

All things

AGRICULTURE



“Agriculture is the science of cultivating crops, and breeding plants and animals to provide food, fiber and resources to sustain life.”

Florida has a great variety when it comes to agriculture businesses and products. Did you know that one third of Florida’s land is used for agriculture? Across the state there are numerous examples of growing crops and raising animals. Florida is home of the largest beef cow-calf operation in the United States and is also the winter strawberry capital of the world. The warmer/moderate temperatures of Florida allow farmers to produce a wide variety of crops including oranges, watermelon, tomatoes, carambolas, olives, grapefruit, strawberries, sweet corn, peppers, blueberries, peanuts and so much more! Agriculture certainly includes items we eat, but it also includes materials that we use to grow, build and enjoy. Florida has thousands of acres of pine trees as well as phosphate mines, cotton, tropical fish and horse farms.

Find the following words in the puzzle. Words are hidden →, ↑, ←, ↗, ↖, ↘, ↙ and ↓.

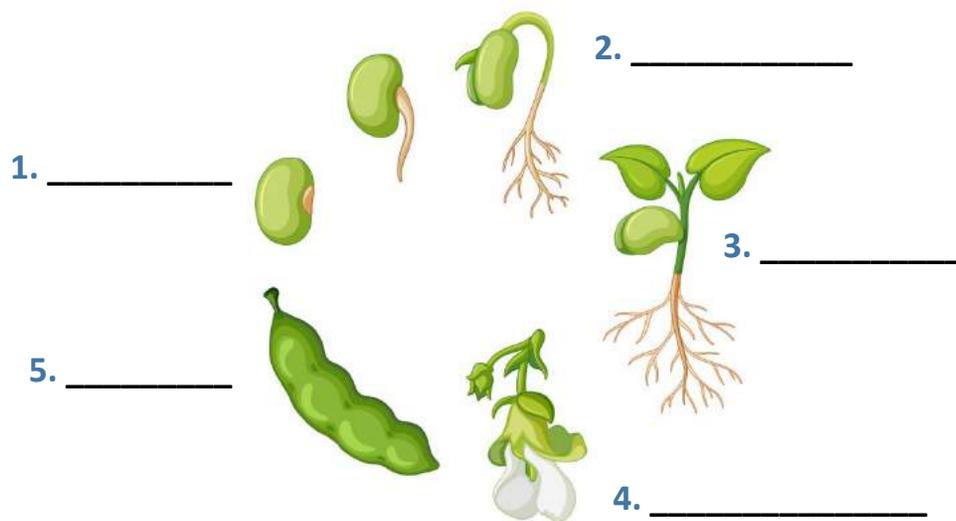
Beef
Citrus
Cotton
Dairy
Forestry
Horticulture
Peanuts
Phosphate
Strawberries
Sugar

J J P N Q C S O F K P S F Y T Z E F N O T T O C G
O O N T I B S N M V E P M G R U R X O Y A S L V B
S K I T P C L W N I A D L Y G D U V Q R U F A D M
W Z R R R B J T R A N O P J M G T I V J E E G M P
H U W Y I X X R Y N U U C P T K L P M K Z S P H M
S L I F U N E F R H T L Z X G U U U F F N W T I D
E T K E R B T G I I S F H L N L C L O R X V P R F
M P W V W O V Z A R I Y D Z Y K I I D Q D R K Z Y
X F Q A A X F U D K A K B F M Z T F K P K P J O E
N F R K S Y D J X L J G E O W G R L E R E W O U E
W T V M X N P K R Z B E U Q N G O D W P W C X W Y
S P H O S P H A T E B H I S A Q H C J M Q J H X Y

The Plant Life Cycle

Plant life cycles are cyclical, meaning they repeat and keep reoccurring. First, the plant starts as a **seed**. It then germinates and turns into a **sprout**. Next, the plant begins to grow roots and becomes an **adult plant**. Adult plants then **flower**. When a plant flowers, it is able to produce **fruit**. The fruit of the plants contain seeds which can be planted to restart the life cycle.

Label the stages of the bean plant below using the bold words in the paragraph above. Draw arrows to show the sequence of the cycle.



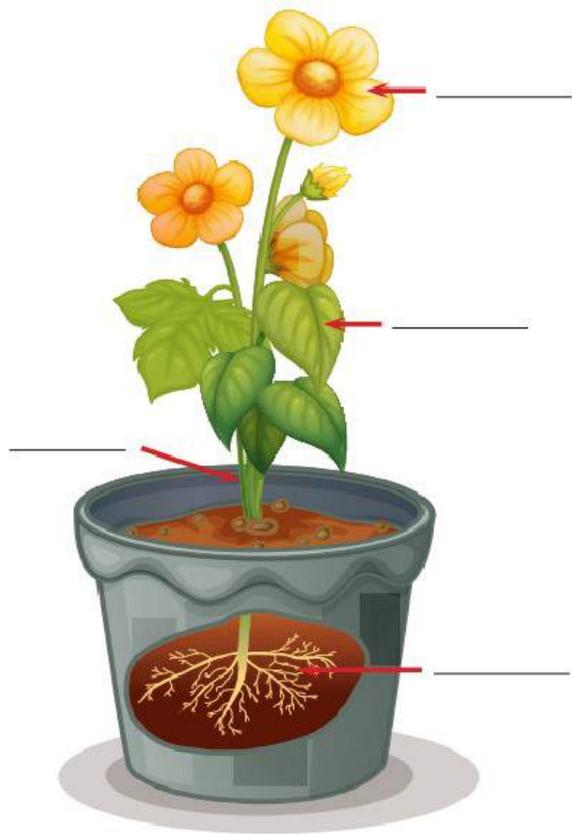
In order for plants to grow, they need light, moisture, air and nutrients. **Draw and label the plant requirements in the space below to help the bean plants grow.**



Fruit and vegetables start from a seed. A seed is typically planted at a depth that is double the width of the seed. The size of the seed determines how deep it should be planted. In order for a seed to germinate, it requires warmth (usually in the form of light), moisture and air. Then, in order to grow, the seed requires light, moisture, air and nutrients. Different seeds have different needs. Seed packets purchased at the store contain various pieces of information including proper plant spacing, water and light requirements and harvest times.

Fill in the blanks using the paragraph above!

1. A seed needs _____, _____ and _____ to germinate.
2. A seed should be planted _____ the width of the seed.
3. In order for the plant to grow, it needs _____, _____, _____ and _____.
4. It is important to consider _____, _____, _____ and _____ when planting seeds.



Did you know that all fruit have seeds and all foods that have seeds are scientifically fruit? This means that cucumber, eggplant, tomatoes and pumpkin are scientifically fruit. Vegetables are the vegetative part of the plant and the reproductive part of the plant before they bloom, set fruit and seed. Examples of true vegetables are spinach, lettuce, broccoli, carrots and beets. This includes the roots, leaves, stems and flowers of the plant.

Match the plant part with its function.

| Plant Part | Function |
|------------|--|
| Leaf | Supports the plant and transports water and nutrients. |
| Flower | Allows for pollination and contains the plants reproductive parts. |
| Stem | Anchors the plant while bringing it nutrients and water. |
| Root | Conducts photosynthesis for the plant. |

Use the word bank to label the plant parts.

Roots
Leaf
Flower
Stem

Word Game: Unscramble the vegetable category and match it to the correct vegetable. Hint: Use the picture for help.

- | | |
|----------------------|-----------|
| 1. E V A E L S _____ | Broccoli |
| 2. T S E M _____ | Asparagus |
| 3. S O O R T _____ | Spinach |
| 4. O F W E L R _____ | Beets |



Circle True or False:

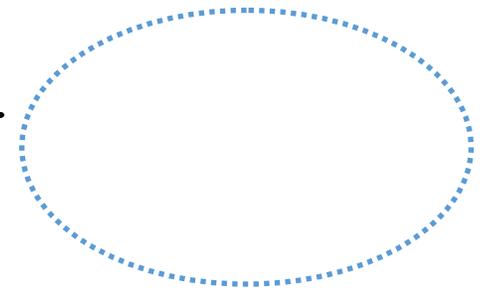
| | | |
|---|------|-------|
| 5. A fruit contains seeds. | True | False |
| 6. Vegetables can be leaves, flowers, stems or roots. | True | False |
| 7. Fruits and vegetables are a part of a balanced diet. | True | False |
| 8. Spinach and cabbage are considered roots. | True | False |

The Water Cycle

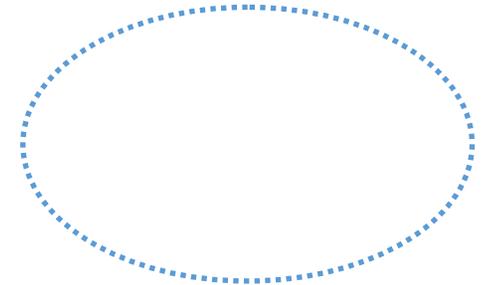
Water can be a gas, liquid or solid and can go back and forth from one state to another.

Draw water in the three stages.

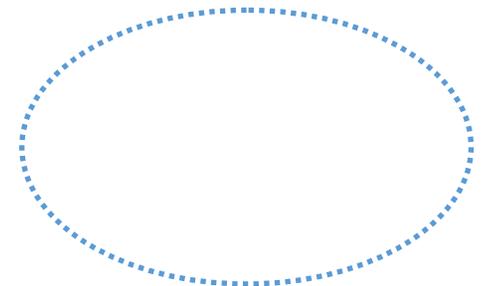
Water as a solid:



Water as a liquid:



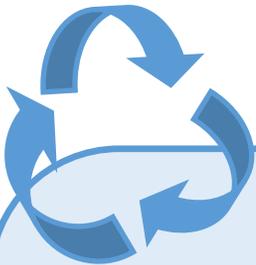
Water as a gas:



Did you know that 70% of the earth's surface is water?

The ocean plays a major role in the water cycle. Notice how the ocean is connected to all of Earth's water reservoirs.

Circle the four oceans on the map.



Each raindrop has a unique life. Using complete sentences, write about the life of a raindrop. Include its time spent as a solid, liquid and gas and where the raindrop visited.

Financial Literacy in Agriculture

Match the vocabulary word to its definition. →

| Vocabulary Word | Definition |
|-----------------|---|
| Investment | A useful or valuable thing, person or quality |
| Profit | A chance of loss or harm |
| Asset | A financial gain |
| Risk | The action of setting aside assets for profit |

Farmers invest in their production with an expectation to increase value and make a future income. Calculate the income and net income from the products below. ↓



| Product | Cost of seed packet | Yield | Price per unit | Income (price per unit x yield) | Net Income (income - cost of seed) |
|----------|---------------------|---------------------|----------------|---------------------------------|------------------------------------|
| Cucumber | \$2.00 | 20 cucumbers | \$1.00 | | |
| Radish | \$1.00 | 50 radishes | \$0.50 | | |
| Tomatoes | \$3.00 | 30 tomatoes | \$1.00 | | |
| Cabbage | \$1.00 | 20 heads of cabbage | \$2.00 | | |



Did you know...

- California is # 1 in producing radishes
- Michigan is #1 in producing cucumbers
- New York is #1 in producing cabbage
- Florida is #1 in producing tomatoes



Circle these States:
California, Michigan,
New York and
Florida



Label the cardinal and
intermediate directions on
the compass rose.

Draw a line
to match the
regions
numbered on
the map with
their name.

- Midwest
- West
- Southeast
- Northeast
- Southwest

Support Local Agriculture

Did you know that several different kinds of fruit and vegetables are grown in Florida? When you're at the grocery store, look for the **Fresh From Florida** logo. This logo was designed by the Florida Department of Agriculture and Consumer Services and helps identify products grown in Florida.



CSA stands for **Community Supported Agriculture**. This program connects local producers with consumers in their area to bring them fresh farm goods. CSA programs look different from county to county but essentially, consumers pay a weekly amount in exchange for farm fresh products. CSA baskets may contain lettuce, greens, various vegetables, fruit, eggs, jellies, baked goods and more!

Answer the questions below based off the given scenario.

Farmer Chris delivers vegetables all across the county to members of his CSA. He delivers to four different locations. Two people are in the city, three people live in the town center, one person is at his work and six people come and pick up the vegetables at the farm. The route Farmer Chris travels is a large circle. It takes seventeen minutes (twelve miles) from his home to the city, another eight minutes (three miles) to the town center, three minutes more to work (two miles) and then he travels twenty-five minutes back home (eighteen miles).



1. How many people does Farmer Chris deliver to? _____
2. How much driving time does it take to make the full loop of deliveries? _____
3. How many miles does Farmer Chris travel to make the loop of deliveries? _____
4. One time, Farmer Chris had to backtrack to make a late delivery. He traveled from home to the city, to the town center, to work, back to the town center, to work and then home. How many miles did Farmer Chris drive that day? _____
5. How much time did he spend in the car during the backtrack loop? _____
6. If each customer pays Farmer Chris \$8.00 per week, how much does Farmer Chris earn in one week? _____
7. How much does Farmer Chris earn in one month (four weeks) from his CSA? _____
8. How much money would Farmer Chris make in a week if he had half of his customers? _____
9. If four new people joined, how much more a month would Farmer Chris make? _____
10. What would you enjoy in your own CSA basket? _____

Careers in Agriculture

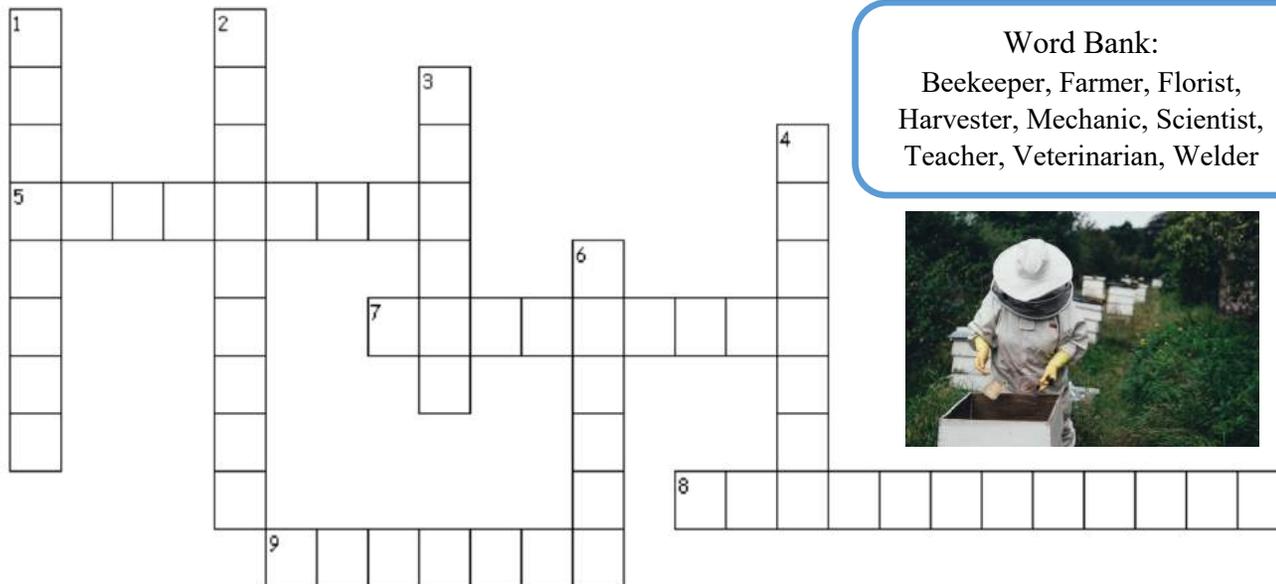
There are countless careers in the agriculture industry!
Could you see yourself working in agriculture? Using the clues below
complete the crossword puzzle.

Down:

1. This person works on farming equipment and fixes machinery.
2. This person experiments in a lab and helps make new advancements.
3. This person grows crops raises animals and cares for the land.
4. This person works in a flower shop and arranges fresh cut flowers.
6. This person binds metal together to build structures and equipment.

Across:

5. This person gathers crops when they are ripe.
7. This agriculturalist cares for hives and a queen.
8. This person is a doctor for animals.
9. This school worker educates others about agriculture.



Word Bank:

Beekeeper, Farmer, Florist,
Harvester, Mechanic, Scientist,
Teacher, Veterinarian, Welder



FLORIDA
Agriculture
IN THE CLASSROOM

Florida Agriculture in the Classroom is funded by the sale of the specialty license plate, the AgTag.

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