D3.1 Reproduction

Checklist

What you should know

After studying this subtopic you should be able to:

- Differentiate between sexual and asexual reproduction.
- Describe the role of meiosis in creating variation in sexually reproducing organisms.
- Compare the differences between the male and female sexes.
- Draw diagrams of the male (typical) and female (typical) reproductive systems.
- Annotate the names of the parts and their functions on the diagrams.
- Describe the hormonal regulation of the menstrual cycle.
- Elucidate the sequence of events leading to fertilisation.
- Explain the role of hormones in IVF.
- Describe the mechanism of sexual reproduction in plants.
- Explain the features of insect-pollinated flowers.
- Draw annotated diagrams of insect pollinated flowers.
- Describe strategies that facilitate cross-pollination in plants.
- Determine the role of self-incompatibility mechanisms in increasing genetic variation in a plant species.
- Explain the mechanism of seed dispersal and germination.

Higher level (HL)

- Outline the role of GnRH, LH, FSH and the sex hormones in the changes associated with puberty.
- Describe oogenesis and spermatogenesis in humans.
- Identify the mechanisms that prevent polyspermy.
- Outline the development of the blastocyst and subsequent implantation in the endometrium.
- State the role of hCG in pregnancy and pregnancy testing.
- Describe the role of the placenta during foetal development.
- Discuss the role of hormones in maintaining pregnancy and initiating childbirth.

- Correlate between HRT and risk of coronary heart disease.