The American Heart Association recognizes the importance of building healthy bodies and minds. This STEM activity is an introduction to science and math concepts particularly in the areas of Physics.

**Objective:**
Students will be introduced to the concept of circular motion, which is a term used to describe revolutions and rotations. Students will conduct experiments using different length jump ropes, and attempt to identify which length jump rope is ideal.

**Materials Needed:**
- Jump rope
- Pencil
- Stopwatch

**Discussion questions:**
- Have you ever wondered how you could jump rope faster? The world record for the greatest number of jumps in one minute is 332, by Beci Dale! That’s more than six jumps a second! How close do you think you can get to that number? What are some of the factors that will help you jump faster? One is the length of the jump rope!
- What does something in motion look like?
- How does the length of a jump rope affect how many jumps a person can make in a minute?
- What turns faster, a shorter or longer jump rope?
- What would you do to improve your speed?
Jump Rope Lengths

Match the photos of which rope would work best for each person.

Student Name: ____________________________  Teacher: ____________________  Date: ____________

5’8  4’10  5’2
Jump Rope Lengths

<table>
<thead>
<tr>
<th>Rope Length</th>
<th>Jumps in One Minute</th>
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</thead>
<tbody>
<tr>
<td>Short</td>
<td></td>
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<tr>
<td>Medium</td>
<td></td>
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<tr>
<td>Long</td>
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Post Activity Group Activity:

- How many successful jumps did you do in one minute using the shortest jump-rope length?
- How many successful jumps did you do a minute using the medium length? Was it greater or less than the number of jumps you made using the shortest rope length?
- How many successful jumps did you do per minute using the longest rope length? Was it greater than or less than the number of jumps you made using the shortest and medium lengths?
- Was the same jump rope length the “best” one for both of you or did each person do better with different lengths? Was the same rope length the “worst” one for both of you?