

# 16 Reproduction and flowers – Part 1

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

## Vocabulary 词汇

*Write each word three times.* 把每个单词抄写三遍。

| English              | 中文   | Write it 3 times (English) |       |       |
|----------------------|------|----------------------------|-------|-------|
| Reproduction         | 生殖   | _____                      | _____ | _____ |
| asexual reproduction | 无性生殖 | _____                      | _____ | _____ |
| variation            | 变异   | _____                      | _____ | _____ |
| sexual reproduction  | 有性生殖 | _____                      | _____ | _____ |
| gametes              | 配子   | _____                      | _____ | _____ |
| fertilisation        | 受精   | _____                      | _____ | _____ |
| zygote               | 合子   | _____                      | _____ | _____ |
| stamen               | 雄蕊   | _____                      | _____ | _____ |
| anther               | 花药   | _____                      | _____ | _____ |
| pollen               | 花粉   | _____                      | _____ | _____ |
| carpel               | 雌蕊   | _____                      | _____ | _____ |
| stigma               | 柱头   | _____                      | _____ | _____ |
| style                | 花柱   | _____                      | _____ | _____ |
| ovary                | 子房   | _____                      | _____ | _____ |
| Pollination          | 传粉   | _____                      | _____ | _____ |

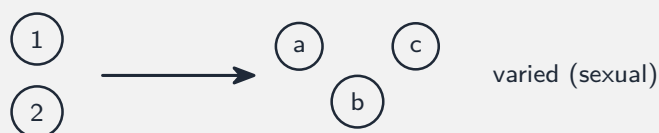
## Recall

**Reproduction** 生殖 makes new organisms of the same kind. There are two types.

## New ideas

Read these first, then do the Practice.

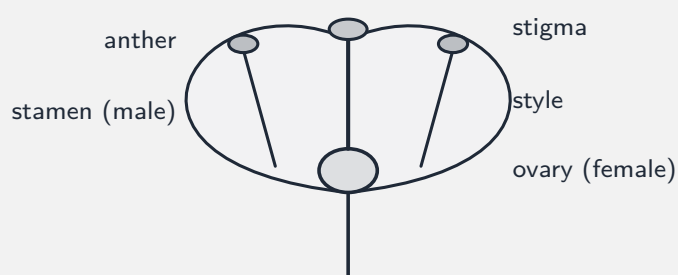
### ■ 1 Asexual vs sexual



- **asexual reproduction** 无性生殖: **one** parent; offspring are genetically identical (clones), so no **variation** 变异.
- **sexual reproduction** 有性生殖: **two** parents; two **gametes** 配子 (sex cells) join (**fertilisation** 受精) to make a **zygote** 合子; offspring show variation.

### ■ 2 Parts of a flower

A flower has male and female parts:



- the **stamen** 雄蕊 (male) = an **anther** 花药 (makes **pollen** 花粉) on a filament;
- the **carpel** 雌蕊 (female) = a **stigma** 柱头, a **style** 花柱 and an **ovary** 子房.

**Pollination** 传粉 is the transfer of pollen from an anther to a stigma.

**Watch out:** **asexual** reproduction has *one* parent and makes identical clones (no variation); **sexual** reproduction has *two* parents and gives variation. **Pollination** (pollen reaching a stigma) is not the same as **fertilisation** (the nuclei joining).

## Practice

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Try these in order.

**16.1** How many parents does asexual reproduction need? [1]

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**16.2** Why do the offspring of sexual reproduction show variation? [1]

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**16.3** What is *fertilisation*? [1]

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**16.4** Name the male part of a flower and the female part. [2]

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**16.5** What is *pollination*? [1]

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**16.6 Challenge.** A grower wants identical copies of a prize plant. State which type of reproduction gives this, and explain why the offspring are identical. [2]