

Which Football Warm-Up Activity Will Increase Heart Rate the Most?



Introduction

This activity has children doing a series of football match warm-ups to find out which type of exercise increases heart rate the most.

Health and Safety

Ensure that children have enough space to safely do the exercises. A hall or outdoor space would be good.

Method

The PowerPoint has an explanation about how to check heart rates.

The PowerPoint suggests counting the pulses for one minute. The traditional method is to count for 15 seconds and then multiply it by four so you may wish to use this method for more able pupils.

1. Children measure their resting heart rate and write it in the table. More able children are given the chance to record their results in a method of their choosing.
2. Children choose how long to perform each exercise for, remembering to use the same length of time for each exercise in order to make sure it is a fair test. One or two minutes would be a suitable length.
3. Children perform the first exercise.
4. Afterwards, they measure their heart rates and record it.
5. Children allow their heart to return to its resting rate.
6. Repeat steps 3, 4 and 5 for the other exercises.

Some children may require extra support in finding their pulse.

Scientific Information

The heart pumps blood around the body to provide it with oxygen and nutrients. When the heart beats, it fills with blood and then contracts to pump it through the body. During exercise, muscles require more oxygen and nutrients so the heart pumps faster to pump more blood, rich in nutrients and oxygen, to them. An average resting pulse for a Key Stage 2 child is around 60 to 110 beats per minute.

Ways to Extend Learning

Children could investigate whether there is a link between individual heart rates and how much they increase during exercise. They could explore whether they have a maximum heart rate. Another investigation could be whether room/outdoor temperature affects heart rate during exercise. The fitter a person is, the lower their resting heart rate is – children could investigate why this is.

Equipment Needed

- Stopwatch
- Space to do exercises