Overview

In hockey, goals are the only points that count towards a win. However, there is also a system of points that makes it possible to track the success of individual players. This lesson uses player statistics for math practice.

Materials

- Video: Washington Capitals Highlight Reel
- Washington Capitals handouts: Tallying Points, Graphing Points
- Writing utensils

Essential Question

How do hockey players count points?

Standards

CCSS 2.OA.A.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

CCSS 2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.

Warm Up

1. Prepare to play your favorite classroom game that involves points. If you don’t have a favorite game, consider a simple game of basket shooting using a ball or crumpled up paper and a box or trash can. Make the game challenging or easy to suit the needs of your students and class.

2. Divide the class randomly into two teams and let everyone have at least one turn shooting. (Remind students that even professional athletes do not make every shot they take. In fact, most professional athletes miss more shots than they make.)

3. Keep score to demonstrate the concept of 1 point per goal.

Math Learning Objective: I can use data to calculate and represent total points. (~30 minutes)

Alex Ovechkin scoring his 484th goal in the NHL and breaking the record for most goals by a Russian-born player. (November 19, 2015)
Activity

1. Play a short highlight reel from the Washington Capitals (available in the digital version of this lesson or online at www.washingtoncapitals.com). Highlight reels usually feature goals and assists. Point out to students that the player scoring the goal earns a personal point and the player assisting (helping by getting the puck to the player who scores) also earns a point. (None of these personal points count towards the team score… only the goal.)

Note: The NHL awards points for assists for up to 2 players who touch the puck before the player who scores, provided a player on the other team does not touch the puck in between. You may or may not choose to go into this detail with your students.

Note: The NHL also awards trophies related to goals and assists. The Art Ross Trophy is for the player with the most total points, and the Rocket Richard Trophy is for the player with the most goals at the end of a regular season.

2. Talk with students about how important it is for people on teams to help each other. That is why assists also earn points. Have students think about ways they help each other in the classroom and think about how they are assisting their classmates.

3. Distribute the handout Tallying Points and lead a discussion about the information on the handout.

4. Read the tasks on the page aloud; ask for and answer questions.

5. Give the students enough time to complete the activities on the handout. Circulate throughout the room while students are completing the assignment to offer support.

6. Distribute the handout Graphing Points and remind students that the graph should show two categories for each player: goals and assists. If needed, show them how to create two bars, one for each statistic, for each player.

7. Ask for and answer questions.

8. Give the students enough time to complete the activities on the handout. Circulate throughout the room while students are completing the assignment to offer support.

Assessment

1. Check the completed handouts: Tallying Points and Graphing Points.

Differentiation

Support

• Provide a partially completed graph; complete the graphing for one player before distributing the handout

• Have students complete the handout in pairs or small groups or do it as a whole class using think aloud and counting support

Challenge

• Ask students which player they would most want to play with and why, based on the stats and what they indicate (no right answer)

Extensions

• Institute a system in your classroom where students can earn points by scoring (achieving a particular goal) or assisting (helping another student succeed); have students track their own classroom points

• Have students look at the NHL rulebook to learn more about the game (www.nhl.com/nhl/en/v3/ext/rules/2015-2016-Interactive-rulebook.pdf)
After the first 18 games of the season, here are the stats for several Caps players. Look at the chart and complete the math problems.

<table>
<thead>
<tr>
<th>Jersey Number</th>
<th>Player Name</th>
<th>GP Games Played</th>
<th>G Goals</th>
<th>A Assists</th>
<th>P Total Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Alex Ovechkin</td>
<td>17</td>
<td>9</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>19</td>
<td>Nicklas Backstrom</td>
<td>15</td>
<td>7</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>74</td>
<td>John Carlson</td>
<td>18</td>
<td>3</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

Math Challenges

1. Which player has more goals than assists?  ________________________________

2. Which players have the same number of games played and total points?  
   _______________________________________________________________________

3. How many goals have Ovechkin, Backstrom, and Carlson scored, all together?  
   Write and solve the equation: _____ + _____ + _____ = ____________

4. Do Ovechkin, Backstrom, and Carlson have goals or assists, all together?  
   Goals: __________     Assists: _____ + _____ + _____ = ____________

5. Figure out Backstrom’s and Carlson’s total points and write the total numbers in the chart above. Hint: add goals and assists to find total points.
Create a bar graph that shows the **goals** and **assists** for each player on the graph: Ovechkin, Backstrom, and Carlson.