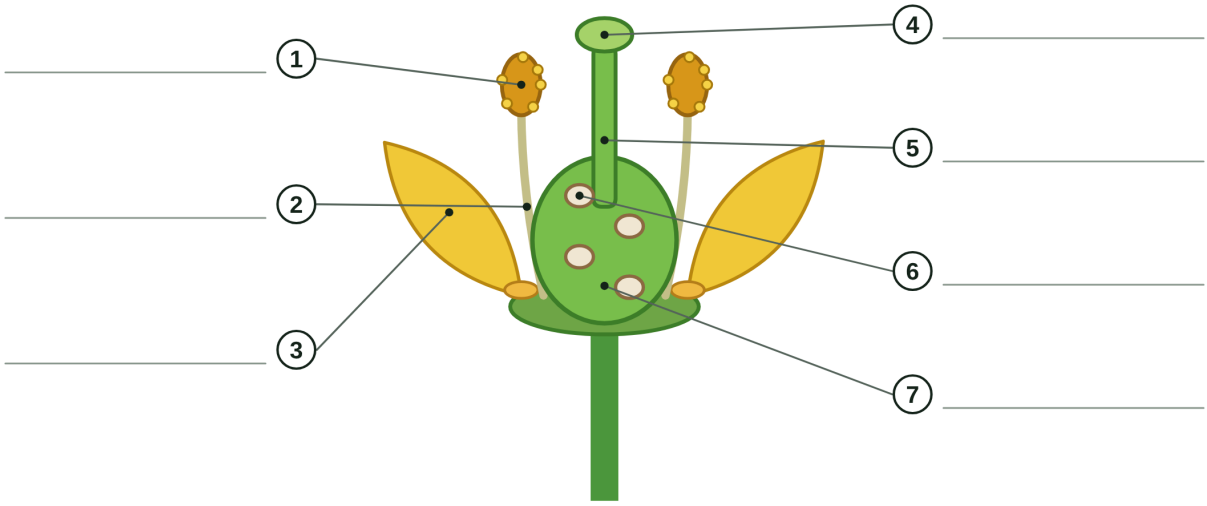
A flower at work, and many eggs or much care

Names: Class: Date:

Work with a partner. Each part ends with a fact and a why question. Write your own answer first, then talk about it with your partner.

PART 1 A flower at work

1. Write the name of each numbered part of the flower on its line. Choose from the names in the box.
2. Number the four steps from 1 to 4, in the order they happen.
3. Read the fact, then answer the why question.



Names to choose from: *anther* *filament* *ovary* *ovule* *petal* *stigma* *style*

From pollen to seed and fruit

- [ ] A pollen tube grows from the pollen grain down the style to an ovule.
- [ ] Each fertilised ovule develops into a seed, while the walls of the ovary thicken and form the fruit.
- [ ] Pollen from an anther lands on the sticky stigma.
- [ ] The pollen grain's sperm fertilises the egg inside the ovule.

WHY WOULD THAT BE?

The fact. Bees can't see the colour red, and flowers pollinated by bees are usually blue, yellow or other colours (OpenStax).

Why would a flower pollinated by bees be blue or yellow rather than red?

PART 2 Many eggs or much care

1. Read the facts about each animal, then tick the group or groups it fits.
2. Write the letters B to F on the chart, each in the box for that animal's care and its number of eggs or young (for the starfish, its eggs in a year).
3. Read the fact, then answer the why question.

Animal and facts		Fertilised outside the body, in water	Fertilised inside the body	Can reproduce asexually
A Coral	On the Great Barrier Reef, corals release millions of bundles of eggs and sperm into the ocean once a year. Corals also bud, and the bud stays on as part of the colony.	☐	☐	☐
B Crown-of-thorns starfish	Females and males release their eggs and sperm into the water at the same time. A large female can release over 200 million eggs a year.	☐	☐	☐
C Cane toad	Cane toads were introduced to Australia in 1935. A female lays up to 35,000 eggs in a single clutch, in still or slow-moving water, and the male fertilises them as they are laid. The parents give no further care.	☐	☐	☐
D Green turtle	The female stores sperm to fertilise her eggs. She lays about 115 eggs in a hole high on the beach, covers them with sand, and goes back to the sea.	☐	☐	☐
E Platypus	After a gestation period of 21 days, the female lays 1 to 3 eggs, usually 2. She incubates them for possibly 10 days, then feeds the young milk for 3 to 4 months.	☐	☐	☐
F Red kangaroo	A female has one baby at a time. After a pregnancy of about 33 days, the baby climbs into her pouch, and it keeps suckling until about 12 months.	☐	☐	☐

Eggs or young each time, and care

Eggs or young each time	No care: eggs left in the water	Eggs hidden, then left	Eggs kept warm, young fed milk for months	Young carried and fed for about a year
100 million or more				
10 million to 99 million				
1 million to 9.9 million				
100,000 to 999,999				
10,000 to 99,999				
1,000 to 9,999				
100 to 999				
10 to 99				
1 to 9				

WHY WOULD THAT BE?

The fact. A large female crown-of-thorns starfish can release over 200 million eggs a year (AIMS), but a red kangaroo has one baby at a time (Australian Museum).

Why would a crown-of-thorns starfish release so many eggs, when a kangaroo has only one young at a time?

Facts: Great Barrier Reef Marine Park Authority and OpenStax (coral); AIMS (crown-of-thorns starfish); Queensland Government, Australian Government, OpenStax and Animal Diversity Web (cane toad); Great Barrier Reef Marine Park Authority and Queensland Government (green turtle); Australian Museum (platypus, red kangaroo). Flower: OpenStax Biology 2e 32.1 and 32.2, and Concepts of Biology 14.4.

Answers (turn the page round). Part 1, the parts: 1 anther, 2 filament, 3 petal, 4 stigma, 5 style, 6 ovule, 7 ovary. **Part 1, the steps:** 2, 4, 1, 3. **Part 1, the why question:** a colour bees can see helps them find the flower. A bee collecting pollen or nectar gets pollen on its fuzzy hair, and some of it is carried to the next flower it visits (OpenStax). **Part 2, the groups:** A outside the body in water, and asexually; B and C outside the body in water; D, E and F inside the body. **Part 2, the chart:** B no care, 100 million or more; C no care, 10,000 to 99,999; D eggs hidden then left, 100 to 999; E eggs kept warm and young fed milk, 1 to 9; F young carried and fed, 1 to 9. **Part 2, the why question:** in animals, the more care parents give each young, the fewer young they have. Young left on their own, like the starfish's, are small and easily eaten, so many are needed for enough to survive. Animals with few young, such as kangaroos, usually give them a lot of care (OpenStax).