

RW question 2

Jan Gimsa, Robert Sleigh, and Ulrike Gimsa have hypothesized that the sail-like structure running down the back of the dinosaur *Spinosaurus aegyptiacus* improved the animal's success in underwater pursuits of prey species capable of making quick, evasive movements. To evaluate their hypothesis, a second team of researchers constructed two battery-powered mechanical models of *S. aegyptiacus*, one with a sail and one without, and subjected the models to a series of identical tests in a water-filled tank.

Which finding from the model tests, if true, would most strongly support Gimsa and colleagues' hypothesis?

- A) The model with a sail took significantly longer to travel a specified distance while submerged than the model without a sail did.
- B) The model with a sail displaced significantly more water while submerged than the model without a sail did.
- C) The model with a sail had significantly less battery power remaining after completing the tests than the model without a sail did.
- D) The model with a sail took significantly less time to complete a sharp turn while submerged than the model without a sail did.

Key	D
Domain	Information and Ideas
Skill	Command of Evidence (Textual)

Key Explanation: Choice D is the best answer. The passage states that Gimsa and colleagues' hypothesis was that the sail-like structure on the back of *S.*

aegyptiacus enhanced the dinosaur's ability to travel underwater to hunt down "prey species capable of making quick, evasive movements." This choice's finding would effectively support the hypothesis because it would indicate that the sail-like structure would enable a dinosaur moving underwater to maneuver more quickly than a dinosaur moving underwater without the structure.

Distractor Explanations: Choice A is incorrect because it would essentially contradict the hypothesis by suggesting that a dinosaur moving underwater with the sail-like structure would move more slowly than a dinosaur moving underwater without the structure. **Choice B** is incorrect because there is no clear passage-based relationship between the amount of water displaced and the hypothesis. **Choice C** is incorrect because there is no clear passage-based relationship between the amount of battery power used and the hypothesis.