



### 3.17 Using Tables & Graphs in Excel

#### Prerequisite Skills and Knowledge

- ∞ Students should have basic mouse skills.
- ∞ Basic word processing skills
- ∞ Basic printing skills
- ∞ Lessons 3.14 Intro to Excel, 3.15 Excel Tables, 3.16 Excel Graphs
- ∞ Basic Internet navigation skills
- ∞ Students need to know how much they weigh.

#### Time Required

- ∞ Mini-lesson and guided practice: 15 minutes for mini-lesson; 20-25 minutes for guided practice; additional time may be needed to complete this lesson.

#### Materials

- ∞ Computer lab, Microsoft Excel, LCD projector, Internet access
- ∞ <http://www.exploratorium.edu/ronh/weight/index.html> URL displayed for students OR create a shortcut on student computers.

#### Intended Learning

- ∞ Students will collect data about their weight on different planets and then graph that data to show they can independently make a table and graph in MS Excel.

#### District Technology Standards Uses Technology Effectively

- ∞ Vocabulary
  - Selecting, formatting toolbar/formatting palette, cells, columns, rows, spreadsheet, graph
- ∞ Word Processing Skills
  - Highlights/selects, copies, pastes
- ∞ Internet Browser
  - Enters URLs in browser

#### Produces Quality Work

- ∞ Spreadsheets
  - Converts mathematical data into a graph or chart.

#### Big Ideas from Everyday Math -

- ∞ Organize, graph, and interpret data

#### Science Standard 4:

- ∞ Earth and Space Science

#### Mini-Lesson

Connection - preparing students' thinking

*What is gravity? Do we weigh the same on all the planets? Why or why not?*

#### Notes

To learn more about Excel, visit these websites:

<http://www.usd.edu/trio/tut/excel/>

[http://www.internet4classrooms.com/online\\_excel.htm](http://www.internet4classrooms.com/online_excel.htm)

**Teaching - Mini Lesson**

With students seated in front, explain that today they will be learning how to collect data about their weights on different planets. They will multi-task between Excel and the Internet, copying and pasting that information into an Excel table, and then graphing that data.

Review with students how to begin a table in Excel. They need the following column headings: "Name of Planet" and "My Weight".

Model for students how to multi-task between Excel and the Internet browser and access the following URL:

<http://www.exploratorium.edu/ronh/weight/index.html>. They will enter their weight into the box, and it will calculate how much they weigh on each planet.

Students need to copy the planet name, go back to Excel, paste it in the table, go back to the Internet, copy their weight, go back to Excel and paste the weight into the table. They will repeat these steps for all the planets.

Next, review with students the steps for using the "Chart Wizard" in Excel to make the graph.

Students will save and print the table and graph when they are finished.

**Active Engagement - Guided Practice**

Seated at computers, students will open Excel and create the data table. They will then open the Internet browser, type in the URL, and find out how much they weigh on different planets. They will copy and paste the first planet's name in the Excel table, go back to the Internet, copy their weight for that planet, and then copy it in the Excel table.

**Link**

Students should work independently to create a data table and graph of their weights on different planets.

**Independent Practice****Teacher**

- ∞ Circulate and answer individual questions, progress check for daily participation and on completing the table and graph.

**Students**

- ∞ Working independently, students will create the table and then copy and paste the data for all the planets into the table. Last they will make a graph, save it, and then print.

**Sharing/Closure**

- ∞ Students share the printed graph with a partner.
- ∞ Students compare their weights on different planets and share what they noticed.

**Differentiation:**

For students who finish quickly: they can write 1 or 2 sentences comparing their weights on different planets.

For students who need extra assistance: limit the number of planets/weights they need to copy, paste, and graph.

**Assessment**

- ∞ Progress/Monitor for daily participation using a checklist as you walk around and observe students. Using a rubric with a score of 1-4, a “3” is given for a complete assignment, following the directions given.
- ∞ Teacher will assess printed table and graph. Using a rubric with a score of 1-4, a “3” is an accurate table with headings, and graph. The graph has correct titles and labels.