**Robot Soccer Challenge Post-Quiz Answer Key**

1. **Explain how we used messages sent over a Bluetooth connection to enable one NXT to be used to remotely control another.**

**Let’s call one NXT the “controller” and the other NXT the “receiver.”**

**When each button (orange, left, right) is pressed on the controller, it sends a distinct message (“1,” “2,” “3”) via Bluetooth to the receiver. When no button is pressed on the controller, it sends another distinct message (“0”) to the receiver.**

**We programmed the receiver so that…**

* **when it receives “1” it moves forward**
* **when it receives “2” it moves left**
* **when it receives “3” it moves right**
* **when it receives “0” it does nothing**
1. **What ideas do you have for how you might change the programming to accomplish different tasks using two NXT bricks?**

**Answers will vary.**

1. **In your own words, what are the steps of the engineering design process? And which is your favorite step?**

**Answers will vary, but generally, look for the following main steps: 1) understand the problem or challenge, 2) brainstorm and research to generate solution ideas and preliminary designs, 3) choose the best solution to pursue as the definitive design, 4) create a prototype, 5) test it and make improvements, 6) present the results and final solution.**