

Let's Get Physical

1. Answers will vary, but students should conclude that value is demonstrated by an increased involvement in physical activities.
2. Answers will vary.
3. Answers will vary but may include the following: Physical activity can help tone muscles, burn extra calories, build healthy bones, and help control your appetite. People who are physically active tend to have more energy, are better able to deal with stress, and have a better body image. Physical activity can help lower the risk of heart disease.
4. Answers will vary.
5. Answers will vary, but may include riding a bicycle, swimming, playing sports, or running.

Pumping Up the Stress

1. Your heart rate is slowest when sitting or resting. It will be fastest during high levels of physical activity.
2. Yes. As you increase your level of physical activity, the body needs more oxygen, so the heart must pump faster to bring that oxygen to the cells that need it.
3. Your heart rate will increase as the physical activity begins, but it will reach a plateau. It will continue beating at the faster rate to supply oxygen to the body; however, your heart rate will not continue to climb.
4. Answers will vary.
5. Aerobic activity helps to keep our heart and body healthy. It literally pumps energy around the body. As the pulse rate rises, an increase in blood and oxygen is supplied to muscles and vital organs. Endorphin levels rise, helping to calm the mind. Metabolism increases as well. Aerobic activity conditions the heart and skeletal muscles, making us more efficient at using energy.

Stress This

1. The number of clicks should increase throughout the 2-week period.
2. Answers will vary.
3. The activity explains that muscle endurance and strength are increased by frequently requiring muscles to perform the same task. The muscles become better at completing the task and can perform the task for longer periods of time without becoming tired or weak.
4. Answers will vary. Differences may be seen most among groups that are involved in physical activities that require the use of their hands.

As We Are "Jointed" Together

1. The farther from the joint that the muscle is attached, the smaller the amount of bone movement; however, the closer the muscle is attached to the joint, the greater the effort needed to move the bone.
2. Answers will vary, but students should understand that muscle placement balances the movement of the bone with the effort of the muscle, so large amounts of movement can occur with a relatively small amount of contraction.
3. A ball and socket joint gives the greatest range of motion.
4. A hinge joint provides strength and stability but only allows movement in one swinging direction.
5. A ball and socket joint gives the user more flexibility, allowing movement in several directions, but does not provide stability. If your knees, for example, were ball and socket joints, your lower legs would move all around but would not be stable enough to hold up your body.
6. Joints provide a way for the bones to move in different directions so that activities like riding a bicycle or throwing a ball are possible.