Math Learning Goals

- Read and interpret a table of concussion injuries for different high schools in a year
- Practice addition, subtraction, and cardinality by comparing the number of injuries for different sports

TN Math Standards 2nd grade
Numbers and Operations in Base Ten:
5.) Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
6.) Add up to four two-digit numbers using strategies based on place value and properties of operations.

Instruction

Ask your students how many of them play sports. There will be a wide variety of answers. After talking about the sports your students play, ask them if they know what a concussion is. They will have many different answers. After hearing what they think, it is important that the correct scientific definition is given. Definition: A concussion is a traumatic brain injury that alters the way your brain functions (Mayo Clinic). Now that you have discussed sports and concussions, talk about how when playing sports there is a chance that the students could have a concussion depending on the sports they play. Then start the activity. (This activity is good for TCAP review).

Adapted by Kelly Sturner, Virginia Parkman, and Suzanne Lenhart
Head Protector

Sports-related Concussions in High Schools

<table>
<thead>
<tr>
<th>Sports</th>
<th>Concussions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Football</td>
<td>91</td>
</tr>
<tr>
<td>Soccer</td>
<td>26</td>
</tr>
<tr>
<td>Other</td>
<td>37</td>
</tr>
<tr>
<td>Basketball</td>
<td>20</td>
</tr>
<tr>
<td>Lacrosse</td>
<td>15</td>
</tr>
<tr>
<td>Wrestling</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>?</td>
</tr>
</tbody>
</table>

1.) How many concussions are there in total?

2.) How many more concussions did football have than soccer?

3.) Does football have more concussions than all the other sports combined?

4.) If each sport is allowed to have 100 concussions each, how many more concussions are there allowed to be had for each sport?
5.) How many more concussions does football have than the second highest sport with concussions?

6.) **Challenge Question** What sport are you most likely to get a concussion? What sport are you least likely to get a concussion.
Head Protector: Answer Key

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1.) How many concussions are there in total?

200

2.) How many more concussions did football have than soccer?

91  Football has 65 more concussions than soccer.
-26
65

3.) Does football have more concussions than all the other sports combined?

No, football does not have more concussions than all the other sports combined.

4.) If each sport is allowed to have 100 concussions each, how many more concussions are there allowed to be had for each sport?

Football: 9 more concussions
Soccer: 74 more concussions
Other: 63 more concussions
Basketball: 80 more concussions
Lacrosse: 85 more concussions
Wrestling: 89 more concussions

400 more concussions in total

5.) How many more concussions does football have than the second highest sport with concussions?

91  54 more concussions.
-37
54

6.) **Challenge Question** What sport are you most likely to get a concussion? What sport are you least likely to get a concussion?

Most likely: Football
Least likely: Wrestling