# CoreValueChesterfield County Public Schools

# Lesson Plan Guide

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| **Date:** **06/29/11** | **Subject:****Science/Math** | **Teacher:****Stephens** |
| **SOL/CPR:** **Math 4.13 Perimeter, Science 4.1**  | **Grade:** **4**  | **Estimated time:****1 hour x 2 class periods** |
| **Objectives:** **Use robot equipped with light sensor to measure the length of a linear path and perimeter of a square.**  |
| **Assessments:****Students will turn in calculation sheets and graphed data.** |
| **Materials/Resources:****5 robots (equipped with light sensor and preporgrammed to follow a black line)****Stopwatch****tape to draw path****meter stick to measure** |
| **Check and Review:****Teacher will meet with all groups to check for understanding of objective and use of materials needed.** |
| **Anticipatory Set:****Use preprogrammed robot to demonstrate the ability to follow a black line around a standard shape (square).** |
| **Modeling:** **Demonstrate the robot following a straight path (2meters) and timing the robot using the stopwatch. Show students that distance can be calculated by multiplying speed by time. Work through calucalations together with students taking notes.**  |
| **Research-Based Strategies Used:** |
| [x]  Similarities and Differences[ ]  Summarizing and Note Taking[x]  Reinforcing Effort and Providing Recognition | [ ]  Homework and Practice[x]  Nonlinguistic Representations[x]  Cooperative Learning | [x]  Setting Objectives and Providing Feedback[x]  Generating and Testing Hypotheses[ ]  Cues, Questions, and Advance Organizers |
| **Guided Practice/Check for Understanding:****See modeling.**  |
| **Independent Practice:****After finding distance of straight path, student will use preprogrammed robot to find perimeter of a square. Students will time robots and then use all data to calculate distance traveled (perimeter). Students will then use a meter stick to measure actual distance.** |
| **Closure:** **Groups will share distances to compare accuracy of actual perimeter versus robot calculated perimeter.** |
| **Reflections:****Students will complete an individual self assessment.** |

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