

Fitness

Objectives:

Through participation in physical education, students will be given the opportunity to develop an understanding of the following:

1. The importance of exercise, activity and becoming physically fit.
2. Target the heart rate zone and the importance of exercising in the zone.
3. Exercise principles such as FITT, overload, progression, specificity and lifelong physical activities.
4. The purpose of a proper warm-up and cool down in an exercise program.
5. Health related fitness including cardiovascular endurance, muscular endurance, flexibility and muscular strength.
6. Healthy lifestyle choices relating to nutrition, stress and relaxation.

Fitness

Components of Physical Fitness

Health- Related Physical Fitness

Cardiovascular Fitness: The ability of the heart, the blood vessels, and the respiratory system to deliver oxygen efficiently over an extended period of time. At least 60 minutes of moderate to vigorous aerobic activity should be accumulated daily.

Body Composition: Body composition is the proportion of body fat to lean body mass.

Flexibility: The range of movement through which a joint or sequence of joints can move. Inactive individuals lose flexibility, whereas frequent movement helps retain the range of movement. Through stretching activities, the length of muscles, tendons, and ligaments is increased.

Muscular Strength: The ability of muscles to exert force; it is an important fitness component that facilitates learning motor skills.

Muscular Endurance: the ability to exert force over an extended period. Endurance postpones the onset of fatigue so that activities can be performed for lengthy periods.

Skill Related Physical Fitness

Agility: Agility is the ability of the body to change position rapidly and accurately while moving. Wrestling and football are examples of sports that require agility.

Balance: Balance refers to the body's ability to maintain a state of equilibrium while remaining stationary or moving. Maintaining balance is essential to all sports but is especially important in the performance of gymnastic activities.

Coordination: Coordination is the ability of the body to smoothly and successfully perform more than one motor task at the same time. Needed for football, baseball, tennis, soccer, and other sports that require hand-eye and foot-eye skills, coordination can be developed by repeatedly practicing the skill to be learned.

Power: Power is the ability to transfer energy explosively into force. To develop power, a person must practice activities that are required to improve strength but at a faster rate involving sudden bursts of energy. Skills requiring power include high- jumping, long jumping. Shot putting, throwing, and kicking.

Speed: Speed is the ability of the body to perform movement in a short period of time. Usually associated with running forward, speed is essential for the successful performance of most sports and general locomotor movement skills.

Reaction Time: the amount of time needed to recognize a stimuli and respond accordingly.

Fitness

Physical Fitness Testing and F.I.T.T. Principle

Physical fitness Tests

<u>Test Item</u>	<u>Test Evaluation</u>
1. Curl Up	Abdominal strength, Muscular Endurance
2. Mile Run	Cardio respiratory endurance, Aerobic capacity
3. Push- up	Upper body strength, Muscular endurance
4. Shoulder Stretch	Joint Flexibility
5. Body Mass Index	Body Composition
6. Trunk Extension	Lower back Flexibility
7. Sit and Reach	Lower Back Flexibility, Upper Leg Flexibility

F.I.T.T. Principle

Frequency: How often a person performs the targeted health- related physical activity. For each component of health- related fitness, a safe frequency is three to five times a week.

Intensity: How hard a person exercises during a physical activity period. Intensity can be measured in different ways, depending on the health-related component. For example monitoring heart rate is one way to gauge intensity during aerobic endurance activities, but gives no indication of intensity during flexibility activities.

Time: The length of a physical activity. Time varies depending on the health- related fitness component targeted.

Type: Type of specificity, refers to the specific physical activity chosen to improve a component of health- related fitness.

Fitness

Fitness and Exercise

Why be physically fit?

Regular exercise can help you feel good, reduce stress, and work more productively. Physical fitness also helps students achieve greater success in academics. Activity increases the amount of oxygen in the brain and can help a person keep alert when learning new information. By being physically fit risk for disease is minimized, emergencies can be met, and life may be lived to the fullest.

Many physical benefits occur as a result of being physically fit. For instance, there is an increase in the efficiency of the heart and lungs, muscle strength and endurance, as well as an increase in bone strength. Regular exercise can also reduce blood pressure and risk of cardiovascular disease. Looking and feeling better by losing excess body fat and improving appearance may result from exercise, which may also improve your self-image.

Preparing for Exercise

A good safe exercise program includes three stages: warm-up, workout, and cool down. The **warm-up** helps reduce muscle injury because warm-up and stretches increase muscle length and flexibility. Your heart is also a muscle and a warm-up helps it get ready for more vigorous exercise. A warm-up should last between one and three minutes. The goal is to gradually increase your heart rate.

The **workout** is the vigorous part of your exercise program. A fitness program should include an aerobic component. An **aerobic activity** is a steady exercise in which the heart rate is elevated for an extended period of time, allowing the heart to supply the muscles with all needed oxygen. Examples of aerobic exercise include jogging, cycling, walking and swimming. Activities performed in short, fast bursts are **anaerobic** because the heart cannot supply blood and oxygen to muscles as quickly as necessary. The 100 yard dash, basketball and handball are examples of anaerobic exercises. Anaerobic activities may be included in a workout program along with aerobic exercise.

Your body needs to gradually **cool down** to recover from vigorous exercise. There must be a heart cool down and a muscle cool down and stretch. To relieve muscle cramps or soreness, stretch the muscles slowly (no bounce).

Your heart and blood vessels recover more efficiently if you move rather than sit or lie down after exercising. This cool down also helps keep you from becoming dizzy or even fainting. After the exercise, be sure to walk and not collapse in order to give your body the proper opportunity to cool down. Set aside a regular time to exercise. It takes between three and six weeks for a person who is exercising regularly (3 to 5 times per week for at least 20 minutes each time) to accomplish some specific fitness goal

Exercise Specifics

Name: _____ Period: _____

Use the following information from the reading selection to answer the following questions.

1. What has been determined to have a detrimental effect on your health? _____
2. Physicians have asserted that _____ minutes of good cardiovascular exercise a minimum of _____ times per week is essential to good health.
3. Good cardiovascular exercise depends on _____
4. For general activities, a target heart rate zone of _____ to _____ of maximum heart rate has a positive effect on the cardiorespiratory system.

Calculate your target heart rate zone

$$220 - \text{_____ (age)} = \text{_____ (max HR)}$$

$$\text{_____ (max HR)} \times .70 = \text{_____}$$

$$\text{_____ (max HR)} \times .85 = \text{_____}$$

Calculating your daily caloric requirements:

1. (Body weight) _____ divided by 2.2 equals (Wt. in kilograms) _____
2. (Wt. in kilograms) _____ X 24 equals _____ (daily calories needed)
3. Activity factor: multiply daily calories needed by one of the following:
Light activity: 1.3 Moderate activity: 1.4 Heavy Activity: 1.5
(Daily calories) _____ X _____ (activity factor) equals _____ (total daily calorie requirements)