This provocation covers these curricular content outcomes:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Relationship between decimals, fractions, and percents</th>
<th>Circle graphs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 8</td>
<td>Percents less than 1 and greater than 100 (decimal and fractional percents)</td>
<td>Rates and proportional reasoning, ratio, proportions, and percent</td>
</tr>
<tr>
<td>Grade 9</td>
<td>Probability and statistics in society (e.g., sampling techniques, misleading stats)</td>
<td></td>
</tr>
</tbody>
</table>

This provocation also gives you the opportunity to wrestle with these big ideas:

- Numeracy helps us to see patterns, communicate ideas, and solve problems.
- We can apply mathematics to inquiry questions and use it to communicate information and data.
- Data enable us to draw conclusions and make predictions in an unstable world.
3. Find a social issue, an epidemic, or a natural disaster that agitates you. Consider choosing an incident that you hope will not happen again!
You must work in a small group with 2 or 3 others who you have not worked with during this school year so far.
Because there is a threat of a reoccurrence of this incident in 2016, your responsibility is:

• to find the numerical data which describes the impact of this particular incident - ensure you triangulate your finding

• make sense of the numerical data using charts & graphs - fractions, ratios, percentages

• develop suggestions/solutions to minimize impact in the future

• THEN present that numerical data you discovered & made sense of with your suggestions/solutions to the United Nations Of V.C.S. at the end of January
Finding the Numbers

In your research, you may want to use the following prompts to decide what numbers you will use in your presentation:

- How many people were affected in total?
- Can you find data on different genders, age categories, wealth/status levels, geographical areas (cities, provinces, countries, continents)? The more different types of subcategories you can find, the more you can cross-compare between them!
- Did the number of people affected change drastically from one period of time to the next? This might be one hour of difference, or maybe even several years. Can you track the changes over time somehow?
- Try to gather as many numbers and data as possible, and decide later whether you want to use them in your final presentation. Who knows? Maybe it will be important to mention that half of the people had pets!
Refer to the Resources and Research sheet for help with the below questions. If you think you need more practice with percentages after you have finished this worksheet, refer to the same Resources and Research sheet for some potential practice or search online / borrow a textbook to find more questions on the topic.

Divide up and shade the rectangles below into an appropriate representation of the following decimals.

1. 0.3  
2. 0.27  
3. 0.08

Divide up and shade the circles below into an appropriate representation of the following fractions.

1. $\frac{67}{100}$  
2. $\frac{3}{4}$  
3. $\frac{7}{9}$

Divide up and shade the circles below into an appropriate representation of the following percentages.

1. 40%  
2. 0.5%  
3. 98%
Circle graphs are used to communicate information in statistics. A circle graph usually contains a breakdown of 2 or more percentages that all add up to make a whole 100%. Use the below times that Callie spends her 24 hour day. Write these hours as a fraction out of the 24 hour day and convert this fraction to a percentage.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>7</td>
</tr>
<tr>
<td>Eating</td>
<td>1</td>
</tr>
<tr>
<td>Online games</td>
<td>2</td>
</tr>
<tr>
<td>Reading</td>
<td>4</td>
</tr>
<tr>
<td>TV</td>
<td>2</td>
</tr>
<tr>
<td>Sleeping</td>
<td>8</td>
</tr>
</tbody>
</table>

With the percentages that you found above, create a circle graph that represents Callie's whole 24 hour day.

Use a component bar chart to show the different hair colours for the boys and girls in your own classroom. Think about how you can properly compile this information before starting this problem.