

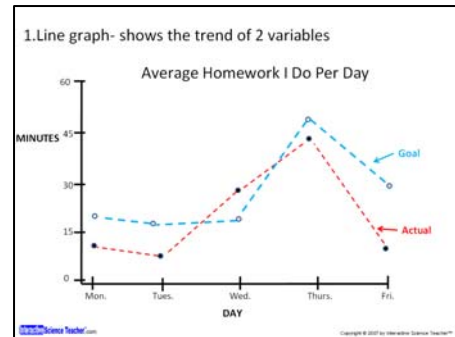
# 3 Kinds Of Graphs

Students begin this lesson with a clean sheet of notebook paper and end with the paper, and their minds, now full of information on the 3 main kinds of graphs-line, bar, and circle.

**Materials:** Colored pencils, Calculator, Ruler (straightedge), large bag of M & M's

## Procedure:

1. Each of the 3 graphs will take up half a sheet of notebook paper, or about 10 lines. If you're using the PowerPoint (see last page) have students copy down what they see.

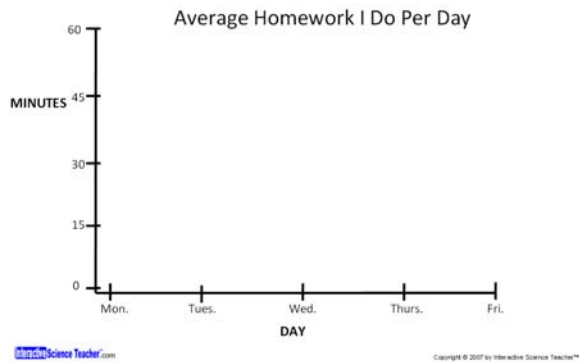


2. The first graph we'll do is the line graph. Have students copy the short definition then set up the graph as shown. We'll graph student's study habits (gulp).

On the PowerPoint the segments appear along the axis the way they do (at the ends first, then middle, and out) so students can do it free-handed and still come close to being right on.

Change the Y-axis to fit your needs. If you students need more minutes, have them do that.

1. Line graph- shows the trend of 2 variables

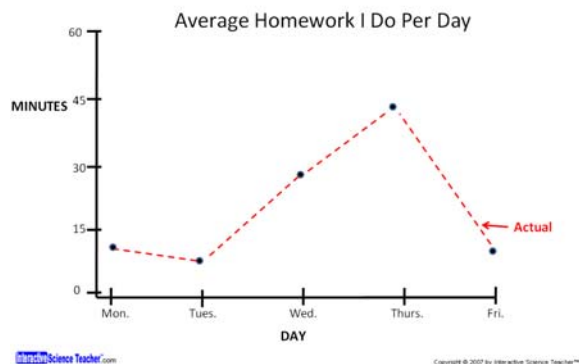


3. With the line graph set up, give students a moment to think about what their actual study habits are. What we're after here is how much they tend to study on each day of the week.

The spike you see on Thursday here represents test preparation.

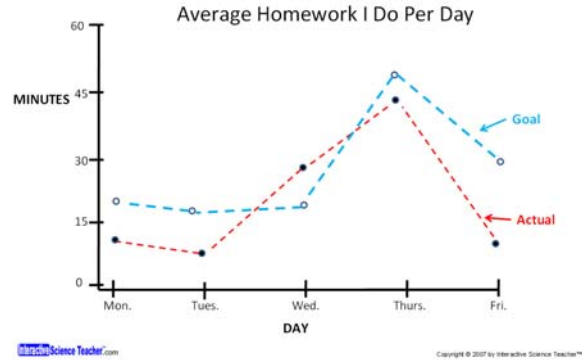
Have them connect their dots with one of the colored pencils.

1. Line graph- shows the trend of 2 variables



4. After a short pep talk about the importance of studying, have students put another set of dots representing their goal for studying. Connect those dots with a new color and label.

1. Line graph- shows the trend of 2 variables



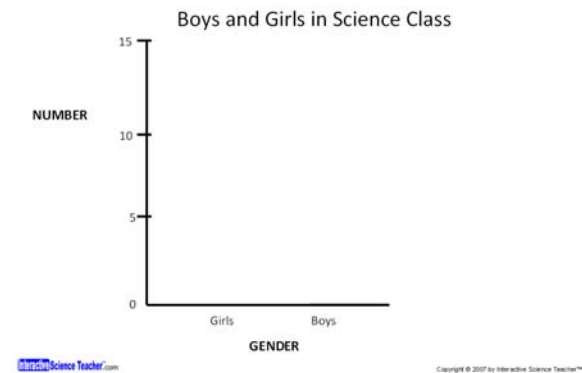
5. After setting up this graph, count the number of students in class. Adjust numbers on the Y-axis if needed.

After putting the bar on showing the number of girls you can sneak in some extra math by dividing the number of girls into the total number of students then multiply times 100. Write that percent on the top of the bar for more effect.

Do the same for the boys.

Color the bars.

2. Bar graph- compares



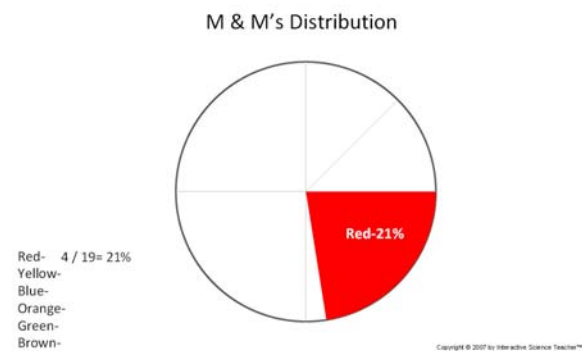
6. This graph will go on the back side.

Have students set up the graph- title, and circle (it helps if they trace around a cup).

Wash your hands and give every student one M & M. **DO NOT** give to students with chocolate or peanut allergies! Ask how many of each color there is and divide the number of each color into the total number and multiply by 100. In the example shown (which you can change on the PowerPoint) 4 of 19 were red, which is about 21 %. Make students do this math with their calculators! Color each wedge the same as the M & M color it represents.

Unless you want to use protractors, an easy way to get you in the ballpark with

3. Circle graph- shows parts of a whole

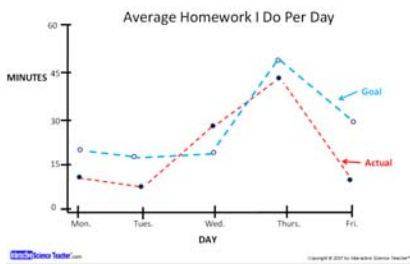


these percents is to faintly divide the whole circle into thirds or fourths, whichever gets you closer to what you need. In the example, we got pretty close to 21% by dividing the whole circle into fourths, then shaded a little less than one of those.

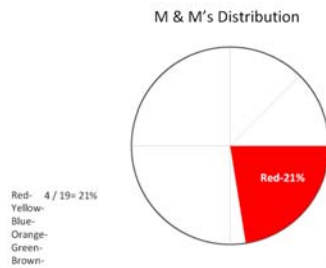
Come back and visit [InteractiveScienceTeacher.com](http://InteractiveScienceTeacher.com) to upgrade this lesson with:

**PowerPoint-** lead your students through the lesson click-by-click

1. Line graph- shows the trend of 2 variables



3. Circle graph- shows parts of a whole



2. Bar graph- compares

