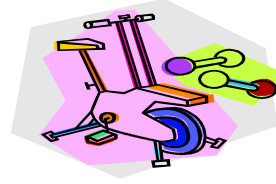


Freshmen Final Exam Project



Create a fitness activity circuit with a minimum of **10 stations** that includes one station for each of the skill and health components listed below. You will be given your fitness test scores for you to improve on. You can use them to develop your fitness goal.

Health Components

Cardiovascular Fitness (Endurance)
Muscular Endurance
Muscular Strength
Flexibility
Body Composition

Skill Components

Agility
Balance
Power
Coordination
Reaction Time

** Heart Rate: Target Heart Rate, Minimum Heart Rate, Maximum Heart Rate and Resting Heart Rate

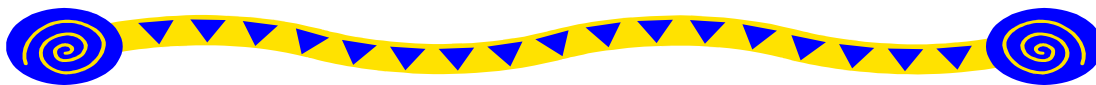
** Heart Rate is not a health component, but is an essential part of the process and **MUST** be included either in the stations or as a station by itself.

Logistics: For each of the stations, please include the following:

- Label and define the component
- One exercise that works the component
- Diagram including pictures, explanation and detailed description of the exercise and how it is to be performed.
- Fitness goal: What are you trying to accomplish at that station? **BE SPECIFIC!**

Helpful Hints: Consider the following helpful hints when planning the overall project

- Use the F.T.T.T Principle (Frequency, Intensity, Time and Type) as a guide to make sure that each station has a well rounded fitness goal.
- Be creative and think “outside the box.” Develop fun and original exercises.
- The internet can be a valuable resource.
- Save all your information on disk and on your school file!
- Keep track of the web links for all pictures, diagrams and text that you use from the internet for your work cited page.



Helpful Links:

Target Heart Rate Calculator:

<http://health.msn.com/encyclopedia/healthtopics/articlepage.aspx?cp-documentid=100106068>

http://exercise.about.com/cs/fitnesstools/l/bl_THR.htm

F.I.T.T Principle:

http://www.healthgoods.com/Education/Fitness_Information/Fitness_Short_Course/fitt_principle.htm

<http://www.thestretchinghandbook.com/archives/fitt-principle.htm>

http://www.workoutsforyou.com/article_fitt.htm

<http://www.sport-fitness-advisor.com/fitt-principle.html>

Fitness and Training Principles

<http://www.cdc.gov/nccdphp/dnpa/physical/measuring/index.htm>

<http://www1.wfubmc.edu/heart/Being+Heart+Healthy/Exercise/Beginning+to+Exercise/index.htm>

<http://www.cooperaerobics.com/tips.htm>

<http://www.ivillage.com/topics/fitness/>

Fitness and Training Activities

<http://www.ksbodyshop.com/spst.html>

http://www.medicinenet.com/exercise_and_fitness/article.htm

<http://www.sparkpeople.com/resource/fitness.asp>

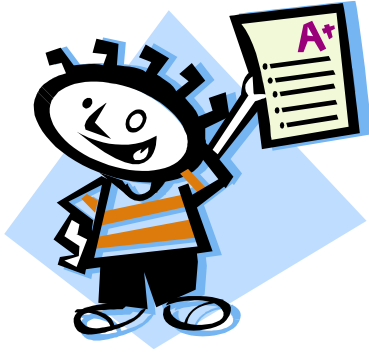
General Health and Fitness

<http://www.primusweb.com/fitnesspartner/>

<http://www.uihealthcare.com/topics/exercisefitness/catexer.html>

<http://www.personalhealthzone.com/fitsports.html>

<http://www.ask.com/?o=312#subject:ask|pg:1>



Grading Procedures: Rubric

Cover Page (includes: Picture, title, name, class and period)	/ 10 pts
Well rounded fitness goal using the F.I.T.T. Principle (Goal is stated, why you chose this, how to accomplish it, in paragraph form, 4-5 complete sentences)	/ 15 pts
10 different stations labeled with the correct definition	/ 20pts
Proper exercise to demonstrate the component	/ 20pts
Diagram and description of exercise	/ 10pts
Creative and original exercises	/ 10pts
Neat, organized and appropriate use of language and content	/ 10pts
Work Cited Page	/ 5pts
Total:	/ 100pts

Freshmen Physical Education Final Exam Review



Benefits of Exercise

1. Lowers resting heart rate
2. Releases daily stress
3. Reduces risk of heart disease
4. Improves circulation and respiration
5. Maintains healthy weight

Cardiovascular Endurance

Cardiovascular Endurance is the ability to perform prolonged, large-muscle, dynamic exercise at moderate to high levels of intensity. Examples of cardiovascular activities include walking, jogging, cycling, swimming and aerobics.

Major organs in the body that are directly affected by cardiovascular exercise include the heart and lungs.

Heart Rate and Exercise

Target Heart Rate Zone (THRZ) is the range of heart rates that should be reached and maintained during cardiovascular endurance to obtain training effects.

THRZ: 140 – 180 Beats Per Minute (BPM)

Maximum and Minimum Heart Rate is the top and bottom number of your target heart rate range. Max and Min HR levels are used to determine the intensity of your workout.

THRZ Formula: $220 - \text{age} \times .60 = \text{Minimum Heart Rate}$

$220 - \text{age} \times .90 = \text{Maximum Heart Rate}$

Resting Heart Rate is the number of beats per minute while your body is at rest. Your resting heart rate can be used to determine your current level of cardiovascular fitness. The lower your resting heart rate the higher your fitness level.

Average Resting Heart Rate: 60 – 70 BPM

Elements That Raise Resting Heart Rate

1. Caffeine
2. Nicotine
3. Asthma inhalers
4. Stress and anxiety
5. Stimulants

Recovery Heart Rate is the average amount of time it takes your pulse to go from its target heart rate zone back down to your resting heart rate zone at the end of exercise.

Healthy Recovery Heart Rate Time: 3 to 5 minutes

Principles of an Exercise Program



(F.I.T.T Principle)

- a. **Frequency:** How often you exercise. Recommended 3 to 5 days a week.
- b. **Intensity:** How hard you exercise. Recommended intensity is between 60 – 90% of your THRZ.
- c. **Time:** How long you exercise. Recommended exercise bout is from 20 – 60 minutes
- d. **Type:** Mode of exercise. Activities that involve aerobic or anaerobic systems; jogging, weight training, jump roping...etc.

Aerobic exercise is activity that is steady enough to allow the heart to supply all the oxygen your muscles need. The term aerobic means “with oxygen.” Aerobic activity is especially beneficial to building high levels of cardiovascular fitness and help in controlling body fatness.

Anaerobic exercise is activity done in short bursts. The term Anaerobic means “without oxygen.” When you do anaerobic activity, your body cannot supply blood and oxygen to the muscles as fast as the body needs it.

Anatomy of a Workout (Stages of a total fitness workout)

Warm-up-- 5 to 10 minutes (work muscles at a moderate pace to generate blood flow through the body before stretching)

Stretch-- 15 – 20 minutes (use dynamic or static stretching)

Activity-- 20 to 40 minutes (Exercise at a pace that keeps your heart rate in your target heart rate zone)

Cool Down-- 5 to 10 minutes (work muscles at a moderate pace to properly and gradually bring body back down after exercise)

Health Components

- **Cardiovascular Endurance** is the ability to perform prolonged, large-muscle, dynamic exercise at moderate to high levels of intensity. Cardiovascular fitness requires a strong heart, healthy lungs and clear blood vessels to supply the cells in your body with the oxygen they need.
 - Increasing cardiovascular endurance decreases chances of heart disease
 - Allows body systems to work more efficiently with less effort

- **Muscular Strength** is the ability of a muscle or group of muscles to exert a maximal force against a resistance. Strength is often measured by how much weight you can lift. People with good strength can perform daily tasks efficiently—that is, with the least amount of effort.
 - Requires muscle to work against resistance
 - Amount of weight you can lift one time; 1RM (1 rep max)

- **Muscular Endurance** the ability to use your muscles many times without tiring. People with good muscular endurance are likely to have better posture and fewer back problems. They are also better able to resist fatigue.
 - Requires muscle to sustain effort over long periods of time
 - Increasing muscular strength will in turn increase muscular endurance

- **Flexibility** is the ability to use your joints fully through a wide range of motion. You are flexible when your muscles are able to freely and comfortably move through a full range of motion without difficulty.
 - Reduces the chances of injury (sprains and strains)
 - Prevents post exercise pain and relieves muscle tension

- **Body Composition** is the percentage of body weight that is made up of fat when compared to other body tissue, such as bone and muscle. For example, a person that weighs 100 pounds, of which 20 pounds is fat, is said to have a body fat % of 20 percent. People that are in a healthy range of body fatness are more likely to avoid illness and even have lower death rates than those outside the healthy range. The extreme ranges are the most dangerous; too little body fat, like too much, can cause health problem.

-- High body fat percentage increases chances of heart disease, diabetes and cancer)

-- Fat is necessary for storing nutrients and providing insulation for the body and its internal organs

Skill Components

Reaction Time - the time it takes to start moving once a stimulus is given

Agility is the ability to change directions and levels quickly and efficiently. An example exercise involving agility is the shuttle run.

Coordination is the ability to move two different body parts simultaneously with purpose and direction. An example exercise involving coordination is jump roping.

Balance is the ability to hold a position and remain stable over ones center of gravity. An example exercise involving balance is a "V" sit.

Power is the ability to generate a large amount of force quickly; to explode. An example exercise involving power is the standing long jump.

Reaction Time is the ability to react or respond quickly to what you hear, see or feel.

Speed is the ability to move swiftly from one point to another

Progressive overload In order for the body to make a physiological adaptation or produce a training effect, exercise should be performed at a level progressively above that at which the individual usually performs.