Gordano Biology Learning Map

GORDANO SCIENCE

Exams & Post – 16 Destination

YEAR 11

Ecology
Water cycle
Decomposition
Predator prey
Sampling techniques
Adaptations for hot and cold environments
Trophic level
Farming techniques
Sustainable fishing

Food Production
Carbon cycle
Food chains
Random Sampling- Quadrats and Transects
Distribution of organisms
Adaptations
Evidence for evolution
Transfer of Biomass
Factors affecting food security
Sustainable food production

Disease
Sterile technique
Non communicable disease
Discovery and development of drugs
Antibiotics and Painkillers
Vaccinations
Fungal and protist diseases
Viral diseases
Human defence systems
Disease
Bacterial disease

YEAR 10

Variation, genetics and evolution
Variation
Selective breeding
Ethics of genetic engineering
Theories of evolution- Darwin
Speciation
Antibiotic resistant bacteria
Classification
Genetic inheritance
Evolution by natural selection
Genetic engineering
Cloning
Adult cell Cloning
History of genetics
Fossils

Reproduction
Gene expression and mutations
DNA and the genome
Sex inheritance
Meiosis
Sexual and asexual production

Homeostasis and The nervous system
Thermoregulation
The Brain
Reflex action
Homeostasis
Problems with the eye
Structure of the eye
Structure and function of the nervous system

Hormonal control
IVF
Diabetes
Controlling blood glucose
Contraception
Menstrual cycle
Endocrine system

Photosynthesis
Uses of Glucose
Effect of Light on Photosynthesis
Rate of photosynthesis
Photosynthesis reaction

YEAR 9

The Challenge of Size
Anaerobic respiration
Digestive system
Breathing and gas exchange
Blood
Health and disease
Food tests
The heart
Blood vessels

Supplying the Cell
Mitosis
Diffusion
Chromosomes
Stem cells
Osmosis
Transpiration

Cells
Plant organ systems
Organisation hierachy
Microscopy
Cell differentiation
Plant tissues
Prokaryotes and Eukaryotes
Specialised cells
Plant and animal cells

YEAR 8

Health and Lifestyle
Food tests
Unhealthy diet
Digestive system
Alcohol
Bacteria and enzymes in digestion
Drugs
Smoking

Reproduction
The menstrual cycle
Fertilisation and implantation
Reproductive systems
Adolescence

Environment
Biological Sampling
Ecosystems
Biomass
Photosynthesis

YEAR 7

Adaptation and Inheritance
Food chains and webs
Inheritance
Natural selection
Classification
Competition and Adaptation
Adapting to change
Continuous and discontinuous variation

Body systems
Movement: joints
Skeleton
Levels of organisation
Movement: Muscles
Breathing
Gas exchange

Cells
Specialised cells
Using Microscopes
Cell division
Unicellular organisms
Plant and animal cells