**Move Until Near** **100 Pts**

**Basic 75 pts. 75% = C**

**Challenge 1 10 pts. 85 %= B**

**Challenge 2 5 pts. 90% = A-**

**Challenge 3 5 pts. 95% = A**

**Challenge 4 5 pts. 100% = A**

**Team Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Team Members’ Names \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Successfully program your robot to stop at a certain distance

Successfully program using the Ultrasonic Sensor

Demonstrate and understanding of how an Ultrasonic Sensor detects distances

**OBJECTIVES**

**MOVE UNTIL NEAR: Program a robot to stop at certain distances using the Ultrasonic Sensor**

**Date**

**BASIC**

**VIEW** video in Connect 1: “Tractor: Farm Utility Vehicle”

**USE** Connect 2 to construct your robot according to the directions in VT. The attachment instructions will need to be adjusted. Your sensor must be at the same level as the wall you are approaching. Our walls are 3 ½” high. The attachment will not work as outlined in the instructions. ***(Student Sign) (Teacher Sign)***

**READ** Construct 3, “Lesson Overview,” and answer questions 3.1 and 3.2

3.1\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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3.2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**READ** Construct 4, “Move Until Near,” *Forward until Near behavior*, and answer questions 4.1- 4.3

4.1\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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4.2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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4.3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**DEMONSTRATE** “Move Until Near” (25 cm), first to a fellow classmate and then to a teacher.

**READ**, **REVIEW AND** **STUDY** Construct 5, “Program Review,” *Forward Until Near Program*

**READ** Contemplate 6, “Move Until Near,” *Backward until Far Behavior,* and answer question 6.1

6.1 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**DEMONSTRATE** “Move Until Near,” *Backward until Far*, first to a classmate and then to a teacher.

**READ**, **REVIEW AND** **STUDY** Contemplate 7, “Ultrasonic Sensors.” **In your own words,** briefly

describe how the ultrasonic sensor works.

7.0 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**READ** Contemplate 8, “Thresholds,” and answer questions 8.1 and 8.2

8.1\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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8.2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Do not complete “Continue 9. Move directly to the Challenges!!**

\_\_\_\_\_\_\_\_\_\_\_**75 Points**

**edge**

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