**Instructional Days:** 10-13

**Topic Description:** Program the robot using the Mindstorm Robot Educator Software tutorials.

**Objectives:**

The students will be able to:

* Use the building blocks of the common palette to program the robot.
* Build robots that can execute the functions programmed through the Robot Educator Software.
* Program the robot using some or all of the complete palette of blocks.

**Outline of the Lesson:**

* Description of the assessment model (10 minutes)
* How to use the tutorials (10 minutes)
* Build and program robots according to tutorials (255 minutes)

**Student Activities:**

* In groups of 2-4, students follow tutorials to build and program small robots.

**Teaching/Learning Strategies:**

* Explain assessment model for tutorials. (Recommended: observe some but not all robots, such as those for tutorials 8, 16, and 20 in the common palette along with several from the complete palette; look at robot construction and the program as well as execution to determine grade.)
* All students should complete the tutorials for the common palette before moving on to the complete palette. It will be helpful for the future projects if students complete most, if not all, of the tutorials for the complete palette as well.
* Circulate throughout class to answer questions, help troubleshoot, and assess robots.
* If some groups finish early, have them assist other groups.

**Resources:**

* NXT User guide pp. 50-53 explain the tutorials