

# 1.1.1 What does this representation tell me?



## Visualizing Information

In this section's activities and problems you will be introduced to several ideas and different mathematical practices that will help you get a sense of what the 6th grade course will be like. In this lesson, you will use multiple ways to visualize information and decide which ways of visualizing are better for various types of information.

1-1. BIRTHDAY BONANZA: About 18,000,000 people on Earth share your birth date (unless you were born on February 29). Do you think one of them might be in your class?

Make sure you copy the histogram in your classroom onto your notebook page. When all of the data is collected, answer the questions below.



- a) Which month has the most birthdays in your class? Which has the fewest? How can you tell by looking at the histogram?
- b) Can you tell by looking at the graph whether anyone shares the same birthday as you? Why or why not?
- c) As a class, discuss how you could find the other students in class who were born in the same month that you were. Look for an organized way to accomplish this.
- d) Ask the name and birth date for each student born in the same month as you. Did you find a "birthday twin"? If you are the only student in class born in your month, find the students born in the month just before or just after yours.

birthday, but

my class.

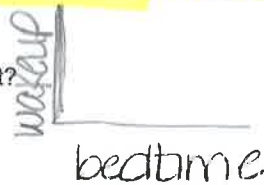
1-2. SLEEPY TIME: How much sleep do you get at night? In your notebook, write the time you usually go to bed and the time you usually get up. For example, the dot below shows that a student goes to bed at 10:00 p.m. and wakes up at 6:00 a.m.



Copy the scatterplot in your classroom onto your notebook page. When all of the data is collected, answer the questions below.



- a) What is the most common bedtime for your class members? How can you tell?
- b) Which dots represent the students who get the most sleep? The least sleep? How much sleep does each of these students get?
- c) If you were to go to bed an hour earlier, how would your sticky dot move? What if you were to get up an hour earlier?
- d) In general, how much sleep do students in your class get?



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b) 1 be no

c) 1

d) 1

1-2

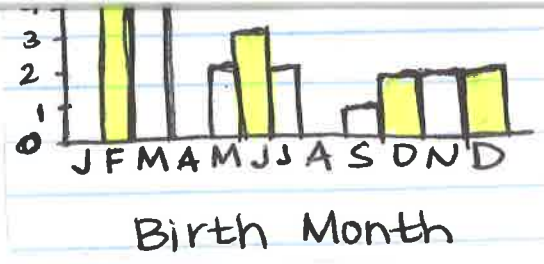
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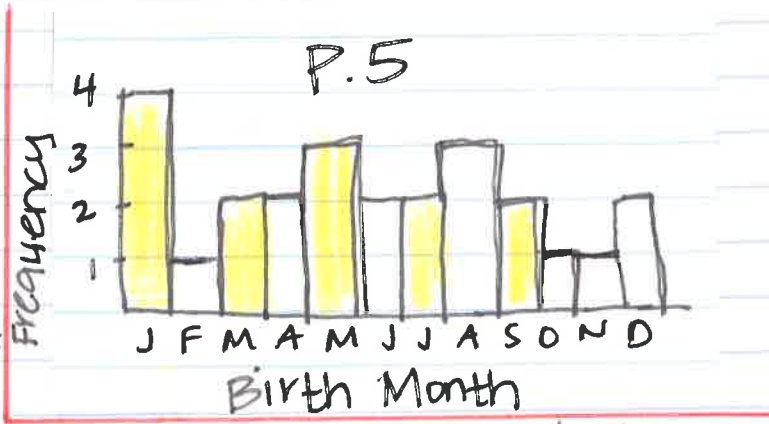
c) The line would move up to go to bed earlier and down to wake up earlier.

d) In general, students in our class get about \_\_\_\_\_ hours of sleep.



**1-1** Class Histogram :

a) In our class, \_\_\_\_\_ had the most birthdays and \_\_\_\_\_ had the least. I can tell by looking for the tallest and shortest bars.



b) NO, I can't tell if anyone shares my birthday because the histogram shows birth month, but not birth day.

c) Class discussion

d) I \_\_\_\_\_ find a birthday twin in my class.

**1-2** I usually go to bed at \_\_\_\_\_ pm and wake up at \_\_\_\_\_ am on a school day.

Class Scatterplot:

a) The most common bedtime is \_\_\_\_\_ pm.

I can tell because there are a **cluster** of dots at that time.

b) The dot that represents the most sleep is \_\_\_\_\_

\_\_\_\_\_ which is \_\_\_\_\_ hrs. The dot that represents the least sleep is \_\_\_\_\_ which is \_\_\_\_\_ hrs.

c) The dot would move left to go to bed earlier and down to wake up earlier.

d) In general, students in our class get about \_\_\_\_\_ hours of sleep.