

## The Rate of My Beat Activity

### Purpose:

The purpose of this activity is to use student's heartbeats to figure the individual's resting heart rate.

### Materials:

- Clock with a visible second hand
- Scratch paper for figuring the heart rate

### Background:

The resting heart rate is the heartbeats per minute while resting or relaxing, with no voluntary body activity taking place. The resting heart rate is used to determine the health and strength of the heart. The resting heart rate is used to determine the maximum heart rate, which are the most beats per minute that a heart produces without any heart damage. The **maximum** heart rate (beats per minute) for a healthy individual is determined by the individual's age and resting heart rate, usually about 220 minus age. For example, a 20 year old will have a **maximum** heart rate of about  $220 - 20 = 200$ . During exercise, the heart rate will increase to about 70% of the maximum (about 140 for a 20 year old).

### Procedure:

1. Divide the students into pairs. One student counts his/her heartbeats while the other watches the second hand on the clock.
2. At the end of 6 seconds, the student multiplies the number of counted heartbeats times 10. (6 seconds times 10 is 60 seconds or one minute.) The product is the individual's resting heart rate.

### Extensions:

1. Graph the resting heart rates of the class.
2. Figure the mean, medium, mode and range of the resting heart rates.
3. Experiment to see if the resting heart rate is affected by sitting, standing, walking, running, talking, writing, eating, etc.
4. Stethoscopes can be used instead of feeling the pulse when counting heartbeats.