

IGCSE Biology (9-1) Specification 3(a)

(a) Reproduction

Students should:

- 3.1** understand the differences between sexual and asexual reproduction
- 3.2** understand that fertilisation involves the fusion of a male and female gamete to produce a zygote that undergoes cell division and develops into an embryo

Flowering plants

- 3.3** describe the structures of an insect-pollinated and a wind-pollinated flower and explain how each is adapted for pollination
- 3.4** understand that the growth of the pollen tube followed by fertilisation leads to seed and fruit formation
- 3.5 practical:** investigate the conditions needed for seed germination
- 3.6** understand how germinating seeds utilise food reserves until the seedling can carry out photosynthesis
- 3.7** understand that plants can reproduce asexually by natural methods (illustrated by runners) and by artificial methods (illustrated by cuttings)

Humans

- 3.8** understand how the structure of the male and female reproductive systems are adapted for their functions
- 3.9** understand the roles of oestrogen and progesterone in the menstrual cycle
- 3.10B** understand the roles of FSH and LH in the menstrual cycle
- 3.11** describe the role of the placenta in the nutrition of the developing embryo
- 3.12** understand how the developing embryo is protected by amniotic fluid
- 3.13** understand the roles of oestrogen and testosterone in the development of secondary sexual characteristics

Dr. James Peros (PhD, BS, BS, BA, AS, CED)