THEORY OF FIRST TERM. PHYSICAL EDUCATION: 2nd E.S.O.

1.- WHAT IS THE WARM-UP?

It is a set of exercises for muscles and joints which prepare the body for the physical activity, reducing the risk of suffering an injury.

1.1.- PARTS OF A GENERAL WARM-UP:

1. - Displacement. Some examples:
   - Running at a gentle pace.
   - Running backwards.
   - Side running.
   - Raising our heels while running.
   - Raising our knees while running.
2. - Joint mobility or/and stretching: different movements of the main parts of the body. Some examples:
   - Ankles.
   - Knees.
   - Hips.
   - Spine
   - Shoulders
   - Elbows.
   - Wrists.
3. - Strength exercises:
   - Sit-ups.
   - Lumbar flexions.
   - Push-ups.
   - Crouches.
4. - High intensity exercises, usually speed activities:

- Short running at maximum speed.
- Some displacement games.

2.- WHAT IS THE PHYSICAL CONDITION?

It is a set of characteristics of our body that allows us to perform any physical activity in an appropriate way. When a person gets tired easily when doing a physical activity, we say that he/she has a weak physical condition. When we perform physical activities without getting exhausted easily, we say that he/she has a good Physical condition.

2.1- WHAT DEPENDS ON HAVING A GOOD PHYSICAL CONDITION?

1. GENES: we inherit different characteristics from our parent through genes.

2. AGE: our body improves its physical condition naturally up to the age of 30. It is maintained until the 35, and then begins to get worse.

3. SEX: it determines some aspects: girls tend to be more flexible while boys are usually stronger.

4. TRAINING: if we practice exercise regularly, we can improve our physical condition.

5. HEALTH HABITS: smoking, diet and rest are some aspects that affect our physical condition.

2.2.- WHAT ELEMENTS MAKE UP THE PHYSICAL CONDITION?

- PHYSICAL OR **MOTOR** QUALITIES: coordination and balance.
- **RESULTING** ABILITIES: agility and skill.
- **BASIC PHYSICAL ATTRIBUTES**: strength, speed, stamina and flexibility.

2.3.- BASIC PHYSICAL ATTRIBUTES: WHAT ARE, DIFFERENT TYPES AND IN WHICH SPORTS ARE IMPORTANT.

STAMINA

The ability to perform prolonged periods of physical activity. Depending on the energy production, It can be aerobic or anaerobic stamina. If we train the stamina, we are developing our **cardiovascular system**.

We have evaluated the stamina through the **Course Navette test**.

Aerobic stamina: the ability of the body to continuously transport oxygen throughout its various systems for extended periods of time.

- HEART RATE: 120-170 bpm
- TIME: 4 minutes - 2 hours

Anaerobic stamina: when the oxygen contributed by our organism is not enough.

- HEART RATE: +170 bpm
- TIME: 20 seconds - 4 minutes.

The **sports** in which the stamina is very important are:

- Athletics (short and long distance)
- Handball
- Basketball
- Motorcycling
- Skiing
- Triathlon
- Cycling
- Swimming

STRENGTH

Is the ability of lifting or moving heavy weights. If we train the strength, we are developing our **muscular system**.

We have 3 types of strength: explosive, maximal and endurance.

Explosive strength: the ability of lifting or moving a weight in a short period of time. For example, a jump or a throw.

We have evaluated the **explosive** upper body strength through the **overhead medicine ball throw test**.

We have evaluated the **explosive** legs strength with the **standing long jump test**.

Maximal strength: the ability of lifting or moving the greatest possible weight in a single contraction, for example weightlifting.

Endurance strength: the ability of lifting or moving a weight many time over for a long time. For example, rowing.

We have evaluated the abdominals **endurance strength** through the **sit ups test**.

The sports in which the strength is very important are:

- Weightlifting
- Athletics (long, height and triple jump)
- Judo
- Kung- Fu
- Boxing

SPEED

Is the ability to perform actions in the shortest possible time. If we train the speed, we are developing our **nervous system**.

We have evaluated the speed through the **10x5 test** (10 meters x 5 times).

This year, we are going to see three different types of speed. Reaction, acceleration and displacement.

Reaction speed: the ability of doing a movement in the shortest possible time in the presence of a stimulus. That is, the time between the presence of a stimulus and my reaction.

Acceleration speed: is the ability of increasing my speed in the shortest possible time. That is, the time between we react and we acquire the maximum speed.

Displacement speed: the ability of moving to the maximum speed.

The sports in which the speed is very important are:

- Athletics (100m, 400m…)
- Soccer
- Handball
- Rugby
- Cycling sprint

FLEXIBILITY

It is the ability to perform movements with a maximum extent. It depends of the **joint mobility** and the **muscular elasticity**.

We have evaluated the flexibility through the deep trunk flexion test.

The sports in which the flexibility is very important are:

- Gymnastics
- Martial arts (for example in taekwondo, in order to do the kicks)
- Capoeira
- Athletics (high jump and pole-vaulting at the moment of passing the bar)
- Surf (for doing the manoeuvres)

3.- HEALTH AND PHYSICAL ACTIVITY

3.1- DIET:

- Eat varied food, rich in fibre, fish, vegetables and fruit.
- You should have 5 meals a day:

  Breakfast – morning snack (in the playtime) – lunch – afternoon snack – dinner.

  The breakfast and lunch should give you the majority of the energy, while the snacks and dinner should be lighter.
- You should get used to drink water during and after any Physical exercises. Drink slowly. Water should not be very cold.
- Neither drink too much carbonated drinks nor eat too many sweets or cakes.

3.2- HYGIENE:

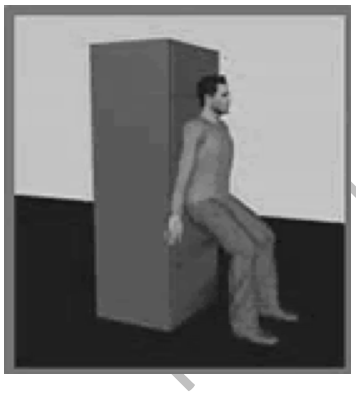
- Use cotton socks so that they absorb the sweat. They must be well stretched to prevent from wounds.
- Footwear must be well tied to stabilize the foot. Air it after doing exercise.
- After doing an exercise, have a shower, dry yourself and change your clothes.

3.3- THE CORRECT POSTURE:

- Walk upright with your shoulders slightly tilted backwards. You must be able to carry a book balance on your head.
- When lifting weights, you must flex your legs, keeping your back as straight as possible and lifting the weight by extending your legs.

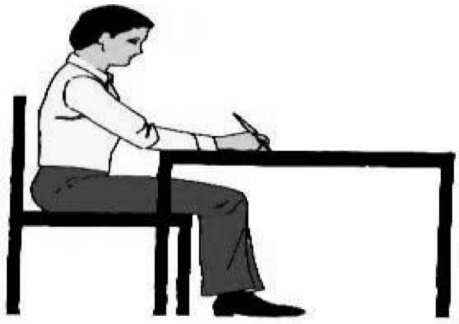
- When pushing a heavy load, you must do it on your back, with your back as straight as possible.

NO



YES

- When sitting on a chair, you must have your back well supported on the back, and your head as straight as possible.



YES

NO