# CoreValueChesterfield County Public Schools

# Lesson Plan Guide

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| **Date:** **06/27/11** | **Subject:****Math/Science** | | | | **Teacher:****Stephens** |
| **SOL/CPR:** **Math 4.15, Science 4.1** | | | **Grade:** **4** | | **Estimated time:****1 hour x 2 class periods** |
| **Objectives:** **Students will use a preprogrammed robot to confirm or deny that the shortest distance between 2 points is a straight line.** | | | | | |
| **Assessments:****Students will turn in a self assessment of work done in a cooperative group. Students will turn in data collected.** | | | | | |
| **Materials/Resources:**  **5 robots (preprogrammed with light sensor to follow a line)**  **Stopwatches**  **Tape - straight line and non-linear path** | | | | | |
| **Check and Review:****Teacher will observe cooperative groups and provide assistance where needed.** | | | | | |
| **Anticipatory Set:** **Students will time each other taking 2 different paths in the school building. One group will travel in a straight path and the other group will take a path with turns. Both groups will meet at same point and compare times.** | | | | | |
| **Modeling:****Teacher will demonstrate the robot following the straight path and using the stopwatch to time robot.** | | | | | |
| **Research-Based Strategies Used:** | | | | | |
| Similarities and Differences  Summarizing and Note Taking  Reinforcing Effort and Providing Recognition | | Homework and Practice  Nonlinguistic Representations  Cooperative Learning | | Setting Objectives and Providing Feedback  Generating and Testing Hypotheses  Cues, Questions, and Advance Organizers | |
| **Guided Practice/Check for Understanding:** | | | | | |
| **Independent Practice:****.Students will time robots following straight path and a nonlinear path. Groups should complete 5 trials for accuracy and average times. Cooperative groups will then confirm or deny that the shortest distance between 2 points is a straight line.** | | | | | |
| **Closure:** **Groups will share data and either confirm or disprove their predictions (hypothesis).** | | | | | |
| **Reflections:****Students will complete an individual self assessment.** | | | | | |

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