Histograms

Don't trust the pictures
**Histograms**

- A frequency chart represented by bar graphs (usually)
Programming Concept

- Use an array
  - each value represents a column
  - every time you encounter an "item" that a column represents, you increase the value in the column by 1

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

0 is red candies
1 is blue candies
2 is green candies
3 is orange candies
In Code

```java
int[] candyCount = new int[4];
Candy[] candies = ...;

for(int i = 0; i < candies.length; i++)
{
    if(candies[i].isRed())
        candyCount[0]++;
    //etc
}
```
int[] randomCount = new int[10];

for(int i = 0; i < 1000; i++)
{
    int rand = (int)(Math.random()*9)+1;
    randomCount[rand]++;
}