

Plants — Adaptation and Reproduction

Science · Class 4 · Topic-wise Practice Worksheet

TIME 40 minutes	QUESTIONS 15	TOTAL MARKS 21	MAX. SCORE ___ / 21
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Name: _____ Class/Sec: _____ Date: _____

INSTRUCTIONS

- There are **15 questions** in this worksheet. All questions are compulsory.
- Each question has four options (A), (B), (C) and (D). Exactly **one** option is correct.
- Questions 1–12 carry **1 mark** each. Questions 13–15 (Achievers Section) carry **3 marks** each.
- There is no negative marking. Study every diagram and table carefully.

Section A — Scientific Reasoning

Q1–Q8 · 1 mark each

- Which part of a flower produces pollen grains?

(A) Anther	(B) Stigma
(C) Ovary	(D) Sepal
- The transfer of pollen from the anther to the stigma is called _____.

(A) Pollination	(B) Germination
(C) Dispersal	(D) Photosynthesis
- After fertilisation, which part of the flower grows into a fruit?

(A) Petal	(B) Ovary
(C) Sepal	(D) Stigma
- Plants that grow in water, such as the lotus, are called _____.

(A) Terrestrial	(B) Desert
(C) Aquatic	(D) Insectivorous
- A cactus stores water mainly in its _____.

(A) Spines	(B) Roots only
(C) Flowers	(D) Thick green stem
- The pitcher plant traps insects because the soil it grows in lacks _____.

(A) Nitrogen	(B) Sunlight
(C) Water	(D) Carbon dioxide
- Which of these plants can grow from a piece of its stem instead of from a seed?

(A) Wheat	(B) Rose
(C) Mustard	(D) Pea
- The seeds of the drumstick have thin wing-like flaps. They are most likely dispersed by _____.

(A) Animals	(B) Water
(C) Wind	(D) Bursting

9. The figure shows the vertical section of a flower. Which labelled part becomes the **seed**?

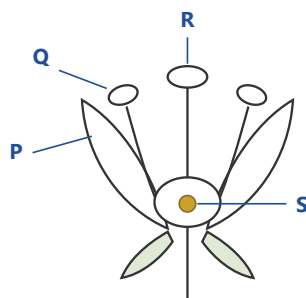


Fig. 9.1 — Vertical section of a flower (S is the small round body inside the ovary)

- (A) P (B) Q
(C) R (D) S

10. In the table below, which row is **incorrectly** matched?

Row	Plant	Adaptation
(A)	Lotus	Broad floating leaves
(B)	Cactus	Leaves reduced to spines
(C)	Pea plant	Thick woody trunk
(D)	Venus flytrap	Traps insects

Table 10.1 — Plants and their adaptations

- (A) Row (A) (B) Row (B)
(C) Row (C) (D) Row (D)

11. Bright petals and sweet nectar are most useful to a flower because they _____.

- (A) Help the flower make its own food (B) Help the flower absorb more sunlight
(C) Keep all insects away (D) Attract insects that carry pollen from flower to flower

12. Why is it useful for seeds to be scattered far away from the parent plant?

- (A) So the new plants do not have to compete with the parent for light, water and space (B) So they look attractive
(C) So they germinate faster (D) So animals cannot eat them

Achievers Section

Q13–Q15 · 3 marks each

13. Consider the following statements.

- (i) All flowers have both male and female parts.
(ii) Photosynthesis stops at night because there is no sunlight.
(iii) Desert plants usually have long roots that reach deep for water.

Which of the statements is/are correct?

- (A) (i) and (ii) only (B) (ii) and (iii) only
(C) (i) and (iii) only (D) All three

- 14.** A leaf on a healthy plant is partly covered with black paper. The plant is left in bright sunlight all day and the leaf is then tested with iodine. The covered part stays pale while the rest turns blue-black. What does this prove?
- (A) Chlorophyll is not needed for photosynthesis (B) Sunlight is necessary for a leaf to make starch
(C) Carbon dioxide is not needed (D) Starch is made only in the veins
- 15.** Match each plant in Column I with the way its seeds are dispersed, given in Column II.

Column I	Column II
(P) Coconut	(1) Wind
(Q) Dandelion	(2) Bursting of the pod
(R) Xanthium (burr)	(3) Water
(S) Balsam	(4) Animals

Table 15.1

- (A) P-3, Q-4, R-1, S-2 (B) P-1, Q-3, R-2, S-4
(C) P-3, Q-1, R-4, S-2 (D) P-4, Q-1, R-3, S-2

Answer Key

1	A	2	A	3	B	4	C	5	D
6	A	7	B	8	C	9	D	10	C
11	D	12	A	13	B	14	B	15	C

Solutions

1. Answer: (A) Anther

The **anther** is the swollen top of the stamen, the male part of a flower, and it is where pollen grains are made.

2. Answer: (A) Pollination

Pollination is the transfer of pollen from anther to stigma. Insects, wind, water and birds all help it happen.

3. Answer: (B) Ovary

The **ovary** swells and ripens into the fruit, while the ovules inside it become the seeds. The petals and sepals usually fall off.

4. Answer: (C) Aquatic

Aquatic plants live in water. They often have broad floating leaves with a waxy upper surface and light, hollow stems.

5. Answer: (D) Thick green stem

A cactus has a **thick green stem** that stores water and also makes food. Its leaves are reduced to spines to cut down water loss.

6. Answer: (A) Nitrogen

Pitcher plants grow in marshy soil that is poor in **nitrogen**. They still make their own food, but trap insects to get the nitrogen their bodies need.

7. Answer: (B) Rose

A **rose** can be grown from a cutting — a piece of stem planted in soil that grows roots of its own. This is a kind of reproduction without seeds.

8. Answer: (C) Wind

Thin flaps act like tiny wings, letting the seed be lifted and carried far by moving air, so it is dispersed by **wind**.

9. Answer: (D) S

S is the ovule, the small round body inside the ovary. After fertilisation each ovule becomes a seed while the ovary around it becomes the fruit. P is a petal, Q is the anther and R is the stigma.

10. Answer: (C) Row (C)

A pea plant is a weak-stemmed **climber** that grips supports with tendrils — it has no woody trunk. The other three rows are correct.

11. Answer: (D) Attract insects that carry pollen from flower to flower

Bright petals and nectar **attract insects that carry pollen from flower to flower**. As an insect feeds, pollen sticks to its body and is carried to the next flower. Wind-pollinated flowers such as grasses are small, dull and have no nectar.

12. Answer: (A) So the new plants do not have to compete with the parent for light, water and space

If every seed fell straight down, all the seedlings would be crowded together. Scattering means **the new plants do not have to compete with the parent for light, water and space**, so more of them survive.

13. Answer: (B) (ii) and (iii) only

Statement (i) is false — in plants such as papaya and maize, the male and female flowers are separate. Statement (ii) is true; photosynthesis needs sunlight, though respiration carries on day and night. Statement (iii) is true; long roots reach the water deep underground. Hence **(ii) and (iii)**.

14. Answer: (B) Sunlight is necessary for a leaf to make starch

Iodine turns blue-black wherever starch is present. The uncovered part got sunlight, made starch and turned blue-black; the covered strip got none and stayed pale. Everything else — chlorophyll, air, water — was the same in both parts, so the only possible cause is **sunlight**.

15. Answer: (C) P-3, Q-1, R-4, S-2

A coconut has a light, air-filled husk so it floats and is carried by **water** (3). A dandelion seed carries a parachute of hairs and is blown by the **wind** (1). A burr has tiny hooks that catch on fur, so it travels on **animals** (4). A balsam pod snaps open and flings its seeds out, which is **bursting** (2). Hence P-3, Q-1, R-4, S-2.