# Differentiated Learning

**Grade Level: 5**

**Topic: 14**

**Domain Covered:**

Measurement and Data

**Clusters: (write out in words)**

Represent and interpret data

Graph points on the coordinate plane to solve real-world and mathematical problems.

**Content Standards: (write out in words)**

5.MD.2 – make a line plot to display a data set of measurements in fractions of a unit. Use operations on fractions for this grade to solve problems involving information presented in line plots.

5.G.2 – represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

## Learning Targets for this Unit

14-1 – Students will learn and understand how to draw line plots, interpret points, and recognize outliers.

14-2 – Students collect data and record data in frequency tables and line plots. Students then interpret results.

14-3 – Students will learn how to make a line plot from data in a frequency table.

14-4 – Students will learn how to use the information in a line plot to solve problems involving the data.

14-5 – Students will write math explanations that relate to line graphs that show data changing over time.

## Practice Standards:

- **Make sense of problems and persevere in solving them.**
- **Reason abstractly and quantitatively.**
- **Construct viable arguments and critique the reasoning of others.**
- **Model with mathematics.**
- **Use appropriate tools strategically.**
- **Attend to precision.**
- **Look for and make use of structure.**
- **Look for and express regularity in repeated reasoning**

# Differentiated Activities

## Advanced/Gifted: (see attached)

**Pg. 351C**

**Quick Synopsis of Activity & Materials Needed-**

Groups of students will draw graphs that are misleading. Each group will draw the same graph at a different scale. Discuss graphs.

**Pg. 351C**

**Quick Synopsis of Activity & Materials Needed-**

Materials: Student textbook and computer

Activity: Students choose one graph from any topic 14 lesson and reproduce it using Tools 4 Math, Graphing on pearsonsuccessnet.com digital path. To find Tools 4 Math:

- From the home page, click on Interactive Digital Path
- Click on Topic 14
- Click on View (any lesson will get you there)
- Click on the cube with the number 4 at the top of the page
- Tools 4 Math will pop up. Use the scrolling arrows to find Graphs
- Click Get Started

## Math Project: (see attached tally chart)

**Pg. 351E**

**Quick Synopsis of Activity & Materials Needed-**

Students will display data from research in a tally chart. Students will then write a question that relates to the data.

## Math and Literature: (Teacher's Guide 351D)

### Pg. 31-32(Guided Problem Solving)

### Quick Synopsis of Activity & Materials Needed-

- Cracking the Code (pages 16-17)
- Math Library Master: Cracking the Code
- Extension page 17: Cracking the Code
    - Have students create symbol code to represent letters.
    - Create mystery messages using the code

Name _____

# Topic 14: Math Project
# Science Link

**Factoid:** Alaska was the only U.S. state not to have a recorded Tornado between 1961 and 1990. Tornadoes are most common east of the Rocky Mountains during spring and summer.

**Directions:**

1. Research 5 tornado safety tips.
2. Survey at least 25 people and record which tips they did not know about.
3. Display data in the tally chart.

# Tally Chart

| Tip | Number of people Who did not know |
|---|---|
| | |
| | |
| | |
| | |
| | |

4. **Writing to Explain:** write a question that relates to the data.

Name _____

# Topic 14: Math Project
# Science Link Extension

**Directions: Create a bar graph of your data using Microsoft Excel.**

1. Type your Title in Cell: B1
2. Type your tip #1 in Cell: A2
3. Continue typing tips in cells A3, A4, A5, A6
4. Type the number of people that match tip #1 in cell B2.
5. Continue typing the number of people who didn't know the tip in cells B2, B3, B4, B5, B6.
6. Highlight all of your data.
7. Click insert at the top of the toolbar.
8. Click "bar" from the choices, and choose the bar graph you would like to create.

**Writing to Explain:**

Compare two pieces of data on your graph using words.