Health Science A/T

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Health Science provides an in-depth exploration of the human body and its integrated systems. Students learn how the structure and function of cells, tissues, and organs allow the body to maintain homeostasis in a changing environment. They research new discoveries increasing our understanding of dysfunctions, leading to novel treatments and preventative measures. Key areas like human reproduction, development, and the aging process are studied to appreciate the sources of variation that make each individual unique.

Course Patterns

Units are sequential, to achieve a minor students will need to complete:

- Unit 1: Human Reproduction and Development
- Unit 2: Human Health and Performance

To achieve a major, students must also complete:

- Unit 3: Human Digestive and Urinary Systems
- Unit 4: Concepts in Neuroscience

Units

In Health Science, students develop their understanding of the structure (anatomy) and the function (physiology) of human tissue from cellular through to organ level. Students also explore human health as affected by changes in cell structure, pathogens or other environmental factors.

The Health Science course uses the human life cycle as a means to create a close link between personal experience and theoretical content for students. Health issues that relate to particular life cycle stages are explored with relation to the structure and function of the human body.

In Health Science, students investigate how various factors can disrupt the body's homeostasis, leading to conditions and diseases. They explore pathogenic infections that trigger immune responses, as well as hormonal imbalances caused by disorders of the endocrine system. Environmental influences like pollution, toxins, and lifestyle choices are examined for their impacts on homeostatic balance. Mental health issues stemming from disruptions in the nervous system are also studied. Additionally, students learn about chronic diseases resulting from factors like poor nutrition, lack of exercise, and other unhealthy habits that tax the body's ability to maintain equilibrium.[1]

Year 11

Unit 1: Human Reproduction and Development

Students investigate the reproductive system, its endocrine control, and aspects of human development and genetics. They explore related diseases and evaluate therapies, examining bioethical considerations and media claims.

Unit 2: Human Health and Performance

This unit covers the cardiovascular, respiratory, and musculoskeletal systems. Students evaluate lifestyle impacts on injury/disease management and prevention for these systems. Conditions, therapies, bioethics, and media claims are critically analysed.

Year 12

Unit 3: Human Digestive and Urinary Systems

The anatomy, physiology, regulation and control of the gastrointestinal and urinary systems are studied. Students evaluate nutrition's impact on health, exploring conditions like cirrhosis, celiac disease, and therapies. Bioethical issues and media claims are examined.

Unit 4: Concepts in Neuroscience

This unit investigates nervous tissue structure/function and communication between the central/peripheral nervous systems. The relationship between the nervous system, aging, degenerative conditions, mental health, and drugs is explored, including therapy efficacy evaluation. Bioethical matters and media claims are critically analysed.

More About Health Science

As a senior secondary subject, Human Biology provides a valuable foundation for students who wish to follow a variety of career pathways by introducing them to the complex technical language of the discipline and to key concepts around the structure and function of the human body. Health Science develops fundamental scientific knowledge about the human body using empirical approaches. It fosters information literacy to evaluate health claims and make informed personal/civic decisions. The course prepares students for further studies and careers in health, medical, allied health and related fields benefiting from a deep understanding of the contested nature of human health science.