

Math 7H - Unit 6

Day 10 - Selecting an Appropriate Display

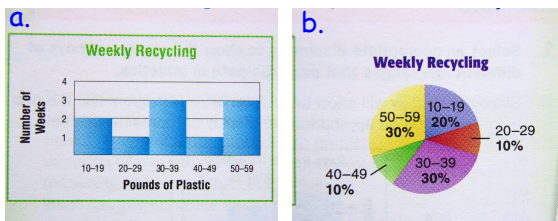
Lesson Objectives:

- I can select, organize, and construct appropriate data displays.
- I can informally assess the degree of overlap of two numerical data distributions.

There are many different types of graphs that are used to display all kinds of statistical data. List all the types of graphs you can think of.

Type of Display	Best Used For	Type of Display	Best Used For
Bar Graph	Show the number of items in specific categories	Box Plot (Box & Whisker Plot)	Show measures of variation for a set of data; useful for very large sets of data
Circle Graph (Pie Chart)	Compare part of the data to the whole; useful for percents	Double Bar Graph	Compare two sets of categorical data
Histogram	Show frequency of data divided into equal intervals	Line Graph	Show change over a period of time
Line Plot/Dot Plot	Show frequency of data with a number line	Stem-and-Leaf Plot	Show the number of items in specific number ranges

The graphs below display the total number of pounds of plastic recycled each week during a ten-week period in different ways.



- What type of graph is graph a? *histogram*
- What type of graph is graph b? *circle graph*
- Which display more easily shows the number of weeks the class collected between 30 and 39 pounds of plastic? *A*
- Which display more easily shows the percent of time that 40 to 49 pounds of plastic was recycled? *B*

Select an appropriate display for the percent of students in each grade at a middle school.

Circle graph

When deciding what type of display to use, ask yourself these three questions:

- What type of information is given?
- What do you want the display to show?
- How will the display be analyzed?

Select an appropriate display to show the number of boys of different age ranges that participate in athletics.

- What information is given? *# of boys & boys who want to play sports*
- What do you want the display to show? *# of boys in each age range*
- How will the display be analyzed? *look @ #s*
- What would be an appropriate display? *histogram*

Select an appropriate type of display to compare the percent of ethanol production by state. Justify your reasoning. Then construct the display. What can you conclude from your display?

Ethanol Production by State Per Year						
State	Iowa	Nebraska	Illinois	Minnesota	Indiana	Other
Gallons (millions)	3,534	1,665	1,135	1,102	1,074	5,098

- What information is given?
- What do you want the display to show?
- How will the display be analyzed?

Select an appropriate display for each situation. Justify your reasoning.

(a) The number of people who have different kinds of pets.

bar graph; groups values into categories

(c) The median age of members in a community band.

box plot; shows the median

(b) The percent of different ways electricity is generated.

circle graph; compares parts to a whole

(d) The number of students that favor chocolate or vanilla as a frosting.

bar graph; shows the number of items per category

Homework

Select an Appropriate Display WKS

* Individual Think Time *



What to do if you get stuck...

1. Reread the problem. Did you write it down correctly?
2. Reread your notes. Is there a problem similar that we did together in class?
3. Find a problem similar in your book. Try this one to see if it helps.
4. Skip the problem until the end of Individual Think Time. Then ask an "educated" question of a neighbor or Mrs. Call.

Today we're working by...

