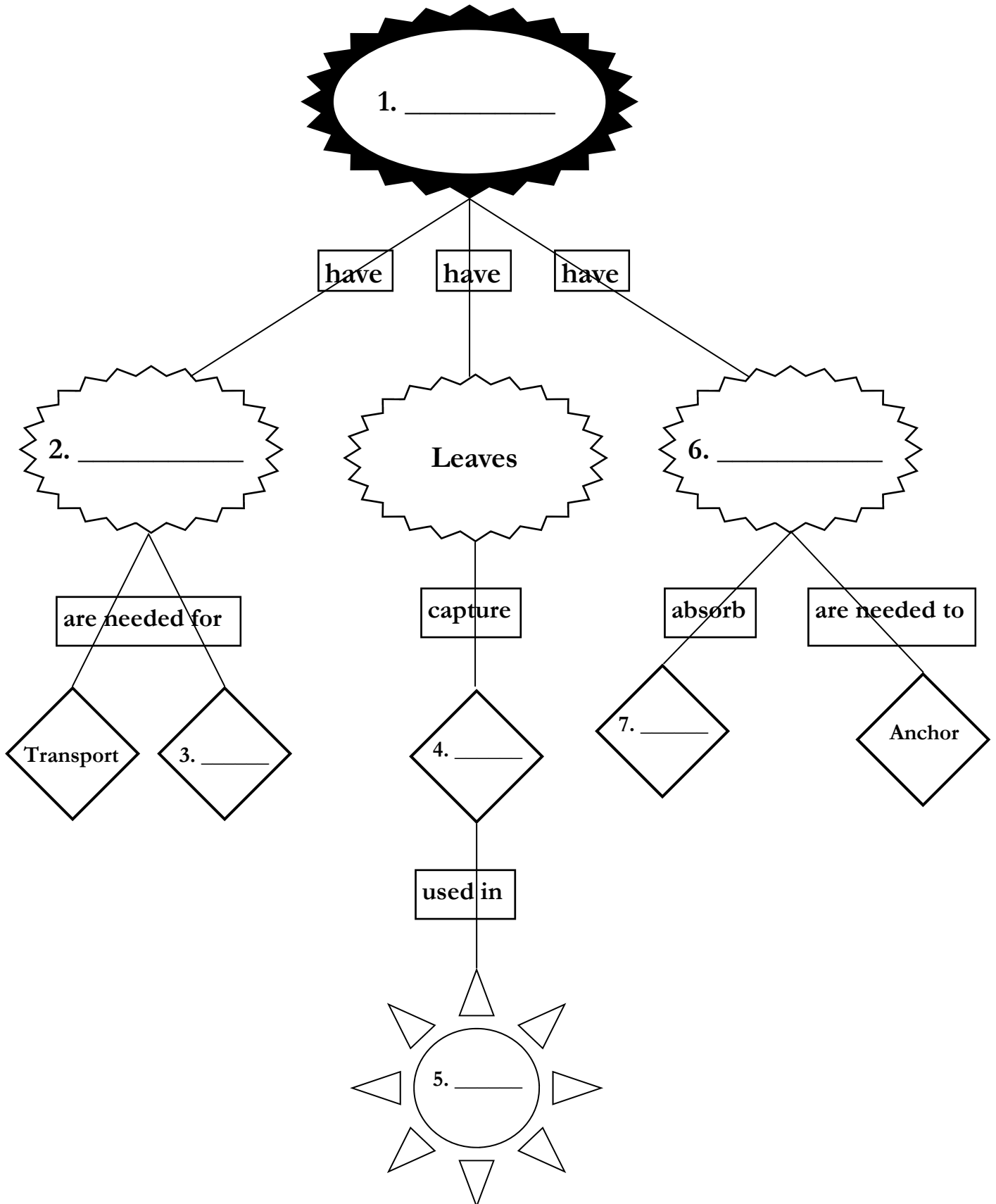


Horticulture Ag Mag - Vocabulary

Organizing Ideas

Directions: Place the label from the word bank in the blank that corresponds with the correct box in the graphic organizer.



Horticulture Ag Mag - Vocabulary

Organizing Ideas

Directions: Place the label from the word bank in the blank that corresponds with the correct box in the graphic organizer.

Word Bank

photosynthesis

roots

seed plants

stems

sunlight

support

water

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

Horticulture Ag Mag - Math - Equivalent Ratios

Directions: Choose the best answer.

1

The ratio of vegetable plants to ornamental plants in a green house is 4 to 9. If there are 36 vegetable plants in the green-house, how many ornamental plants are there?

- A** 81
- B** 16
- C** 13
- D** 320

2

The ratio of elm trees to oak trees in a park is 4 to 1. How many elm trees are there if there are 26 oak trees?

- A** 6.5
- B** 22
- C** 104
- D** 30

3

A landscape architect's scale drawing of a playground to the actual playground has a ratio of 1 inch to 6 feet. If the width of the playground is 60 feet, what should the length of the playground be on the scale drawing?

- A** 360 inches
- B** 54 inches
- C** 67 inches
- D** 10 inches

4

Kevin bought 5 shrubs, 8 trees, and 5 bags of grass seed for a landscaping project. Jackie bought an equivalent ratio of plants. How many trees did Jackie buy if she bought 10 shrubs?

- A** 13 trees
- B** 15 trees
- C** 16 trees
- D** 18 trees

Horticulture Ag Mag - Math - Equivalent Ratios

Directions: Choose the best answer.

5

When watering a plant nursery, the water dispenses at $\frac{1}{2}$ inch every 15 minutes. If Donna forgets to turn the water off in the nursery for an hour, how much water will have been dispensed?

- A 1 inch
- B 2 inches
- C 1.5 inches
- D 2.5 inches

6

The ratio of perennials to annuals in a golf course landscape is 3 to 4. If there are 160 annuals in the golf course, how many perennials are there?

- A 120
- B 192
- C 214
- D 112

7

The ratio of 3 days to 6 weeks is equivalent to _____.

- A $\frac{1}{3}$
- B $\frac{1}{14}$
- C $\frac{1}{2}$
- D $\frac{1}{7}$

8

The ratio of 4 days to 3 weeks is equivalent to _____.

- A $\frac{1}{3}$
- B $\frac{3}{7}$
- C $\frac{4}{21}$
- D $\frac{1}{14}$

Horticulture Ag Mag - Reading Passage

“Plant Growth”

Taken from *Life Science* by Holt, Rinehart and Winston

All living things grow. You're growing right now. When you're older, you will reach a certain height and stop growing. Many plants, however, can keep growing for as long as they live. A plant's growth is affected by its genes, environment, and hormones.

A plant's traits, such as heart-shaped leaves or red flowers, are determined mainly by the plant's genes, or its DNA. As with all living things, plant traits are passed from parent to offspring. The transmission of traits from one generation to the next is called heredity. Heredity is the reason why seeds from a tomato grow into tomato plants and not pepper plants.

A plant's traits are determined by the plant's genes, but its behavior and appearance can be affected by the plant's environment. The amount of daylight and darkness is just one of the many environmental factors that can affect a plant's growth. Other factors include the amount of water a plant receives and the kind of soil a plant grows in.

Heredity and environment affect a plant's production of hormones. Hormones are chemical messengers that carry information from one part of an organism to another. They are produced in small amounts, but they have a strong effect on the organism. A plant hormone is produced in a specific part of a plant, such as the shoot tips. The hormone then moves through the plant and causes a response in all part of the plant it contacts.

Life scientists have identified at least five major plant hormones. One of these is auxin. Auxin, a hormone produced in shoot tips, has many effects on plant growth. For example, auxin is the hormone involved in phototropism. When a plant is exposed to light from one direction, auxin travels from the shoot tip to the stem to grow longer. This causes the stem to bend toward the light. Another important plant hormone is gibberellins. Like auxin, gibberellins affects plant growth in many ways, including causing flower stalks to grow long.

People sometimes apply plant hormones to plants to make them grow in desirable ways. For example, some farmers spray grape stems with gibberellins. This hormone causes the stems that bear flowers to grow longer and the fruits they produce to grow larger.

Horticulture Ag Mag - Reading Passage

Directions: Read each question and choose the best answer.

1

What determines a plant's traits?

- A Environment
- B Genes
- C Offspring
- D Growth

2

_____ major plant hormones have been identified by life scientists.

- A 2
- B 35
- C 5
- D 19

3

Unlike humans, many plants can keep _____ for as long as they live.

- A Living
- B Producing
- C Passing
- D Growing

4

A plant's behavior and appearance can be affected by _____.

- A Environment
- B Growth
- C Offspring
- D Hormones

Horticulture Ag Mag - Reading Passage

Directions: Read each question and choose the best answer.

5

The term phototropism relates to how a plant reacts to the amount of _____ it receives.

- A Water
- B Light
- C Food
- D Soil

6

Plant hormones are used to help plants _____.

- A Grow larger
- B Grow taller
- C Grow longer
- D All of the above

7

Plant traits are passed from _____ to _____.

- A Offspring to parents
- B Flowers to stems
- C Parents to offspring
- D Offspring to flowers

8

A plant hormone causes a response in _____ parts of the plant it contacts.

- A One
- B Two
- C All
- D None



Extended Response—HORTICULTURE

Landscape design is one career discussed in the Horticulture Ag Mag. Why is this career important to the concept of “going green”? How does a landscape architect’s job impact the area surrounding their design? What factors must they take into consideration when planning a design?