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| **Syllabus changes** |
| The content identified by ~~strikethrough~~ has been deleted from the syllabus and the content identified in *italic*s has been revised in the syllabus for teaching from 2023.  **Unit 1**  **Science Inquiry Skills**   * design investigations, including the procedure(s) to be followed, the materials required, and the type and amount of primary and/or secondary data to be collected; conduct risk assessments; and consider research ethics~~, including animal ethics~~ * conduct investigations~~, including monitoring body functions; use microscopy techniques; and perform real or virtual dissection,~~ safely, competently and methodically for the collection of valid and reliable data * represent data in meaningful and useful ways; organise and analyse data to identify trends, patterns and relationships; qualitatively describe sources of measurement error~~, and uncertainty,~~ and limitations in data; and select, synthesise and use evidence to make and justify conclusions   **Science as a Human Endeavour**   * blood transfusions rely on determining blood groups *(ABO and Rhesus)*, and can be used to treat many different diseases and conditions * treatment of conditions due to system or organ dysfunction has changed through improvements in early diagnosis and appropriate use of drugs, physical therapy, ~~radiation therapy,~~ and removal and/or replacement of affected parts   **Science Understanding**  **Cells and tissues**   * the cell membrane separates the cell from its surroundings with a structure, described by the fluid mosaic model, which allows for the movement of materials into and out of the cell by *osmosis*, *simple* diffusion, facilitated diffusion ~~osmosis~~, active transport and vesicular transport (endocytosis/exocytosis)   **Metabolism**   * cellular respiration occurs, in different locations in the cytosol and mitochondria, to catabolise organic compounds, aerobically or anaerobically, to ~~release~~ *store* energy in the form of adenosine triphosphate (ATP)   **Digestive system**   * digestion involves the breakdown of large molecules to smaller ones by mechanical digestion (teeth, *peristalsis*, *churning* and bile ~~and peristalsis~~) and chemical digestion (by enzymes with distinctive operating conditions and functions that are located in different sections of the digestive system)   **Excretory system**   * [the excretory system](http://www.emc.maricopa.edu/faculty/farabee/biobk/BioBookglossE.html#excretory system) regulates the chemical composition of body fluids by removing metabolic wastes and *regulating* ~~retaining the proper amounts of~~ water, salts, and nutrients~~; components of this system include the kidneys, liver, lungs, and skin functioning at the organ level~~ *(regulatory processes not required)*   **Unit 2**  **Science Inquiry Skills**   * design investigations, including the procedure(s) to be followed, the materials required, and the type and amount of primary and/or secondary data to be collected; conduct risk assessments; and consider research ethics~~, including animal ethics~~ * represent data in meaningful and useful ways; organise and analyse data to identify trends, patterns and relationships; qualitatively describe sources of measurement error~~, and uncertainty,~~ and limitations in data; and select, synthesise and use evidence to make and justify conclusions   **Science as a Human Endeavour**   * the use of ~~genetic profiling and~~ genetic screening ~~of adults and embryos~~ *to assess the risk of inherited disorders has* implicit ethical considerations * new technologies, including the ~~Pap smear~~ *cervical screening test*, breast screening and blood tests for prostate cancer, have made early detection of cancers possible   **Science Understanding**  **DNA**   * protein synthesis involves the transcription of a gene on DNA into messenger RNA ~~ribonucleic acid (RNA)~~ in the nucleus, and translation into an amino acid sequence at the ribosome with the aid of transfer RNA   **Human Reproduction**   * contraception methods that reduce the probability of the union of gametes or implantation all have limitations, risks and benefits, and include methods that:   + *use fertility awareness*   + use steroid hormones   + use physical barriers between gametes   + use chemical spermicides   + use sterilisation (tubal ligation, vasectomy)   + function after coitus (emergency contraceptive pill and intrauterine devices [IUDs]) * there are a range of techniques available to ~~genetically~~ screen embryos before implantation or during early development, including blood tests, *ultrasound*, amniocentesis and chorionic villi sampling   **Types of inheritance**   * ~~DNA profiling identifies the unique genetic make up of individuals and can be used in determining parentage~~ |