YEAR7/8/9

Unit 1.2.b - Applying the Principles of Training

The Components of a Warm Up

4. Dynamic Movements: This involves movement that show a change in speed or direction, such as shuttle runs or agility runs.

5. Skill Rehearsal: This involves practicing common skills that will be used in the activity, for example passing drills for a rugby player or dribbling drills for a hockey player.

Unit 1.2.b - Applying the Principles of Training

The Purpose of a Cool Down

The purpose of a cool down is to return the body back to normal following exercise.

A cool down achieves this by doing the following:

- It prevents joint and muscle soreness by stretching.
- It prevents delayed onset muscle soreness (DOMS) that is felt after exercise.
- It removes lactic acid and carbon dioxide, this would not be as effective if exercise stopped suddenly.

The Purpose of a Cool Down

Task: Discuss with your partner the reasons why you believe we cool down following exercise.

The purpose of a cool down is to return the body back to normal following exercise.

A cool down achieves this by doing the following:

- It gradually lowers the heart and breathing rate.
- It gradually lowers the body temperature.
- It continues to circulate blood and oxygen which helps to remove waste products.

Unit 1.2.b - Applying the Principles of Training

The Components of a Cool Down

Cool downs should last around ten minutes and must consist of the following components.

1. Low Intensity Exercise: This involves exercise such as jogging and lowers the heart rate and body temperature back to normal.

2. Stretching: This includes gentle, static stretches of the major muscles/joints in the body.

The Purpose of a Warm Up

A warm up does this as during the warm up the following effects occur:

- Flexibility of muscles and joints increases. This reduces the chance of injury and allows a greater range of movement.
- Pliability (flexibility) of ligaments and tendons increases. This also reduces the chance of injury and allows a greater range of movement.
- The speed of muscular contractions increase. This is because warm muscles can produce more explosive actions.

Unit 1.2.b - Applying the Principles of Training

The Purpose of a Warm Up

Task: Discuss with your partner the reasons why you believe we warm up before exercise.

The purpose of a warm up is to prepare the body for exercise and prevent injury.

A warm up does this as during the warm up the following effects occur:

- Body/muscle temperature increases. This prevents injury and over heating.
- Heart rate increases. This is to allow the body to cope with the demand for oxygen once exercise begins.
- Blood flow and oxygen to the muscles increases. This is because movement opens up the blood vessels allowing blood to flow more easily and decreases the strain on the heart.

Unit 1.2.b - Applying the Principles of Training

The Components of a Warm Up

Warm ups should last around ten minutes and must consist of the following components.

1. Pulse Raiser: These include exercises that slowly increase the heart rate. This involves movements such as jogging, running, side steps and sprinting.

2. Mobility: This involves exercises that take the joints through their full range of movement such as arm swings, hip circles and high knees.

3. Stretching: This can involve static stretches where you remain still or dynamic stretches that involve movement, these include open/close the gate.

YEAR8/9

Unit 1.1.e - The Effects of Exercise on the Body Systems

The Short Term Effects of Exercise on the Muscular System

There are three short term effects of exercise on the muscular system:

1. Muscle temperature increases.
2. Lactic acid is produced.
3. Blood is re-distributed to working muscles.

The Short Term Effects of Exercise on the Cardiovascular System

There are four short term effects of exercise on the cardiovascular system:

1. Heart rate increases.
2. Stroke volume increases.
3. Cardiac output increases.
4. Vascular shunting occurs (as discussed regarding the muscular system).

Unit 1.1.e - The Effects of Exercise on the Body Systems

The Short Term Effects of Exercise on the Respiratory System

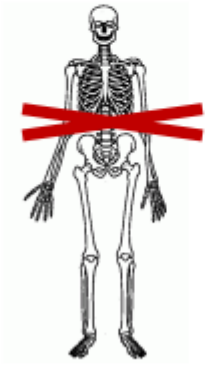
There are three short term effects of exercise on the respiratory system:

1. Respiratory rate increases.
2. Minute ventilation increases.
3. Tidal volume increases.

Unit 1.1.e - The Effects of Exercise on the Body Systems

The Short Term Effects of Exercise on the **Skeletal System**

There are **no** short term effects of exercise on the skeletal system.



Year 9 only (plus all previous slides)

Unit 1.1.e - The Effects of Exercise on the Body Systems

The Long Term Effects of Exercise on the **Muscular System**

There are four long term effects of exercise on the muscular system:

1. Muscle hypertrophy occurs.
2. Muscular strength increases.
3. Muscular endurance increases.
4. Resistance to fatigue increases.

The Long Term Effects of Exercise on the Cardiovascular System

There are six long term effects of exercise on the cardiovascular system:

1. Heart hypertrophy occurs.
2. Resting heart rate decreases.
3. Resting stroke volume increases.
4. Cardiac output increases.
5. Recovery rate increases.
6. Capilliarisation increases.

Unit 1.1.e - The Effects of Exercise on the Body Systems

The Long Term Effects of Exercise on the Respiratory System

There are four long term effects of exercise on the respiratory system:

1. Aerobic capacity increases.
2. Respiratory muscles become stronger.
3. Tidal volume during exercise increases.
4. Minute ventilation during exercise increases.

The Long Term Effects of Exercise on the **Skeletal System**

There is one long term effect of exercise on the skeletal system:

1. Bone density increases