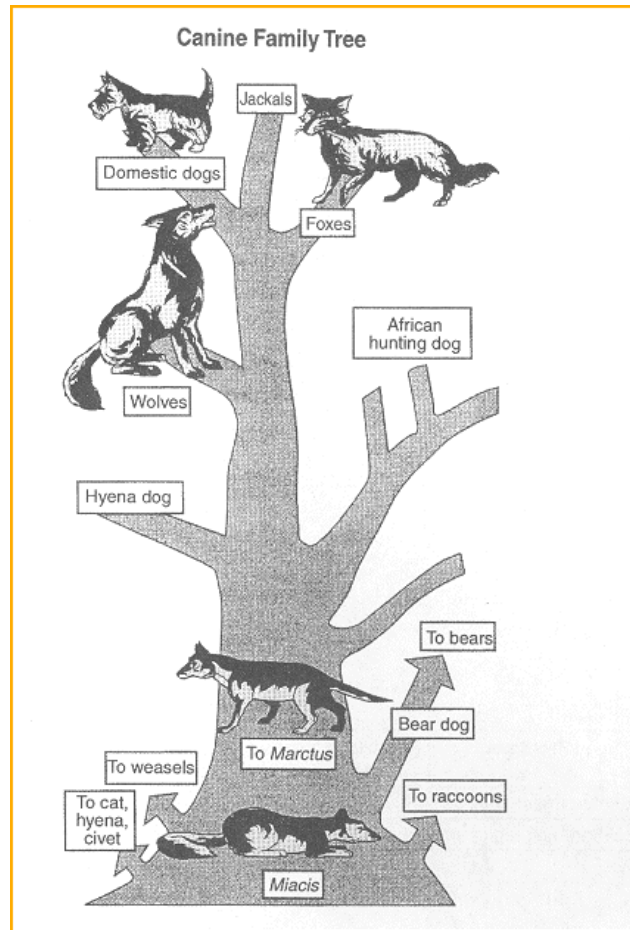


Canine Evolution

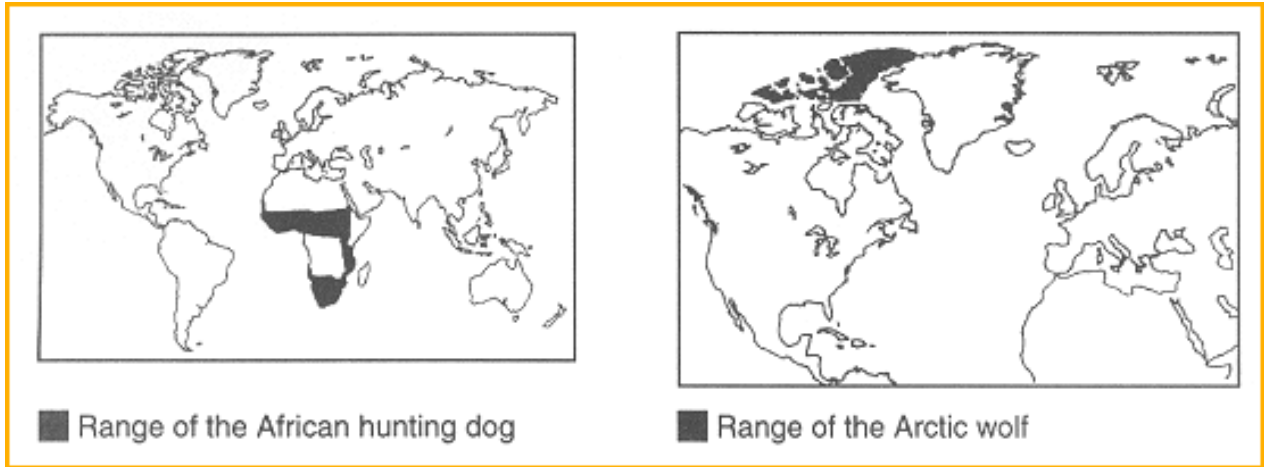
Directions: The following questions are based on the family tree pictured below which illustrates the relationships between animals in a possible canine family tree. For multiple choice questions, circle the choice that best answers the question. Please answer writing questions in the spaces provided and write as legibly and neatly as possible.



1. According to this family tree, which group of organisms has the most closely related members?
 1. cats, weasels, and wolves
 2. bears, raccoons, and hyena dogs
 3. jackals, foxes, and domestic dogs
 4. African hunting dogs, hyena dogs, and domestic dogs
2. According to the canine family tree, weasels, foxes, and domestic dogs all most likely originated from the:
 1. wolf
 2. bear dog
 3. *Marcus*
 4. *Miacis*

3. State one valid conclusion regarding the relationship of bears to other animals in the canine family tree.

4. The ranges of the African hunting dog and the Arctic wolf are represented in the maps shown below.



State a possible hypothesis that might explain why these two related animals successfully inhabit different areas of Earth.

5. Describe how geographic isolation could lead to speciation between the African hunting dog and the Arctic Wolf. In your answer please include the following terms:

- mutation
- selecting pressures
- environment
- variation
- adaptation
- natural selection
