

SCIENCE CONTENTS

BIOLOGY AND GEOLOGY 3º ESO

Topic: Humans as multicellular organisms:- Causes, cures and prevention of infectious diseases.

1. That humans are multicellular organisms, organised into tissues, organs and systems which mutually support the health of the whole organism
2. That some micro-organisms can cause disease and that micro-organisms enter the body by a range of mechanisms
3. That the body can defend itself against infections and ailments.
4. That humans have developed means of enhancing the natural defence mechanisms
5. That these defence systems have an effect on organ transplants

Topic: Nutrition and Health

1. Nutrients and Food
2. Balanced diet
3. Effects of an unhealthy diet
4. Conservation, manipulation and marketing of the food.
5. People and the food consumption. Genetically-modified food

Topic: Organs and Systems that support Nutrition; Processes within the Digestive system; Healthy Habits and Common Ailments

1. The digestive system
2. What happens within the digestive system
3. Maintenance of healthy functioning of the system.
4. Common ailments

Topic: Respiratory System

1. Good health involves social, mental and physical aspects
2. How the respiratory system contributes to the body's nutrition
3. Description of anatomy of the apparatus involved in respiration
4. Keeping our lungs healthy
5. Common respiratory illnesses

Topic: The Circulatory System. Healthy habits. Frequent Illnesses.

1. The circulatory system as a vital system involved in nutrition
2. Description of the anatomy of the circulatory system
3. Keeping a healthy heart
4. Common illnesses related to the circulatory system

Topic: The Excretory System

1. The role of the kidney in osmo-regulation and homeostasis of the body in filtering waste and extra fluid from the blood.
2. The process of filtration of the blood and the consequences if it fails.
3. Common ailments of the kidneys and related tissues, e.g. kidney failure, urinary tract infections, kidney stones.

Topic: Interaction and co-ordination

1. How the different parts of the nervous system work together to co-ordinate the body's responses to stimuli
2. Voluntary and reflex responses
3. The endocrine system
4. Internal control systems of the body - homeostasis
5. Glands and main hormones
6. Frequent illnesses associated with the nervous system

Topic: Human Reproduction. Links to Humans as multicellular organisms; the organisation of the body into tissues and organs with specialised functions

1. Identification and naming the parts of the reproductive system of humans
2. The function of the reproductive apparatus
3. Fertilisation as the fusion of egg and sperm cells
4. The stages of foetal development
5. Contraception and fertility, transmission of disease

GEOLOGY

Topic: Rocks

1. Definition of rocks and minerals
2. The three fundamental types of rocks
3. Process of the formation of igneous, sedimentary and metamorphic rocks
4. The rock cycle

Topic: Minerals:

1. Characteristics of minerals
2. Crystallography
3. Chemical composition of minerals
4. Practical uses and exploitation of minerals