

HOW TO PREPARE A SIMPLE DRIP IRRIGATION SYSTEM



READING



1. The Problem

At Green Valley Training Farm, a group of Agriculture students is working with farm workers in a small vegetable garden. During the dry weeks, lettuce, tomato, and pepper seedlings need regular water. Hand watering takes a long time, and it often leaves some soil very dry while other areas receive too much water.

The garden uses a storage tank as its water source, but the supply is limited. Drip irrigation can solve this problem because it sends small amounts of water directly to the roots. It reduces evaporation, keeps the leaves drier, and helps the crops grow more evenly.

Last season, the students carried buckets. This year, they want to use water more efficiently.

2. Planning the System

Before the installation, the group studies the location of the crops. They look at the length of each row, the distance between rows, and the position of the storage tank. They also check the water source and the water pressure.

The system must reach every row, but the tubing should not block paths or damage the seedlings. The students prepare a list of materials: a main hose or tubing, smaller lines, connectors, a simple filter, a valve, and small emitters. They choose materials that are strong enough for outdoor work but simple enough to repair.

Check the water source before starting. Measure the rows carefully, and choose a route that uses the least tubing. The farm workers explain that good planning saves time, prevents leaks, and protects the soil.



Key idea:
Efficient irrigation gives crops the water they need without wasting the farm's supply.





3. BUILDING THE SYSTEM

The students begin near the storage tank. First, they connect the filter and valve to the main hose. Then they carry the hose to the garden and place it beside the first row. Place the hose along the rows, keeping the emitters close to the seedlings. In some areas, the group uses smaller tubing to reach plants that are far from the main line.

Make sure the connections are secure before opening the valve. If a connector is loose, water can escape and the soil can become muddy.

The students open the valve slowly because the water pressure may be different from one row to another. They watch the first drops of water and check whether each emitter is working. Do not waste water while testing the system. Collect any extra water and use it on nearby crops.

When the water reaches the roots, the group covers the soil with a thin layer of mulch. Mulch helps the soil keep moisture and protects the roots from strong sunlight.



4. AFTER INSTALLATION

After the installation, the students walk along every row. They look for leaks, blocked emitters, and places where the tubing has moved. Inspect the system after the first watering and again after heavy work in the garden.

If one area is too wet, reduce the flow or check the pressure. If another area is too dry, clean the emitter and examine the connector. The farm workers also remove weeds carefully so that tools do not cut the tubing.

Keep the tubing covered or protected when possible, and do not pull it across the crops.

With regular checks, the simple drip irrigation system can work for many weeks. It saves water, supports healthy seedlings, and gives the garden a more reliable supply.



USEFUL RECOMMENDATION

Use water carefully, repair leaks quickly, and protect the tubing from tools and animals.

COMPREHENSION ACTIVITIES



Read the text and answer all the questions.



A. Multiple Choice

1. Why does the group need a drip irrigation system?
 - a) The garden has no crops.
 - b) Hand watering takes time and does not distribute water evenly.
 - c) The students want to remove the storage tank.
 - d) The soil is always too wet.
2. What is the main benefit of drip irrigation in the reading?
 - a) It sends water directly to the roots.
 - b) It makes the leaves grow faster.
 - c) It removes all weeds.
 - d) It increases the distance between rows.
3. What do the students study before installing the system?
 - a) The colour of the vegetables.
 - b) The price of the crops.
 - c) The rows, water source, distance, and available materials.
 - d) The weather in another country.
4. Why do the students open the valve slowly?
 - a) To make the tubing longer.
 - b) Because water pressure may be different between rows.
 - c) To remove the mulch.
 - d) Because seedlings do not need water.



B. True or False

5. Hand watering always gives every part of the garden the same amount of water. _____
6. The storage tank is the water source for the garden. _____
7. Mulch can help the soil keep moisture and protect roots. _____



COMPREHENSION ACTIVITIES - CONTINUED



C. Short Answer

8. Name two crops or seedlings mentioned in the reading.

What two things should the group check before or during installation?

What can the students do if one area is too wet or another area is too dry?



D. Language Focus: Imperatives

11. Find two imperatives in the reading. Write them and explain what each instruction tells the reader to do.

12. Find one positive imperative and one negative imperative about saving or protecting water. Explain each instruction.

FINAL VOCABULARY ACTIVITY: MATCHING

Match each agricultural word with the correct definition. Write the letter on the line.

- | | |
|-------------------|-------|
| 1. irrigation | _____ |
| 2. tubing | _____ |
| 3. seedlings | _____ |
| 4. connectors | _____ |
| 5. water pressure | _____ |
| 6. mulch | _____ |
| 7. roots | _____ |
| 8. rows | _____ |

- A) The underground parts of a plant that take in water and nutrients.
- B) Young plants that are ready to be planted or are growing in a garden.
- C) Long, flexible material that carries water.
- D) The force that pushes water through a pipe or hose.
- E) Lines of crops planted with space between them.
- F) Small pieces that join hoses or tubes together.
- G) A method of giving water to crops.
- H) A layer of material placed on the soil to protect it and keep moisture.



Use the reading to support your answers.



TEACHER ANSWER KEY

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How to Prepare a Simple Drip Irrigation System - English VI Agriculture

A.

MULTIPLE CHOICE

1. b

2. a

3. c

4. b

B.

TRUE OR FALSE

5. False

6. True

7. True

C.

SHORT ANSWER - SUGGESTED ANSWERS

8. Any two: lettuce, tomato, pepper seedlings.

Any two: the water source, water pressure, row length, distance between rows, crop location, or available materials.

If an area is too wet, reduce the flow or check the pressure. If an area is too dry, clean the emitter and examine the connector.

D.

LANGUAGE FOCUS - SAMPLE ANSWERS

Any two: suitable examples, such as 'Check the water source before starting' = examine the water source before beginning; 'Place the hose along the rows' = put the hose beside the crop rows; 'Make sure the connections are secure' = check that the connectors are tight.

Positive: 'Use water carefully' or 'Collect any extra water' = save and reuse water. Negative: 'Do not waste water' or 'Do not pull it across the crops' = avoid wasting water or damaging crops.



VOCABULARY MATCHING

1 G

2 C

3 B

4 F

5 D

6 H

7 A

8 E



Accept equivalent answers when they show accurate understanding of the reading.