

# Lesson 6: A Closer Look at Histograms – Sweet!

#### **Opening Activity**

1. The table below lists the number of grams of 12 candy bars. Use the table to complete the bar graph.

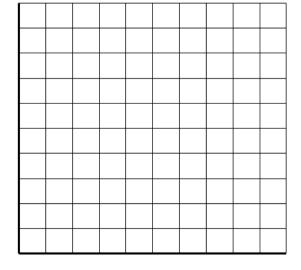


| Candy Name      | Number of<br>Grams | One Serving of Selected Candy Bars  |
|-----------------|--------------------|---|
| 3 Musketeers    | 51                 | 55  |
| Almond Joy      | 50                 | 50  |
| Butterfinger    | 45                 | 45  |
| Kit Kat         | 43                 | 0 35  |
| M&M's - Peanut  | 47                 | 40<br>40<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5   |
| Nestle Crunch   | 44                 | § 25  |
| Reese's Pieces  | 55                 | 15  |
| Skittles        | 57                 | 10  |
| Snickers        | 57                 | 5   |
| Starburst       | 59                 | at an the the at at the the the the the the   |
| Twix - Caramel  | 57                 | 3 Misterers Anord Joh Butterfinger Kitkat Peanut Crunch Pieces Shitle Shitles Shitles Statut Carmel   |
| York Peppermint | 12                 | 3 Misketers Altrond Joh Butterfinger Hittast Pearut Current Reeses Statute Stickets Statutes |
| Pattie          | 43                 | 10 <sup>th</sup> Sec.   |
| source:         |                    | One Serving of Selected Candy Bars  |

http://www.cnn.com/FOOD/resources/food.for.thought/sweets/compare.candy.bar.html]

- 2. Use the same data to create a histogram.
- 3. Why might someone be interested in how many grams are in a single serving of each candy bar?

One Serving of Selected Candy Bars



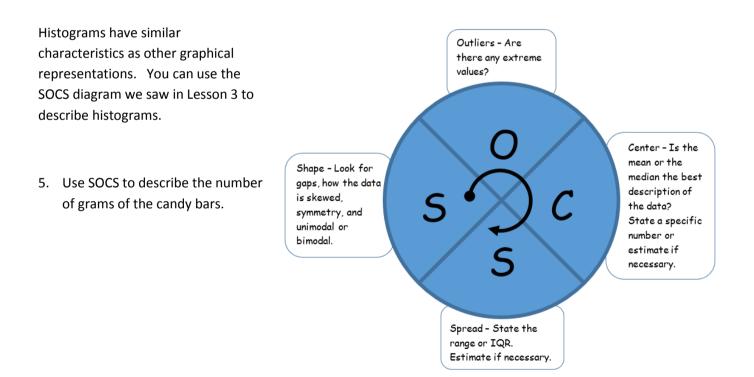
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4. What are differences and similarities in the bar graph and histogram you made in Exercise 1? List your ideas in the Venn diagram below.

Unique to Bar Graphs · Can see individual Similarities ·Data in intervals data Compare one grou to another th use ·The ·Can compare one thing to another No spaces between Categorical data Unique to Histograms





Lesson 6: Unit 1: A Closer Look at Histograms – Sweet! Measuring Distribution







6. A. For the histogram at the right, Final Scores describe the distribution using SOCS. · Left skewed 12 .Unimodal 10 Number of students No gaps
No outliers
The center is about 8 صا 6 ·Wide IQZ 4 7 2 2 0 20 30 40 50 60 70 80 90 100

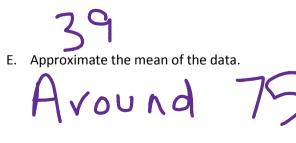
B. Can we determine the original data from the graph? Explain.



C. How many students earned less than a 60% on their final?



D. How many students took this final?





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S.71

engage



Heights of Black Cherry Trees

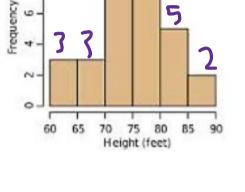
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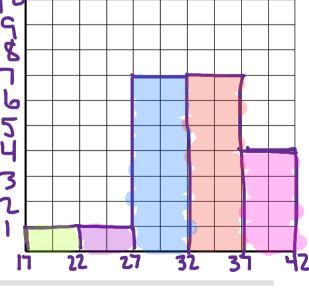
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- 7. Use the histogram at the right to answer the questions.
  - A. How many cherry trees where between 70 and 74.99 feet in height?
  - B. How many cherry trees were measured altogether?
  - C. Can we tell from this histogram what the minimum and maximum are? If yes, what are they? If not, explain.
    - 0
  - D. Without calculating, what is an approximate mean for this data?
    - prox. -
- 8. Mrs. Riederer gave her students a quiz out of 40 points. Their scores were:

| 40 |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|
| 32 | 31 | 31 | 30 | 29 | 28 | 28 | 28 | 24 | 18 |

Create a histogram of the data. Then describe the data using t SOCS.





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Quiz Scores for Mrs. Riederer's Class



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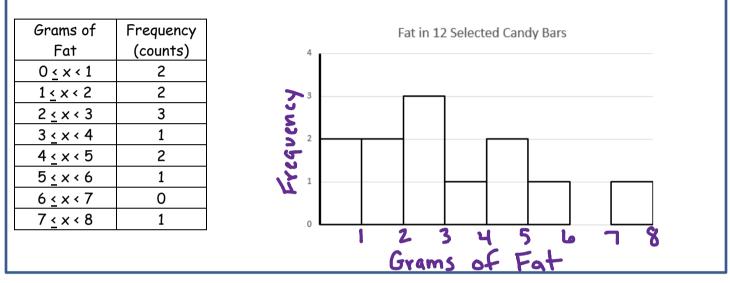


9. Write in the labels on the horizontal axis of the histogram in the summary below.

## **Lesson Summary**

## Here are the grams of fat in 12 candy bars: 1.5, 2.5, 5.5, 3, 4.5, 2.5, 7, 0, 0, 4.5, 2.5, 1.5

Intervals:

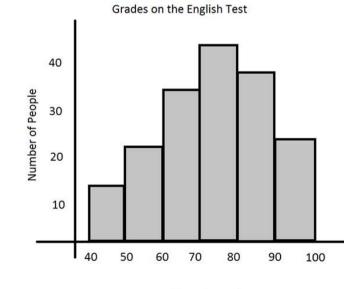


#### **Homework Problem Set**

graph?

easier to read?

1. A. Describe the distribution of the data in the histogram below.



C. What could have be done to make this histogram

B. What specific information can you get from this

Grade on the Quiz



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| Candy Name             | Number of Grams | Calories | Proteins in Grams |
|------------------------|-----------------|----------|-------------------|
| 3 Musketeers           | 51              | 212      | 1.5               |
| Almond Joy             | 50              | 232      | 2.5               |
| Butterfinger           | 45              | 216      | 5.5               |
| Kit Kat                | 43              | 220.5    | 3                 |
| M&M's - Peanut         | 47              | 242.5    | 4.5               |
| Nestle Crunch          | 44              | 229.5    | 2.5               |
| Reese's Pieces         | 55              | 258      | 7                 |
| Skittles               | 57              | 231      | 0                 |
| Snickers               | 57              | 273      | 4.5               |
| Starburst              | 59              | 233.5    | 0                 |
| Twix – Caramel         | 57              | 284.5    | 2.5               |
| York Peppermint Pattie | 43              | 149      | 1.5               |

2. Use the data on candy bars data to create two histograms - one on the number of calories and one on the grams of protein. Then describe the data in each distribution.

[source: http://www.cnn.com/FOOD/resources/food.for.thought/sweets/compare.candy.bar.html

| Number of Calories in One Serving | Number of Grams of Protein in One Serving |
|-----------------------------------|---|
| with 12 Selected Candy Bars       | with 12 Selected Candy Bars               |
| with 12 Selected Calluy Dars      | with 12 Selected Calluy Dars              |
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