

	Reproduction	
	Assessment statement	Teacher's notes
6.6.1	Draw and label diagrams of the adult male and female reproductive systems.	The relative positions of the organs is important. Do not include any histological details, but include the bladder and urethra.
6.6.2	Outline the role of hormones in the menstrual cycle, including FSH (follicle stimulating hormone), LH (luteinizing hormone), estrogen and progesterone.	
6.6.3	Annotate a graph showing hormone levels in the menstrual cycle, illustrating the relationship between changes in hormone levels and ovulation, menstruation and thickening of the endometrium.	
6.6.4	List three roles of testosterone in males.	Limit this to pre-natal development of male genitalia, development of secondary sexual characteristics and maintenance of sex drive.
6.6.5	Outline the process of in vitro fertilization (IVF).	
6.6.6	Discuss the ethical issues associated with IVF.	Aim 8: There is great variation between human societies around the world in the views held on IVF. This is the result of cultural and religious diversity. There is little evidence to suggest that children born as a result of standard IVF protocols are different in any way from children conceived naturally. It is important that there is parity of esteem for all children, however they were conceived. TOK: There are potential risks in the drug treatments that the woman is given, and there are concerns about the artificial selection of sperm and the injection of them into the eggs that occurs with some IVF protocols. The natural selection of sperm with consequent elimination of unhealthy ones is bypassed, and there is evidence that there are higher rates of abnormality in the offspring as a result.
11.4.1	Annotate a light micrograph of testis tissue to show the location and function of interstitial cells (Leydig cells), germinal epithelium cells, developing spermatozoa and Sertoli cells.	
11.4.2	Outline the processes involved in spermatogenesis within the testis, including mitosis, cell growth, the two divisions of meiosis and cell differentiation.	The names of the intermediate stages in spermatogenesis are not required.
11.4.3	State the role of LH, testosterone and FSH in spermatogenesis.	
11.4.4	Annotate a diagram of the ovary to show the location and function of germinal epithelium, primary follicles, mature follicle and secondary oocyte.	
11.4.5	Outline the processes involved in oogenesis within the ovary, including mitosis, cell growth, the two divisions of meiosis, the unequal division of cytoplasm and the degeneration of polar body.	The terms oogonia and primary oocyte are not required.
11.4.6	Draw and label a diagram of a mature sperm and egg.	
11.4.7	Outline the role of the epididymis, seminal vesicle and prostate gland in the production of semen.	

11.4.8	Compare the processes of spermatogenesis and oogenesis, including the number of gametes and the timing of the formation and release of gametes.	
11.4.9	Describe the process of fertilization, including the acrosome reaction, penetration of the egg membrane by a sperm and the cortical reaction.	
11.4.10	Outline the role of HCG in early pregnancy.	
11.4.11	Outline early embryo development up to the implantation of the blastocyst.	Limit this to several mitotic divisions resulting in a hollow ball of cells called the blastocyst.
11.4.12	Explain how the structure and functions of the placenta, including its hormonal role in secretion of estrogen and progesterone, maintain pregnancy.	
11.4.13	State that the fetus is supported and protected by the amniotic sac and amniotic fluid.	Embryonic details of the fetus and the structure of amniotic membranes are not required.
11.4.14	State that materials are exchanged between the maternal and fetal blood in the placenta.	
11.4.15	Outline the process of birth and its hormonal control, including the changes in progesterone and oxytocin levels and	

(1) Discuss the ethical issues that relate to family planning and contraception. (Total 8 marks)

(2) Compare the processes of spermatogenesis and oogenesis. (Total 7 marks)

(3) Explain how hormones control the menstrual cycle in human females. (Total 8 marks)

(4) Outline the process of fertilization in humans. (Total 6 marks)