

# 7KC-Sexual & asexual

Mastery planner 7U-Reproduction unit



novice

## Activate

Prior PS-Life cycle: The process of reproduction is a part of the life cycles of animals and plants

Goal To show understanding of prior ideas that are prerequisite for new learning.

## Acquire

### Types of reproduction

Level 3 Types of reproduction: Reproduction can be sexual, involving mixing genetic material from two parents, or asexual where cells from one parent divide.

Level 2 Fertilisation, Seed

Level 1 Gametes, Embryo, Pollination, Flower structure

Skill Use relevant features and behaviours of a model to account for aspects of a real phenomenon.

Technique N/A

Goal To explore the differences between sexual and asexual reproduction and explain how cloning creates identical offspring in different species.

### Human reproduction

Level 3 Human reproduction: Processes in the male and female human reproductive organs work together to enable sexual reproduction.

Level 2 N/A

Level 1 Testes, Urethra, Penis, Oviduct, Uterus, Vagina, Ovary

Skill Suggest an explanation for a new observation based on a scientific idea.

Technique N/A

Goal To suggest hypotheses for infertility by studying reproductive organs, and use evidence from test results to conclude which hypothesis is likely.

### Seed dispersal practical

Level 3 (Practical lesson)

Level 2 N/A

Level 1 N/A

Skill Think up an experiment to test if a hypothesis or model is correct.

Technique Measure length, Measure mass

Goal To determine how seed structure affects the distance it travels during dispersal.

## Assess

Goal To show accurate understanding of the ideas and rectify gaps and misconceptions before problem-solving.

## Apply

Goal To explain why offspring of unfamiliar organisms are identical or look different, To suggest a hypothesis for an observation by relating the structure of parts of the reproductive systems to their function.

## Analyse

Goal To develop a reasoned argument about the effectiveness of a fertility treatment or contraceptive, using information about how it works.

expert



# 7KC-Menstrual cycle

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## Activate

Prior 7KC-Sexual & asexual

**Goal** To show understanding of prior ideas that are prerequisite for new learning.

## Acquire

### Menstrual cycle

Level 3 Menstrual cycle: The menstrual cycle involves a series of events that prepare the female body for fertilisation and development of the embryo.

Level 2 N/A

Level 1 Ovulation , Menstruation, Gamete life span, Length of cycle, Uterus lining

Skill Provide relevant evidence from the data, to support a conclusion.

Technique N/A

**Goal** To consider how a woman could work out when she is most fertile, by modelling the changes to the female reproductive system as a cycle.

## Assess

**Goal** To show accurate understanding of the ideas and rectify gaps and misconceptions before problem-solving.

## Apply

**Goal** To identify or explain key events from a diagram of the menstrual cycle, To determine whether pregnancy will occur at different times in the menstrual cycle.

## Analyse

**Goal** To draw conclusions about the function of hormones using a graphical representation of how hormone levels change in the menstrual cycle.

expert



# 7KC-Embryo development

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## Activate

Prior 7KC-Menstrual cycle

**Goal** To show understanding of prior ideas that are prerequisite for new learning.

## Acquire

### Placenta role

Level 3 Placenta role: The placenta contains blood vessels from both the mother and foetus. It is like a leaky barrier; it allows the movement of some substances from the mother's blood to the foetus, but blocks others.

Level 2 Substance direction, Foetal growth

Level 1 Gestation, Foetus, Amniotic fluid, Umbilical cord

Skill Discuss the limitations and precision of a model and suggest ways to improve it.

Technique N/A

**Goal** To explore a claim about the movement of a substance between mother and foetus using a model placenta.

## Assess

**Goal** To show accurate understanding of the ideas and rectify gaps and misconceptions before problem-solving.

## Apply

**Goal** To explain observations by considering the functions of the placenta, umbilical cord and amniotic fluid.

## Analyse

**Goal** To draw conclusions from experimental data about how the lifestyle choices of expectant mothers can affect the foetus.

expert

