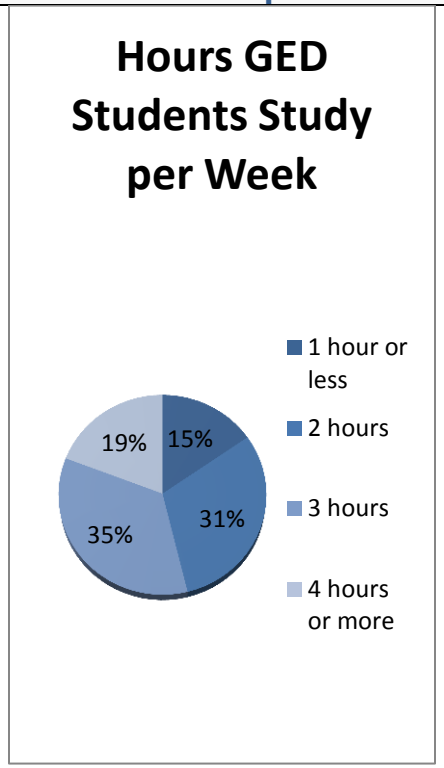
Minnesota Literacy Council — Sharing the Power of Learning

Week Eleven: Charts and Graphs Introduction

TYPES OF CHARTS AND GRAPHS

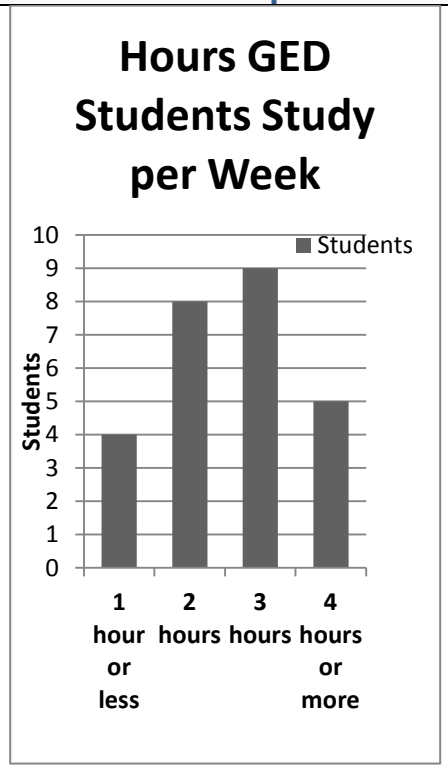
Pie Graph



26 Students Surveyed

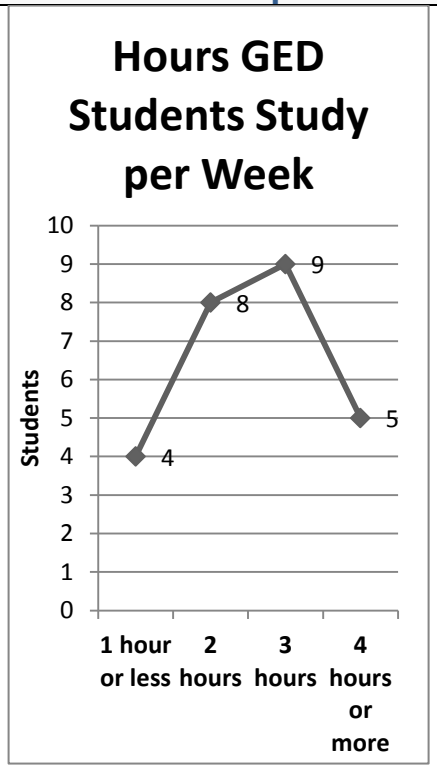
- Pie graphs show what part of a whole something is.
- Parts must add up to 100%

Bar Graph



- Bar graphs use rectangular bars to show how large each value is.
- The bars may be horizontal or vertical.

Line Graph



- A line graph uses points connected by lines to show how large in value something is.

Chart/Table

Hours GED Students Study per Week

# of Students	Hours Studied per week
4	1 hour or less
8	2 hours
9	3 hours
5	4 hours or less

- A chart orders information in rows and columns.

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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.

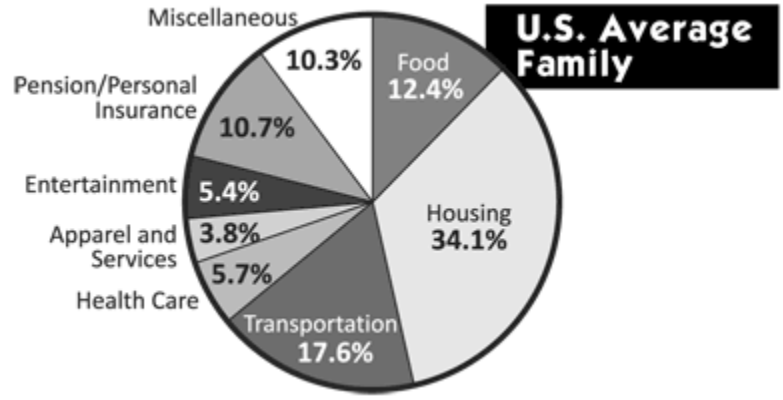
Tips excerpted from *International Center for Learner Leadership in Education*: Reading Strategies for Career Academies and Career-Technical Education

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?

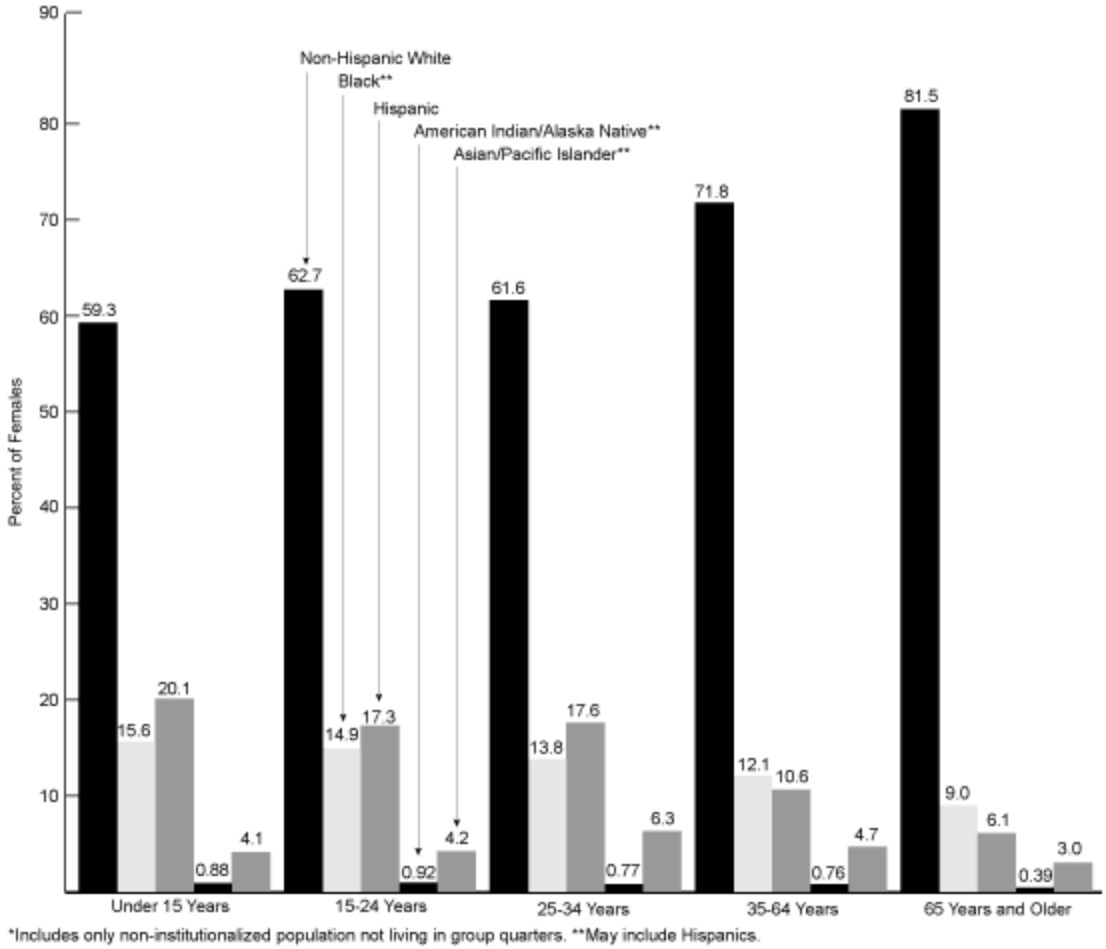
4) What is one fact that you learned from this graph?

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

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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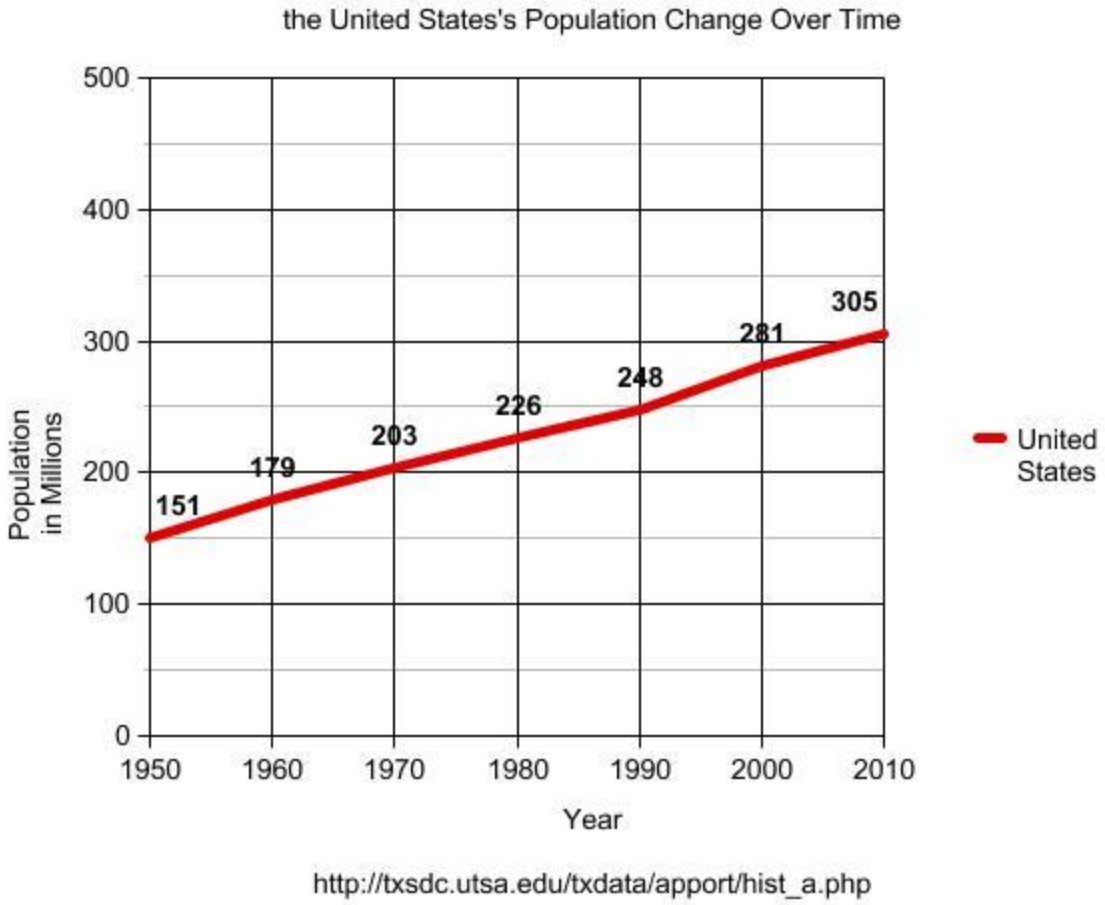
Example 3:



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?

Example 4:

Average Daily Temperature in St. Paul

Date	Average Daily Temperature (degrees Fahrenheit)
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.

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

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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: