Can you Crack the Code?

Standards:
- Distinguish between and identify ratios, rates and unit rates
- Attend to precision
- Work cooperatively with others

Task: There are two lists one is a list of RATIOS and the other is a list of NON-RATIOS. Your task is to create a list of characteristics that make up a RATIO and then construct a RATIO that you see in real life. How would you attend to precision? What cooperation skills are needed?

### Ratios

- 3:5, 3 to 5, 3/5
- 9/2, 9:2, 9 to 2
- 12 to 13, 12/13 or 12:13
- 5.2:3.6, 5.2/3.6 or 5.2 to 3.6
- 3:5:7

In game 4 of the 2013 Stanley Cup finals the Hawks scored 6 goals and the Bruins scored 5. The ratio of Hawks goals to Bruins goals could be written 6/5.

After game 4 the series was tied 2-2. The ratio of Hawk wins to Bruins wins could be written 2:2, or simplified to 1:1.

The ratio 24:16 can be simplified to 3:2

There are 75 students on the Bulls and 100 students on the Cubs. The ratio of Cubs to Bulls is 100 to 75, or 4 to 3. Which means for every four Cubs students there are three Bulls students.

In the name Kupsco the ratio of vowels to consonants is 2:4 or 1:2. Which means for every vowel there are two consonants.

### Non-Ratios

- 3$/5 cookies, $3:5 cookies, $3 to 5 cookies
- 25 miles: 1 hour
- 5 boys/2 girls, 5 boys: 2 girls, 5 boys to 2 girls
- 2 1/2

In game 4 of the 2013 Stanley Cup finals the Hawks scored 6 goals and the Bruins scored 5. The ratio of Hawks goals to Bruins goals could be written 5/6.

After game 4 the series was tied 2-2. The ratio of Hawk wins to games could be written 2:5.

The ratio 18:24 cannot be simplified.

There are 75 students on the Bulls and 100 students on the Cubs. The ratio of Cubs to Bulls is 37:92.

Out of the 9 periods two of them are language arts. There is no ratio.

In the name Kupsco the ratio of vowels to consonants is 4:2 which cannot be simplified and there is no meaning.
Can you Crack the Code?

Task: There are two lists one is a list of RATES and the other is a list of NON-RATES. Your task is for you to create a list of characteristics that make up a RATE and then construct a RATE that you see in real life. How would you attend to precision?

Rates:
- 3$/5 cookies, $3:5 cookies, $3 to 5 cookies
- 25 miles: 1 hour
- 5 boys/2 girls, 5 boys: 2 girls, 5 boys to 2 girls
- In 2012 the average global birth rate was 19.15 births per 1,000 total population
- Before skydiving Mrs. Miller’s heart rate was 90 beats per 1 minute

Non-Rates
- 3:5, 3/5, 3 to 5
- 25 miles: 1
- 5/2 = 2½
- In 2012 the average global birth rate was 19.15
- Before skydiving Mrs. Miller’s heart rate was 90 beats
- In game 4 of the 2013 Stanley Cup finals the Hawks scored 6 goals and the Bruins scored 5. The ratio of Hawks goals to Bruins goals could be written 6/5.
<table>
<thead>
<tr>
<th>Criteria</th>
<th>+</th>
<th>◀</th>
<th>△</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratio Characteristic List</td>
<td>Has at least 4 valid characteristics and no extraneous characteristics</td>
<td>Has 3 valid characteristics or has some extraneous characteristics</td>
<td>Has 2 or less valid characteristics and several extraneous characteristics</td>
</tr>
<tr>
<td>Ratio</td>
<td>The ratio constructed is an actual ratio and relates to real life</td>
<td>The ratio constructed is an actual ratio but does not relate to real life</td>
<td>The ratio constructed is not an actual ratio. It may or may not deal with real life</td>
</tr>
<tr>
<td>Rate Characteristic List</td>
<td>Has at least 4 valid characteristics and no extraneous characteristics</td>
<td>Has 3 valid characteristics or has some extraneous characteristics</td>
<td>Has 2 or less valid characteristics and several extraneous characteristics</td>
</tr>
<tr>
<td>Rate</td>
<td>The rate constructed is an actual rate and relates to real life</td>
<td>The rate constructed is an actual rate but does not relate to real life</td>
<td>The rate constructed is not an actual rate. It may or may not deal with real life</td>
</tr>
<tr>
<td>Attend to Precision</td>
<td>Class will determine descriptors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Cooperatively with Others</td>
<td>Class will determine descriptors</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>