

NTI

7th grade

Day

9

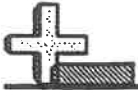
ITM

The Group

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# 7th Grade NTI Day # 9



## Determining Proportionality with Tables

Name: \_\_\_\_\_

Determine if the values in the table are proportional (yes) or not (no).

1)

X	Y
9	1
27	3
36	4
72	8

$$K = \frac{Y}{X}$$

2)

X	Y
80	-8
40	-4
20	-2
10	-1

3)

X	Y
18	20
27	30
36	40
54	60

4)

X	Y
-5	-4
-6	-3
-7	-2
-8	-1

5)

X	Y
-8	-10
-7	-9
-6	-8
-5	-7

6)

X	Y
-10	-70
-9	-63
-5	-35
-1	-7

7)

X	Y
-10	20
-5	10
-4	8
-3	6

8)

X	Y
-8	-40
-6	-30
-4	-20
-2	-10

9)

X	Y
32	-24
24	-18
16	-12
8	-6

10)

X	Y
5	30
6	36
9	36
10	40

11)

X	Y
9	3
16	4
49	7
64	8

12)

X	Y
1	5
2	6
3	7
4	8

## Answers

1. yes
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_
11. \_\_\_\_\_
12. \_\_\_\_\_



Name: \_\_\_\_\_

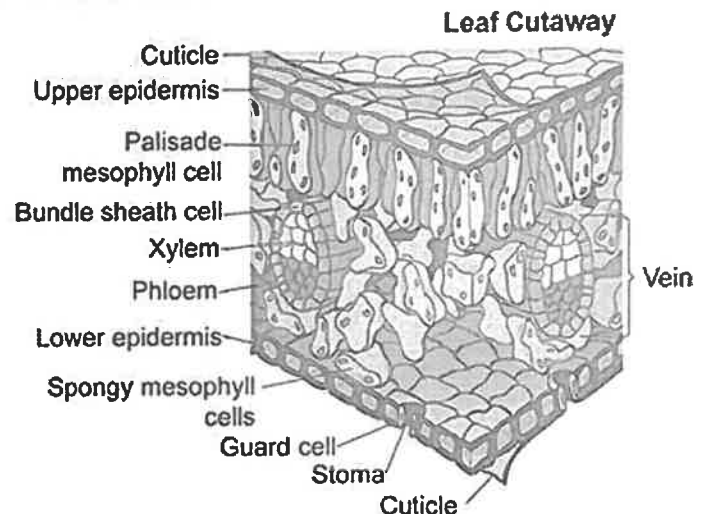
# Lesson 29 <sup>7th - NTI Day 9</sup>

## Function of Plant Parts

Consider all the greenery you encounter on a regular basis. Most of these are **vascular** plants, meaning they possess the ability to transport water and nourishment throughout their various sections. The conduit systems facilitating this distribution extend through the roots, stems, and leaves of the plant.

**Roots** typically burrow beneath the soil to anchor the plant while soaking up water and minerals from the earth. These nutrients penetrate the root through a fragile cellular layer known as the **epidermis**. From there, they proceed to the **xylem**, a sturdy vessel designed to deliver these absorbed elements from the roots to other plant sections. A thinner conduit known as the **phloem** transports glucose, the sweet nourishment concocted in the leaves, to different parts of the plant. Some plants, like potatoes, hoard a significant quantity of nourishment within their roots.

Whether it's the slender stem of a fragile blossom or the sturdy trunk of a towering tree, these are all classified as stems. Their primary function is to offer support to the plant. The xylem and phloem circulate nutrients through the **stem**, delivering them to the **leaves**. Refer to the leaf section diagram on the right to visualize what a dissected leaf might look like under a microscope.



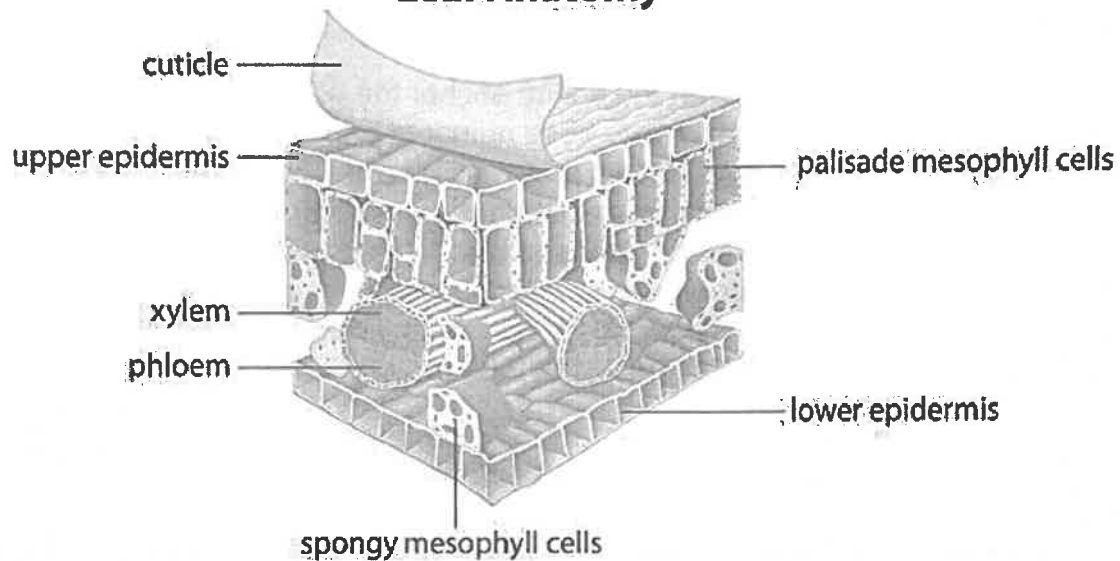
Leaves come in all shapes and sizes, each with the vital task of facilitating **photosynthesis**. This process transforms water, sunlight, and carbon dioxide into plant food in the form of **glucose** (sugar) and starch. Water and gasses travel into the leaf's epidermis through tiny openings known as **stomata**. Each stoma is encircled by a pair of **guard cells** that regulate its opening and closing. Sunlight stimulates the guard cells to open, which is why they typically open during the day and close at night. The green pigment **chlorophyll**, located within the plant cells, soaks up the sunlight reaching the leaf, enabling the plant to produce glucose.

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Check the *Leaf Anatomy* diagram below for the location of the **mesophyll**. This area houses most of the plant's chlorophyll. Oxygen, a gas essential to all living beings, is a secondary product generated during photosynthesis.

During photosynthesis, a process known as **transpiration** leads to water loss from the leaf when the stomata open. Provided the xylem is sufficiently hydrated, it continues to transport water to the leaf. However, if the soil is excessively dry and the xylem lacks water, the leaves start to droop and wilt.

### Leaf Anatomy



END OF TEXT

Name: \_\_\_\_\_

# Lesson 29 *7th-Day 9*

## Function of Plant Parts

1. What does it mean for a plant to be vascular?

- A. It can transport nutrients and water.
- B. It has large leaves.
- C. It can only grow in soil.
- D. It has colorful flowers.

2. What is the main job of a plant's stem?

- A. To support the plant
- B. To absorb sunlight
- C. To store food
- D. To perform photosynthesis

3. What are the small holes on a leaf's epidermis called?

- A. Chlorophyll
- B. Mesophyll
- C. Xylem
- D. Stomata

4. What is the role of guard cells?

- A. They open and close stomata.
- B. They make glucose.
- C. They store food.
- D. They anchor the plant.

5. What process converts water, sunlight, and carbon dioxide into food for the plant?

- A. Transpiration
- B. Circulation
- C. Respiration
- D. Photosynthesis

Name: \_\_\_\_\_

# Lesson 29

## Function of Plant Parts

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6. What happens to a leaf during the process of transpiration?

- A. It gains water.
- B. It loses water.
- C. It produces carbon dioxide.
- D. It stores glucose.

7. What does the xylem do when the leaf loses water?

- A. It transports more water to the leaf.
- B. It closes the stomata.
- C. It produces glucose.
- D. It stores food in the roots.

8. What happens to the leaves when the xylem lacks water?

- A. They grow larger.
- B. They turn green.
- C. They start to droop and wilt.
- D. They produce more glucose.

9. Where is the majority of the plant's chlorophyll located?

- A. In the mesophyll
- B. In the xylem
- C. In the phloem
- D. In the roots


10. What is a byproduct produced during photosynthesis?

- A. Glucose
- B. Starch
- C. Carbon Dioxide
- D. Oxygen



## Lesson #9

## What's in It For You?

 It might be arranged," said Saint George, thoughtfully. "I *must* spear you somewhere, of course, but I'm not bound to hurt you very much. There's such a lot of you that there must be a few *spare* places somewhere. Here, for instance, just behind your foreleg. It couldn't hurt you much, just here!"

"Stop! You're tickling," said the dragon, coyly. "No, that place won't do at all. Even if it didn't hurt—and I'm sure it would awfully—it would make me laugh, and that would spoil everything."

"Let's try somewhere else, then," said Saint George, patiently. "Under your neck, for instance—all these folds of thick skin—if I speared you here, you'd never even know I'd done it!"

"Yes, but are you sure you can hit off the right place?" asked the dragon, anxiously.

"Of course, I am," said Saint George, with confidence. "You leave that to me!"

"It's just because I've *got* to leave it to you that I'm asking," replied the dragon, rather testily. "No doubt you would deeply regret any error you might make in the hurry of the moment, but you wouldn't regret it half as much as I would! However, I suppose we've got to trust somebody, as we go through life, and your plan seems, on the whole, as good a one as any."

"Look here, dragon," interrupted the Boy, a little defensive on behalf of his friend, who seemed to be getting all the worst of the bargain, "I don't quite see where *you* come in! There's to be a fight, apparently, and you're to be licked, and what I want to know is, what are *you* going to get out of it?"

"Saint George," said the dragon, "just tell him, please—what will happen after I'm vanquished in the deadly combat?"

"Well, according to the rules, I suppose I shall lead you in triumph down to the marketplace or whatever answers to it," said Saint George.

"Precisely," said the dragon. "And then—"

"And then there'll be shouting and speeches and things," continued Saint George. "And I shall explain that you're converted, and see the error of your ways, and so on."

"Quite so," said the dragon. "And then—?"

"Oh, and then—" said Saint George, "why, then there will be the usual banquet, I suppose."

"Exactly," said the dragon, "and that's where *I* come in. Look here," he continued, addressing the Boy, "I'm bored to death up here, and no one really appreciates me. I'm going into Society!"



RL.7.2 1. What is the main idea of the passage?

- A) Saint George looks for the safest place to spear the dragon.
- B) The dragon is almost giddy with the prospect of attending the banquet.
- C) The three characters conspire to fake Saint George's victory over the dragon.
- D) The plan is good, but the dragon fears that Saint George might miss the intended target.

T T M N T

- RL.7.1 2. According to the dragon, he will benefit from a defeat. Underline what the dragon says will happen.

Explain the statement you underlined.

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- RL.7.4 3. Choose the correct definition based on how the word is used in the text.

<b>bound</b>	obligated	tied up
<b>testily</b>	irritably	quizzically
<b>deeply</b>	far down in a hole	intensely
<b>answers</b>	serves the purpose	responds verbally
<b>addressing</b>	writing out the envelope	talking directly to someone
<b>appreciate</b>	increase in value	recognize one's full worth

- RL.7.4 4. Match each word with its clue.

_____ coyly	A) defeated
_____ anxiously	B) seems to be true
_____ apparently	C) modestly; shyly
_____ vanquished	D) exactly
_____ precisely	E) transformed
_____ converted	F) nervously

- RL.7.3 5. The dragon says to Saint George, "It's just because I've got to leave it to you that I'm asking." Why does he say this?

- A) The dragon must rely on the accuracy of Saint George's aim.  
 B) The dragon would regret any error twice as much as Saint George would.  
 C) The dragon can only hope Saint George will take him to the banquet.  
 D) both A and B

- RL.7.6 6. Choose a character. Describe how he feels at the end of the passage and why he feels that way.

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