**Student Worksheet: Sink or Swim: Exploring Bone Density and Buoyancy**

**Directions**: Based on recent research, *Spinosaurus* is depicted swimming in the newest *Jurassic World* movie. Some studies point to *Spinosaurus*’s relatively dense bones, which could have helped control buoyancy for swimming. But others argue that *Spinosaurus* fossils point to its life as a wader.



*Fabbri et al.*

**Graph Questions**1. Of the organisms pictured above, which one has the densest bones?

1. Puffin
2. extinct penguin
3. swan
4. alligator
5. *Tyrannosaurus*
6. *Spinosaurus*

2. An extinct penguin has denser bones than a puffin. What evolutionary advantages might this provide the puffin?

3. What physical or behavioral characteristics of an animal might be a result of the animal’s bone density?