



# The SPIRIT Project

## *Educational Robotics*

### Lesson Building Block Template

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#### I. Concepts

Using the TekBot to gather data to be put into a spreadsheet

#### II. Standards (NETS – National Educational Technology Standards for Students)

- Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.
- Students use technology tools to process data and report results.
- Students use technology resources for solving problems and making informed decisions.
- Students employ technology in the development of strategies for solving problems in the real world

#### III. Learning Activity Context:

Context: X Moving TekBot

Abstract: Students will set up two ramps. One ramp will be four times higher (i.e. 11cm and 44cm). Time how long it takes the TekBot to get to the end of each ramp. Take five time trials. Put the data (timings and measurements from the ramp) into a spreadsheet and graph.

#### IV. Teacher and Student Suggestions/Tips:

Use three 30 minute classes. First class used to gather information. Second class used to set up spreadsheet, input data, and graph. Third class can be used as time to analyze the data (and finish anything that didn't get finished in the first and second class).



If time is short set up a spreadsheet template before hand. This way they can just input the data, create formulas (for average and square root functions), and graph.

Materials Needed: TekBots, ramps, books to make the ramp higher, stop watches

**V. Teacher Questions:**

How much more time do you think it would take the TekBot to climb the higher ramp?

How does a spreadsheet help to organize and analyze the data gathered?

**VI. Assessment Ideas:**

Students use the TekBot to gather different data of their choosing. The Students will use a spreadsheet to present that data in an organized way.

**VII. Other information:**

See Spreadsheet example

**VIII. list of materials**

[Spreadsheet link](#)

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