



Science Toolkit: Grade 8 Objective 1.A.1.c

Student Handout: Science: Grade 8 Objective 1.A.1.c

Standard 1.0 Skills and Processes

Topic A. Constructing Knowledge

Indicator 1. Design, analyze, or carry out simple investigations and formulate appropriate conclusions based on data obtained or provided.

Objective c. Explain and provide examples that all hypotheses are valuable, even if they turn out not to be true, if they lead to fruitful investigations.

Selected Response (SR) Item

Question

A teacher asks her students the following question: How does the air pressure inside a soccer ball affect the distance the soccer ball travels after the ball is kicked?

Which statement below is the best hypothesis for this investigation?

- A. If a soccer ball is large, then the soccer ball will travel a farther distance than a small soccer ball.
- B. If a soccer ball has a high internal air pressure, then the ball will travel a farther distance than a soccer ball with less internal air pressure.
- C. If a soccer ball travels a distance of 15 meters, then the ball is traveling faster than a soccer ball that travels a distance of 20 meters.
- D. If a soccer ball has 0.5 atmospheres of internal pressure, then the ball will travel slower than a ball with 0.8 atmospheres of internal pressure.

Correct Answer

B. If a soccer ball has a high internal air pressure, then the ball will travel a farther distance than a soccer ball with less internal air pressure.

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