

## Week Eleven: Charts and Graphs Introduction

**Weekly Focus:** Introduction  
**Weekly Skill:** Charts and Graphs

**Lesson Summary:** This week students will be introduced to various charts and graphs formats. They will be asked to identify appropriate charts and graphs for particular scenarios. Finally, they will have an opportunity to create their own chart or graph.

**Materials Needed:** Charts and graphs handout, Group Roles, In-Class Assignment/Assessment, paper, markers or color pencils

**Objectives:** Students will be able to...

- Identify various types of graphs and charts
- Demonstrate comprehension of charts and graphs by correctly answering comprehension questions
- Correctly match appropriate chart or graph as evidence to a claim
- Create their own chart or graph to visually demonstrate information

**Common Core Standards Addressed:** [CCSS.ELA-Literacy.RH.11-12.2](#), [CCSS.ELA-Literacy.RH.11-12.7](#)

**Notes:** On the 2014 test, students will need to not only be able to read a chart and/or graph, they will also need to be able to think about charts and graphs as evidence and choose which chart or graph best supports a stated position.

## Week Eleven: Charts and Graphs Introduction

### Activities:

#### Testing: TABE

**Time: 50 minutes**

For the first hour, students will be testing on the TABE Reading test. Talk to your coordinator about this as well as your role as a proctor.

**Break: 10 minutes**

#### Activity 1: Introduction to Charts and Graphs

**Time: 60 minutes**

- 1) Explain to students that today we will be looking at various types of charts and graphs. Being able to comprehend the information in these graphs will be an important skill for the GED test. We will continue to work with charts and graphs in the upcoming weeks.
- 2) Warm-Up: Ask students to get into groups of three or four. Then, write these questions on the board: What is a chart? What is a graph? What is one example of a chart or graph that you've seen used recently? Why do people use charts and/or graphs instead of just writing information in a paragraph or essay format? Have students take five to ten minutes in groups to brainstorm answers and then share out as a class. You may find it useful to pass out "group roles" to students.
- 3) Hand out Charts and Graphs Sheet. Read through the back "Tips" together. Then, ask students in their groups to practice these tips by taking a look at the graphs on the front of the sheet (Hours GED Students Spend Studying). Assign each group a graph to look at and have them, in their groups, answer these questions: What, in your own words, does the graph show? How many people total are represented in the graph?
- 4) Go over the answers as a class. All of the answer should be the same, or roughly the same. Explain to students that each of these graphs is showing the same information, just in different ways. Go over the different types of graphs together.
- 5) Finally, explain to students that information on a chart or graph can also be used to support an argument. Ask students for what claim these graphs might be used as evidence to support. Give them this example: "GED students need a homework center." Together, talk about why these graphs would support this claim. Have them discuss another possible claim in groups and come back together to share.

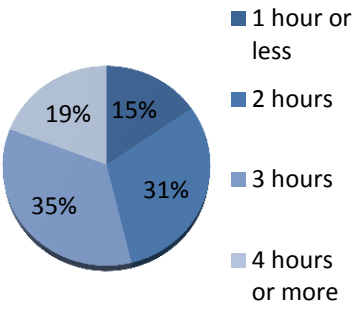
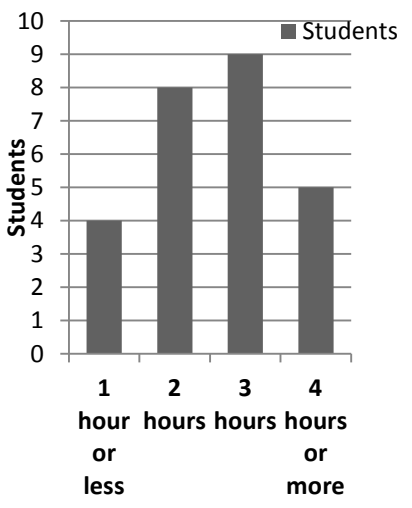
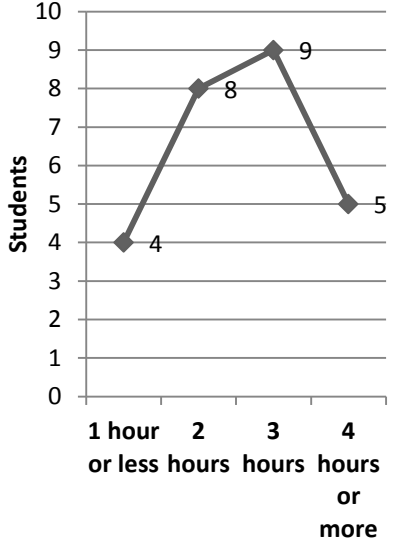
**Assessment:** Have students work in groups or individually to complete the assessment activity, then go over as a class.

#### Extension Activity: Creating Chart or Graph

**Time: 50 minutes**

Divide students into groups and have them follow the steps on the extension activity on the assignment sheet. Save time for groups to present their graphs at the end of class.

**TYPES OF CHARTS AND GRAPHS**

Pie Graph	Bar Graph	Line Graph	Chart/Table										
<p style="text-align: center;"><b>Hours GED Students Study per Week</b></p>  <p style="text-align: center;"><b>26 Students Surveyed</b></p>	<p style="text-align: center;"><b>Hours GED Students Study per Week</b></p> 	<p style="text-align: center;"><b>Hours GED Students Study per Week</b></p> 	<p style="text-align: center;"><b>Hours GED Students Study per Week</b></p> <table border="1" data-bbox="1585 641 1995 1177"> <thead> <tr> <th># of Students</th> <th>Hours Studied per week</th> </tr> </thead> <tbody> <tr> <td>4</td> <td>1 hour or less</td> </tr> <tr> <td>8</td> <td>2 hours</td> </tr> <tr> <td>9</td> <td>3 hours</td> </tr> <tr> <td>5</td> <td>4 hours or less</td> </tr> </tbody> </table>	# of Students	Hours Studied per week	4	1 hour or less	8	2 hours	9	3 hours	5	4 hours or less
# of Students	Hours Studied per week												
4	1 hour or less												
8	2 hours												
9	3 hours												
5	4 hours or less												
<ul style="list-style-type: none"> <li>• Pie graphs show what part of a whole something is.</li> <li>• Parts must add up to 100%</li> </ul>	<ul style="list-style-type: none"> <li>• Bar graphs use rectangular bars to show how large each value is.</li> <li>• The bars may be horizontal or vertical.</li> </ul>	<ul style="list-style-type: none"> <li>• A line graph uses points connected by lines to show how large in value something is.</li> </ul>	<ul style="list-style-type: none"> <li>• A chart orders information in rows and columns.</li> </ul>										

## TIPS FOR READING CHARTS AND GRAPHS

**Charts and Graphs:** Visual forms of representing data.

Charts and graphs use pictures **and** words to provide a quick snapshot of information.

### **BEFORE YOU READ**

1. **Read** the **title** or **heading** of the visual first. This will indicate the topic of the graphic or the type of information presented.
2. Next **read** all the **labels** on the visual. These are usually written along the vertical and horizontal axes of the chart or table. The labels tell you what each line, mark, or section on the graphic represents.
3. **Read** any other **text** that has been written on or around the graphic. Writers often provide short explanations for the different parts of the graphic.
4. Lines or sections on the graphic may be printed in different colors or patterns. **Look for a key** to tell you what the different **colors mean**. Each color represents a different category of data.
5. Symbols may also be used to represent information. **Look for a key** to tell you what the **symbols mean**.

### **AS YOU READ**

6. **Take notes** on the data you found in the chart, table, timeline, or graph. This will help you keep the information organized.

### **AFTER YOU READ**

7. **Analyze** the **data** you gathered and determine what conclusions you can draw based on the data.
8. **Remember** that **valuable information** is contained in the visual representations of data. You may be tested on items found there.

Tips excerpted from *International Center for Learner Leadership in Education: Reading Strategies for Career Academies and Career-Technical Education*

## Group Work Roles

### LEADER

- Makes sure that every voice is heard
- Focuses work around the learning task; guide group from exercise to exercise

**Sound bites: Let's hear from \_\_\_\_ next." "That's interesting, but let's get back to our task."**

### RECORDER

- Compiles group members' ideas:
  - Make a star on the sections/numbers we need to go over
  - Write specific questions

**Sound bites: "I think I heard you say \_\_\_\_\_; is that right?" "How would you like me to write this?"**

### TIME KEEPER

- Encourages the group to stay on task
- Announces when time is halfway through and when time is nearly up

**Sound bite: "We only have five minutes left. Let's see if we can wrap up by then."**

### PRESENTER

- Presents the group's finished work to the class

**Sound bite: "Which questions do we need to go over in this section?" "What else do we need to ask?"**

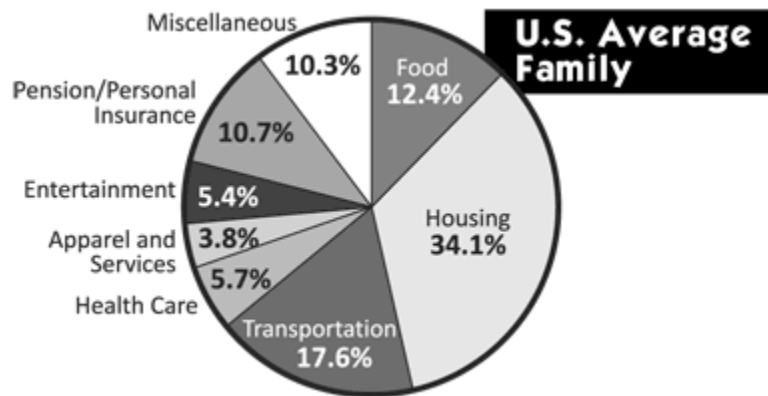
Created by Jen Ouellette for the Minnesota Literacy Council

## IN-CLASS ASSESSMENT

### I. CHARTS AND GRAPHS COMPREHENSION QUESTIONS

**Directions:** Look at each of the charts and graphs examples below and answer the questions beneath them.

**Graph 1: U.S. Average Family Spending**



- 1) What type of chart or graph is this?
- 2) In your own words, what does this graph show?
- 3) What are three different categories of spending that the graph shows?
- 4) What is one fact that you learned from this graph?

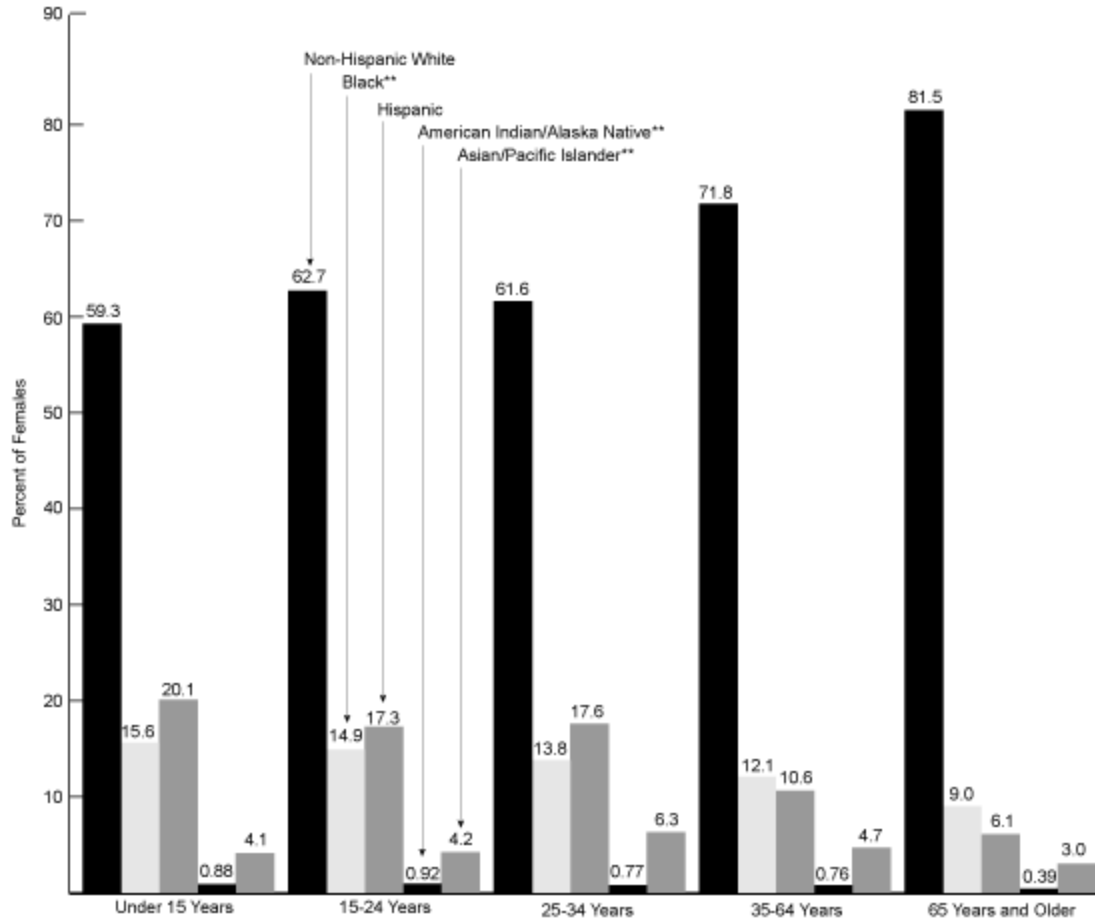
**BONUS QUESTION:** What is a claim that could use this graph as evidence to support it?

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### Example 2:

#### U.S. Female Population,\* by Age and Race/Ethnicity, 2004

Source: U.S. Census Bureau, American Community Survey



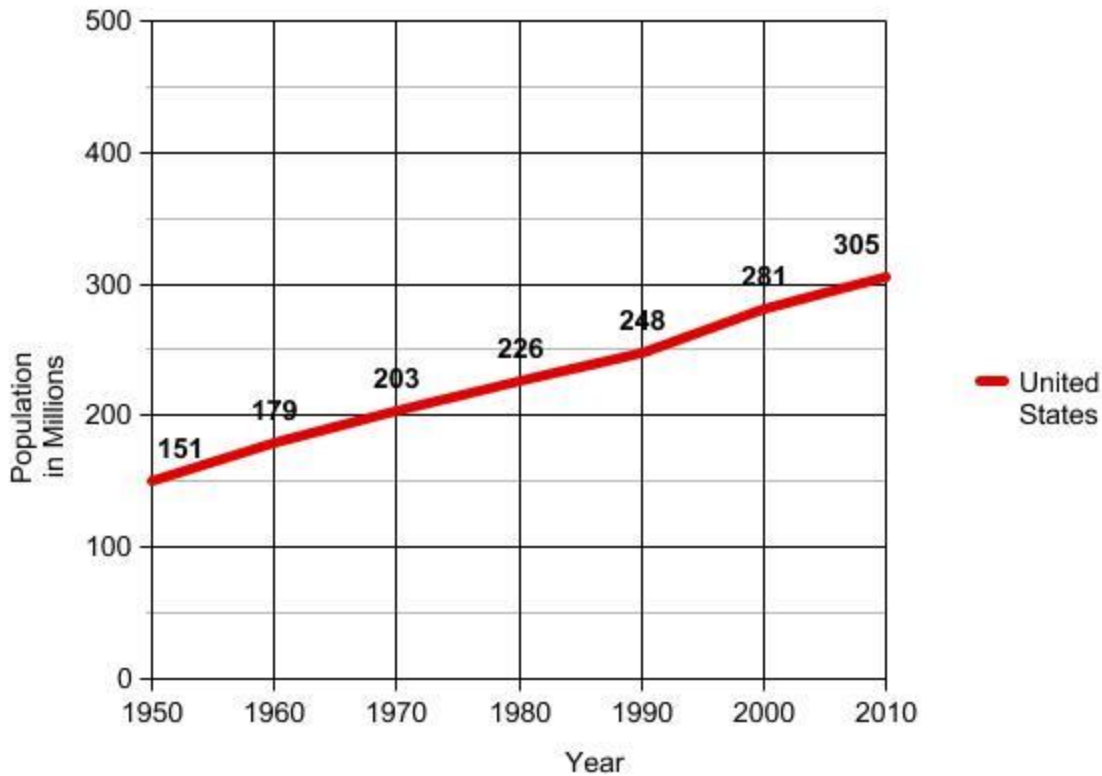
\*Includes only non-institutionalized population not living in group quarters. \*\*May include Hispanics.

- 1) What type of chart or graph is this?
- 2) In your own words, what does this graph show?
- 3) What do the numbers on the Y axis represent?
- 4) What do each of the bar colors represent? Which bar color represents more than one group?
- 5) What are three different categories of age that the graph shows?

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### Example 3:

the United States's Population Change Over Time



[http://txsdc.utsa.edu/txdata/apport/hist\\_a.php](http://txsdc.utsa.edu/txdata/apport/hist_a.php)

- 1) What type of chart or graph is this?
- 2) In your own words, what does this graph show?
- 3) What do the numbers on the y-axis represent?
- 4) What are the categories on the x-axis?
- 5) What, overall, can you tell about the nation's population by looking at this graph?

**BONUS QUESTION:** What is a claim that could use this graph as evidence to support it?



**Week Eleven: Charts and Graphs Introduction****Example 4:****Average Daily Temperature in St. Paul**

<b>Date</b>	<b>Average Daily Temperature (degrees Fahrenheit)</b>
January 1	5
January 2	8
January 3	22
January 4	21
January 5	13
January 6	3
January 7	2

Using the information in the chart above, create a line graph below.



## II. CREATE YOUR OWN GRAPH

### Directions:

- 1) First, come up with a question that you'd like to ask the class. The question should either be a yes/no question or a question that you can represent with numbers.
- 2) Write the question in the survey box below. Then, send one member of the group around to survey the other groups. He or she should record and report back with the answers.
- 3) Decide as a group if you'd like to create a pie graph, bar graph, line graph, or table. Work together to prepare a visual representation of the information that you have gathered. Use another sheet of paper to make the table/graph.
- 4) Your graph should have a title and key.
- 5) Be ready to present your graph to the class.

Question:

Total Number of People Surveyed:

Results: