What’s My Speed Activity

Learning Objectives:
1. Students will learn to calculate the average in speed.
2. Students will use unit measure conversions to convert speed from feet/second to miles per hour.

Type of Teacher Tool: Whole Class Activity
Targeted Grade Level(s): 9-12
Targeted Curriculum Areas: Math, Science, STEM

Videos/Resources/Materials Needed:
1. Physics 8: The Science Behind Bowling
2. Physics 15: Finding the Average Velocity
3. Tape Measure
4. Flat space for at least 20 feet.
5. Something to mark the 20 ft mark
6. Stopwatch
7. Student Tool 54: What’s My Speed Worksheet

Teacher Instructions:
1. Measure out 20 feet and clearly mark the finish line.
2. Have student(s) run from starting position to finish
3. Have a second student record the time in seconds that it took the first student to make it to the finish.
4. Repeat steps 1 – 3 three times, for every student, and give each student their 3 recorded times.
5. Instruct students to calculate their average time in ft/sec.
6. Students should then use proper conversions, to calculate their time in miles per hour using 5280 feet for a mile.
7. Students can use the worksheet provided on the next page of this document to record their findings. The worksheet is also available as a separate document (Student Tool 51: What’s My Speed Worksheet) on the same Educate.Today webpage where the videos listed above are located.

Assessment/Evaluation Option:
1. Students should record all work on accompanying worksheet to be handed in.
**Student Tool 54: What’s My Speed Worksheet**

**Student Name______________________________________**

**Instructions:**
1. Use the form below to record your results and calculations as your teacher guides you through the activity.

<table>
<thead>
<tr>
<th>Speed 1</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speed 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>$S_1 + S_2 + S_3 = \frac{}{3} = \text{ft/sec}$</td>
<td></td>
</tr>
<tr>
<td>Convert feet to miles</td>
<td>$1 \text{ mile} = 5280 \text{ ft}$</td>
<td>$\text{miles}$</td>
</tr>
<tr>
<td>Convert seconds to minutes</td>
<td>$\frac{\text{seconds}}{60}$</td>
<td>$\text{hours}$</td>
</tr>
</tbody>
</table>

Convert minutes to hours

$\frac{\text{minutes}}{60}$

ft/sec

miles

hour