

PHYSICAL EDUCATION

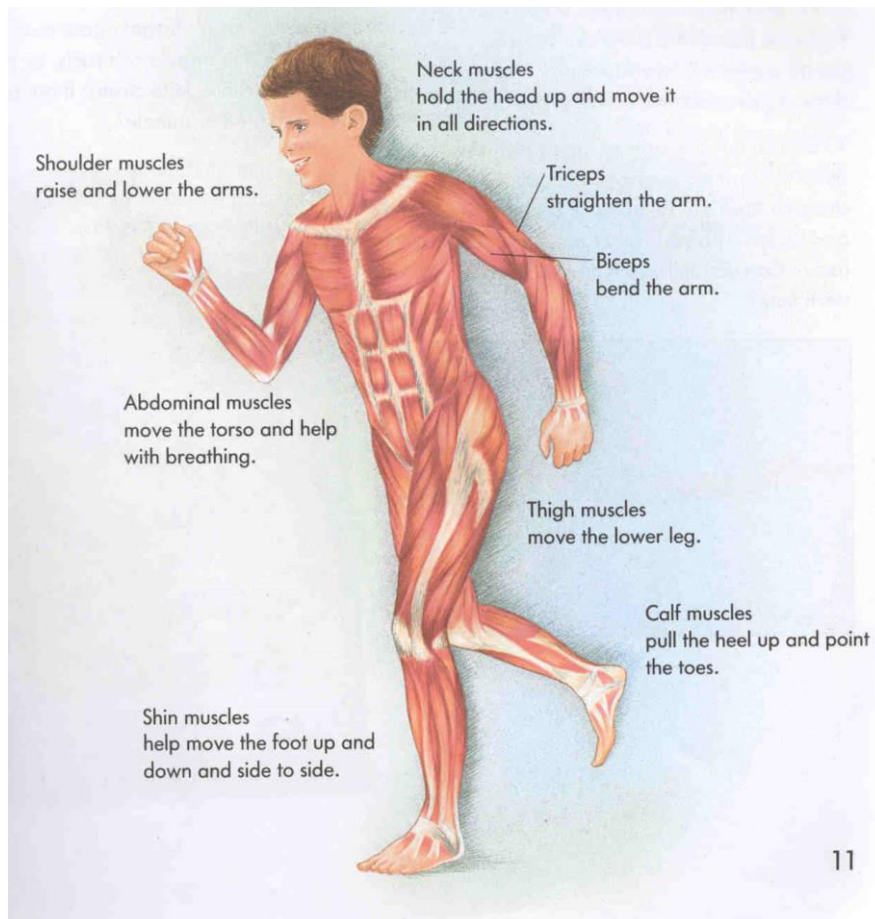
YEAR 9 & 10

Worksheet 1

Objective : students to understand the structure of skeletal muscle and how it works

Sub-strand: Exercise Physiology

- Muscles is a soft tissue found in most humans. There are about 656 muscles in our body and it makes up a major portion of our body weighing 43%.
- The term muscle is derived from the Latin “musculus” meaning “little mouse” perhaps because of the shape of certain muscles or because contracting muscles look like mice moving under the skin.



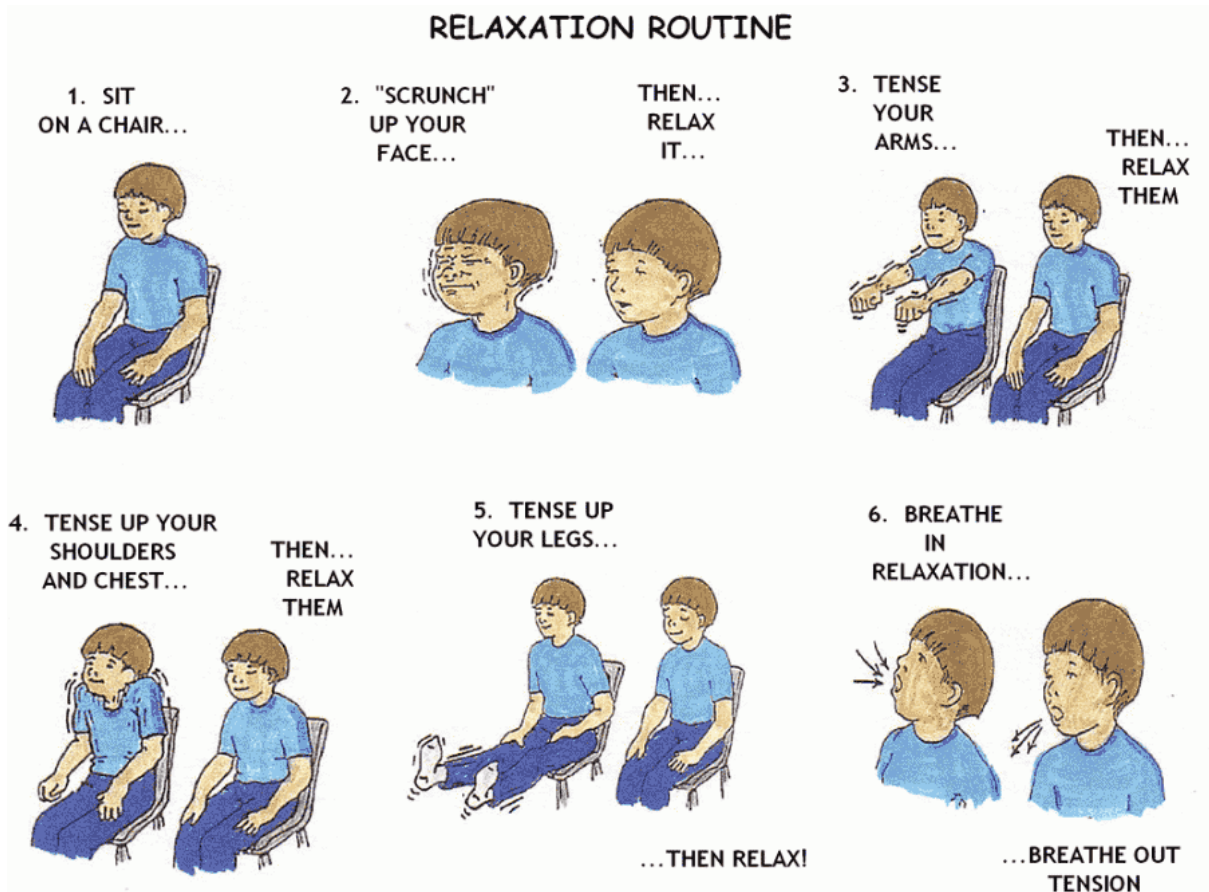
Functions of muscles:

- To create movement
- To maintain good posture
- To maintain body functions
- Heart muscles pump blood.
- Muscles of stomach wall and intestines digest food.
- Diaphragm and chest muscles initiate breathing.

Activities for Worksheet 1

Students need to relax their body and mind by following the simple relaxation routine

Repeat this exercise 10 to 15 times



PHYSICAL EDUCATION
YEAR 9 & 10
WORKSHEET 2

Objective : Students to understand the importance of BMI (BODY MASS INDEX)

Sub-strand: Cardio Respiratory System

BMI

- Body Mass Index (BMI) is a measurement of a person's weight with respect to his or her height. It is more of an indicator than a direct measurement of a person's total body fat.

BMI calculations

- The formula is - BMI = (Weight in kilograms) divided by (Height in metres squared)

Metric Formula

$$\text{BMI} = \frac{\text{(weight in kilograms)}}{\text{height in meters}^2}$$

A guide with examples are shown below

Example : For an adult with height of 180 cm and weight of 75 kg. Our first step needs to be to convert the height into meters (British spelling: metres). As there are 100cm in a meter, we divide our figure by 100. This gives us 1.8m.

$$\text{BMI} = 75 \div (1.8 \times 1.8)$$

$$\text{BMI} = 75 \div 3.24$$

This gives us a BMI figure of 23.15.

BMI Categories:

Underweight = <18.5

Normal weight = 18.5–24.9

Overweight = 25–29.9

Obesity = BMI of 30 or greater

Activities for Worksheet 2

Using the formula, students are required to calculate their BMI and their parents or sisters whom they are staying with and find it out in which category they all fell in. Are they under-weight, normal weight, over-weight or obesity?

Metric Formula

$$\text{BMI} = \frac{\text{(weight in kilograms)}}{\text{height in meters}^2}$$

A guide with examples are shown below

Your BMI -

PARENTS -

BROTHER OR SISTER -

**PHYSICAL EDUCATION
YEAR 9 & 10
WORKSHEET 3**

Objective : Students to understand the importance of nutrition and element of diet

Sub-strand: fitness and nutrition

- The three basic groups of foods are carbohydrates, proteins and healthy protective.
 - These are also called macronutrients or "go, grow and glow" foods. Each of these three types of food serves an important function in promoting or supporting overall health.
1. **Energy foods (energy-giving): Carbohydrates**- wheat, rice, corn, fats or lipids.
 2. **Body-building foods: Proteins**- soy, meat, poultry, seafood.
 3. **Protective foods (regulating):** Vitamins & Minerals- fruits and vegetables, as well as dairy products

Activities for Worksheet 3

Students are required to fill the table and monitor from what food group they have eaten and check if they had balanced meal or no

	BODY BUILDING FOOD LIST	ENERGY GIVING CARBOHYDRATES	HEALTHY GIVING
MONDAY			
TUESDAY			
WEDNESDAY			
THURSDAY			
FRIDAY			
SATURDAY			
SUNDAY			

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