Year 7
Subject: Biology
Topic/Unit: Human and Plant Reproduction, and Inhe
When: Half Term 2

Huntington School
Learn and succeed

Overview: Why this? Why now?
Understanding reproduction is fundamental to comprehending how life continues. This unit enables students to explore the biological mechanisms of life, from cellular specialisation to whole-organism development. Introducing these concepts at Key Stage 3 prepares students to make informed decisions about their own physical development and understand agricultural and ecological systems in the wider world.

Building on...building to:
This unit builds on primary school knowledge of basic plant parts and human life cycles. It **builds to subsequent biology studies**, establishing foundational models of cell division, gametes, DNA, and hormone regulations.

Sequence summary:
- **Human Anatomy and Gametes.** Identification of male and female reproductive organs and how sperm and egg cells are specialised.
- **Fertilisation, Gestation, and Puberty.** Understanding gamete fusion, the average 28-day menstrual cycle, gestation stages, staying healthy during pregnancy, and hormonal changes during adolescence.
- **Infertility Treatments.** Biological causes of infertility and the medical process, advantages, and ethical aspects of In Vitro Fertilisation (IVF).
- **Plant Reproduction and Seed Structure.** Examining flower structures via dissection, distinguishing pollination from fertilisation, and dissecting broad beans to identify the seed coat, plumule, radicle, and cotyledon.
- **Seed Dispersal and Inheritance.** Investigating wind, animal, water, and explosive dispersal. Exploring how DNA, genes, and chromosomes dictate traits, alongside environmental influences.

Key Vocabulary:
Gamete, fertilisation, zygote, embryo, uterus, oviduct, ovulation, menstruation, hormone, IVF, stamen, stigma, pollination, plumule, radicle, cotyledon, chromosome, gene.

Assessments:
Formative assessment occurs via weekly whiteboard retrieval tasks and flower/bean dissection observations. **Summative assessment** consists of exam-style Progress Examination Questions (PEQs) covering human reproduction, plant structures, and genetic versus environmental variation.

Able and interested:
Learners are stretched by **calculating standard form percentages of surviving sperm**, graphing maternal age against IVF success rates, and researching midwifery or embryology careers.

Inclusion, Personal Development and Wider Skills:
Dissection activities adhere to strict safe-handling guidelines. Personal development is fostered through collaborative group work and **establishing clear classroom rules for discussing sensitive topics** like puberty and reproductive health, ensuring a safe learning environment.

Homework and Independent Learning:
Students will complete a task set on the SPARX online platform. The task is based on the current topic but also includes consolidation on previous topics. It will automatically adjust the level of challenge as the student complete the activities.