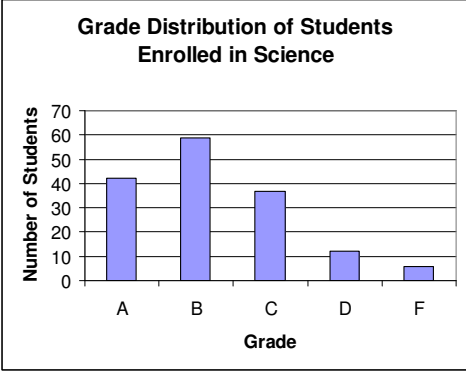
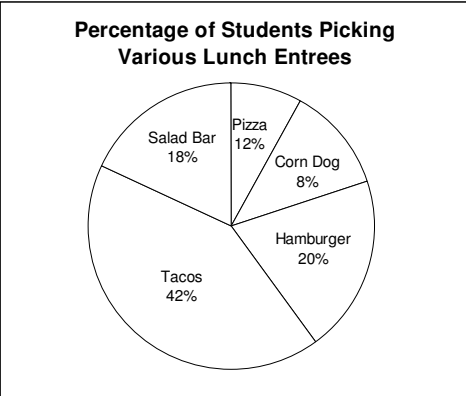
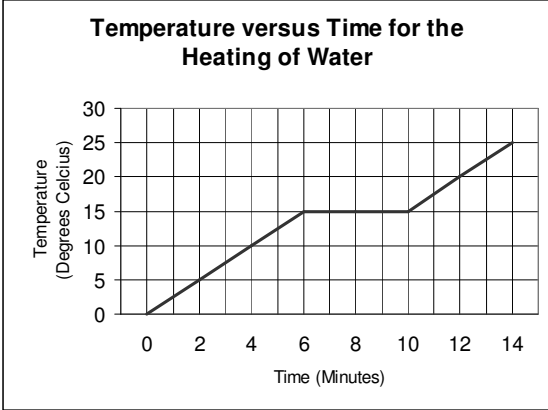


Graphing Guide

Part I: Types of Graphs

| Type of Graph | Best use for this graph | | | | | | | | | | | | |
|---|-------------------------------|-------------------------------|-------|-----|-----------|-----|-----------|-----|-------|-----|---|----|---|
| <p>Name of Graph: _____</p>  <table border="1"> <caption>Grade Distribution of Students Enrolled in Science</caption> <thead> <tr> <th>Grade</th> <th>Number of Students</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>45</td> </tr> <tr> <td>B</td> <td>60</td> </tr> <tr> <td>C</td> <td>40</td> </tr> <tr> <td>D</td> <td>15</td> </tr> <tr> <td>F</td> <td>10</td> </tr> </tbody> </table> | Grade | Number of Students | A | 45 | B | 60 | C | 40 | D | 15 | F | 10 | <ul style="list-style-type: none"> • Comparing Data from individual items or events • Cannot make a <i>scale</i> because one of the variables is not <i>continuous</i>. |
| Grade | Number of Students | | | | | | | | | | | | |
| A | 45 | | | | | | | | | | | | |
| B | 60 | | | | | | | | | | | | |
| C | 40 | | | | | | | | | | | | |
| D | 15 | | | | | | | | | | | | |
| F | 10 | | | | | | | | | | | | |
| <p>Name of Graph: _____</p>  <table border="1"> <caption>Percentage of Students Picking Various Lunch Entrees</caption> <thead> <tr> <th>Entree</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Tacos</td> <td>42%</td> </tr> <tr> <td>Hamburger</td> <td>20%</td> </tr> <tr> <td>Salad Bar</td> <td>18%</td> </tr> <tr> <td>Pizza</td> <td>12%</td> </tr> <tr> <td>Corn Dog</td> <td>8%</td> </tr> </tbody> </table> | Entree | Percentage | Tacos | 42% | Hamburger | 20% | Salad Bar | 18% | Pizza | 12% | Corn Dog | 8% | <ul style="list-style-type: none"> • When data is part of a whole • When you want to display <i>percentages</i> |
| Entree | Percentage | | | | | | | | | | | | |
| Tacos | 42% | | | | | | | | | | | | |
| Hamburger | 20% | | | | | | | | | | | | |
| Salad Bar | 18% | | | | | | | | | | | | |
| Pizza | 12% | | | | | | | | | | | | |
| Corn Dog | 8% | | | | | | | | | | | | |
| <p>Name of Graph: _____</p>  <table border="1"> <caption>Temperature versus Time for the Heating of Water</caption> <thead> <tr> <th>Time (Minutes)</th> <th>Temperature (Degrees Celsius)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>6</td> <td>15</td> </tr> <tr> <td>10</td> <td>15</td> </tr> <tr> <td>14</td> <td>25</td> </tr> </tbody> </table> | Time (Minutes) | Temperature (Degrees Celsius) | 0 | 0 | 6 | 15 | 10 | 15 | 14 | 25 | <ul style="list-style-type: none"> • Display data that change continuously • Often used to display changes over time • Used when there is a <i>cause-effect</i> relationship | | |
| Time (Minutes) | Temperature (Degrees Celsius) | | | | | | | | | | | | |
| 0 | 0 | | | | | | | | | | | | |
| 6 | 15 | | | | | | | | | | | | |
| 10 | 15 | | | | | | | | | | | | |
| 14 | 25 | | | | | | | | | | | | |

Part II: Making a Line Graph

| Amount of fertilizer (g) | Average height of plants (cm) |
|--------------------------|-------------------------------|
| 5 | 12.2 |
| 10 | 14.1 |
| 15 | 14.9 |
| 20 | 15.4 |
| 25 | 16.5 |
| 30 | 17.3 |
| 35 | 16.1 |
| 40 | 11.0 |

1. **Variables:** Using the data table, identify the independent & dependent variables.

Independent Variable: _____

Dependent Variable: _____

2. **Title** the Graph: _____

3. **Label** the Axes: The independent variable goes on the x axis. The dependent variable goes on the y axis. Don't forget the unit labels!

4. **Scale:** Chose the appropriate scale following the steps below

What is the range in the values for x? _____

How many boxes are available along the x axis? _____

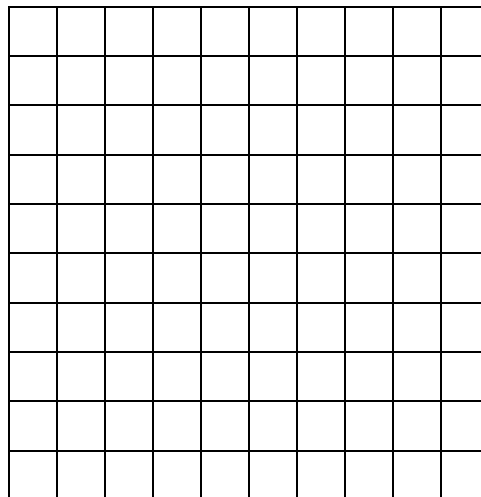
What is the scale for the x axis? _____

What is the range in the values for y? _____

How many boxes are available along the y axis? _____

What is the scale for the y axis? _____

5. **Plot:** Plot the data points on the graph below. Connect the data points with a smooth line.



6. **Conclusion:** What overall trend do you see in the data? What would you conclude about fertilizer and plants?
