Module 1.0: Golf Measurements

1. The fairway is 125 yards and a player hit their first drive down the fairway 153 feet. How many feet do they have left? Which of the following mathematical expressions would be most useful to solve the problem?
    a. Feet = total yards/3 - distance
    b. Feet = total yards*3 - distance
    c. Feet = distance*3 - total yards
    d. Feet = distance/3 - total yards

2. The fairway is 150 yards long and a player hit their first shot (drive) 182 feet and their second shot 123 feet. How many yards do they have left?
    a. 48 yards
    b. 87 yards
    c. 100 yards
    d. 129 yards

Module 2.0: Force of a Golf Swing

1. What causes the golf ball to be in motion?
    a. Radiation Energy
    b. Collision
    c. Balanced Forces
    d. Unbalanced Forces

2. Which of the following would *not* increase the energy of the golf ball?
   (*Hint: there is more than one answer*).
    a. Increase the speed
    b. Hit it higher
    c. Hit it harder
    d. Decrease the weight (mass)
    e. Increase the weight (mass)

3. T or F: It is important to control the other variables (like the person hitting the ball) in an experiment.

Module 3.0: Scoring in Golf

1. What mathematical expression shows the best golf score to the worst?
    a. 10 > 9 > 4
    b. 4 < 9 < 10
    c. 1 < 4 < 8
    d. 8 > 4 >1

2. What algorithm would be the most useful in calculating a total golf score?

a. Add all strokes together and subtract from the par of the course.
b. Subtract each hole from par and add together each hole.
c. Multiply the strokes by the hole number and divide by 18.
d. Add par and the number of stokes and subtract the handicap.

Module 4.0: Engineering a Pushcart

1. Which of the following best describes criteria in the EDP (Engineering Design Process)?
   a. Requirements
   b. Rules
   c. Setbacks
   d. Building materials

2. Why does identifying criteria and constraints help create a better design?

3. Which steps are correct for the EDP (Engineering Design Process)?
   a. Brainstorming → Build → Present → Identify the problem → Redesign
   b. Identify the problem → Brainstorming → Build → Present→ Redesign
   c. Present → Identify the problem → Brainstorming → Build → Redesign
   d. Identify the problem → Build → Redesign → Present

4. T or F: Constraints make engineering a *solution* impossible.

Module 5.0: What is a Golf Ball?

1. Which of the following properties would *not* help you find out the function of an object?
   a. Weight
   b. Material type
   c. Color
   d. Size

2. What properties of a golf ball have the largest impact on it's function?
   a. Material type
   b. Color
   c. Weight
   d. Size

3. Explain why this statement is true: Golf balls were specifically engineered for a specific function.

Module 6.0: Angles
What is the correct angle and club style represented in each diagram?

1.

    a. 10° Iron
    b. 45° Iron
    c. 90° Putter
    d. 125° Putter

2.

    a. 10° Iron
    b. 45° Iron
    c. 90° Putter
    d. 125° Putter

3. What is the relationship between angle and height?
    a. A larger angle will decrease the height of the ball.
    b. A larger angle will not change the height of the ball.
    c. A larger angle will increase the height of the ball.
    d. A smaller angle will increase the height of the ball.

Module 7.0: Water in Golf
Label the following as either an *input* or *output* for plant growth.
1. Water
    a. Input
    b. Output
2. Sun
    a. Input
    b. Output
3. Sugar (glucose/fructose)
    a. Input
    b. Output
4. Oxygen
    a. Input
    b. Output
5. Carbon Dioxide
    a. Input
    b. Output

6. Describe a solution for drought on a golf course?
   a.

Module 8.0: Areas of the Golf World

June
1981-2010 Average

Average Precipitation (inches)

0   4   8

Climate.gov
Data: NCEI
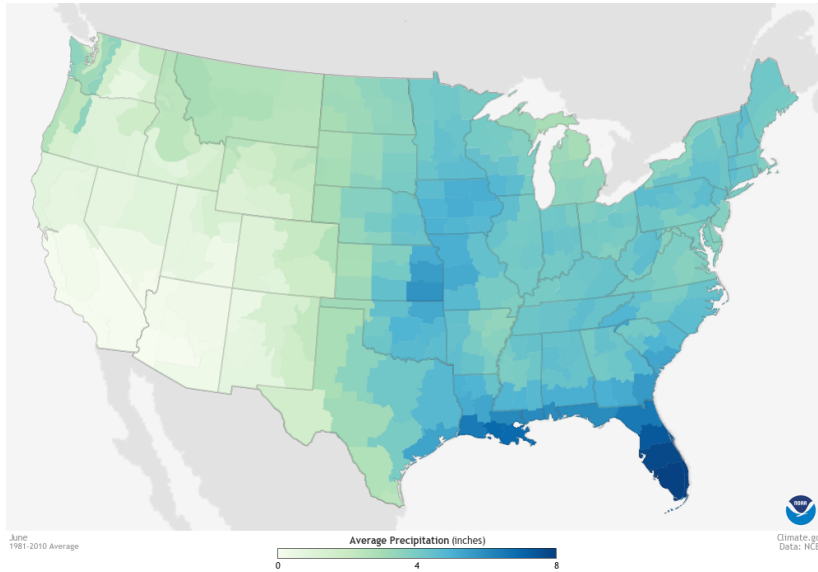
1. Based on the above map, what area of the country has the highest level of precipitation?
   a. Northeast
   b. Midwest
   c. Southeast
   d. Southwest

2. Why is precipitation important for a golf course location?

3. T or F: The climate of an area determines if the area should support a golf course.