

Name: \_\_\_\_\_

Class: \_\_\_\_\_

# Force of a Golf Swing

GRADES 6-8

How far can you hit a golf ball?

**Estimate:** \_\_\_\_\_ yards

	Trial 1	Trial 2	Trial 3	Average Drive
Drive				

Write a hypothesis on how you can increase your average drive distance.

## Scaffold Experiment Guide:

**Question:** How can you increase the distance of a golf ball?

**Hypothesis:** If I \_\_\_\_\_,  
then the distance of the golf ball will increase because

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## Variables:

### Independent (check one):

Foot position

Follow-through

Type of club

Speed of the swing

Angle of swing

Clubhead speed

Height of the tee

**Dependent:** Distance the ball travels.

**Control:** What other variables will you keep the same?

**Experiment Design:** Briefly summarize how you will collect your data.

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**Data:**

Record the distance in feet for 5 trials.

	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Average
Independent variable <b>Distance (meters)</b>						
Independent variable <b>Time (sec)</b>						
Control (same as <i>Explore</i> ) <b>Time (sec)</b>						
Control (same as <i>Explore</i> ) <b>Distance (meters)</b>						

**Analyze:** Find the average distance for both the controlled and changed swing and graph your average data comparing the two distances. If you are calculating the change in force using Newton’s 2nd Law, calculate the average speed and then acceleration of the ball. Divide your speed by time. *Acceleration is initial speed subtracted from final speed divided by time. Since the initial speed is zero, just divide your speed by time.*



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**Report:** Answer the following questions.  
Did your data support your hypothesis?

How did your adjustment (independent variable) change the distance of the ball?

How do you know your change (independent variable) influenced the distance the ball traveled?

How did your adjustment (independent variable) increase the force on the ball?