Student Name:

How to: Read a Seed Packet

Summary: Did you know that seed packets contain a wealth of information on how to grow the seeds they contain? This lesson will introduce you to gardening vocabulary terms that will assist you in reading seed packets. Knowing how to read a seed packet will help you become a great gardener!

Time: 30-40 minutes

Materials:

- Seed packets (optional)
- Pen or Pencil
- Colored pencils or markers (optional)

DO: The following terms and concepts are helpful when gardening. First, read the definition for each term. Next, **draw** an image that represents your understanding of that definition or **write** the meaning in your own words. If you get stuck, feel free to use the image bank below to help you brainstorm what to draw.

Vocabulary	Draw or Write
Annual plants complete their entire life cycle from seed to flower to seed within a single growing season.	
Biennials plants require two years to complete their life cycle.	
Perennial plants are plants that grow for many growing seasons.	

Germination is the process by which an organism grows from a seed.	
Seed viability refers to the degree in which a seed is capable of germinating under suitable conditions. Seed viability is often expressed as a percentage. If you planted one hundred seeds at 75 sprouted and grew, your seed viability would be 75%. Seed viability decreases with time and poor storage conditions.	
Direct seeding (also called direct sowing) means planting seeds in the garden, rather than buying small plants or starting seeds indoors earlier in the season and transplanting them outside.	
Plant variety refers to a specific, individual identity within a larger plant family or species. For example, onions are a species within a plant family. But there are many varieties of onion like green onions, yellow onions, red onions, etc.	
Heirloom seeds come from **open-pollinated** plants that pass on similar characteristics and traits from the parent plant to the child plant. Heirloom seeds are varietals that have been preserved and not altered for many generations	
Open Pollinated seed comes from varieties that produce seed that can be harvested from the plant, saved,	

replanted, and the same variety will re-grow year after year. All heirloom seeds are open pollinated.	
A hybrid seed is produced by **cross pollinating** two genetically different plants of the same species, such as two different tomatoes or two varieties of corn. Seeds saved from hybrid plantings will not reproduce the same variety the next year.	

Image Bank

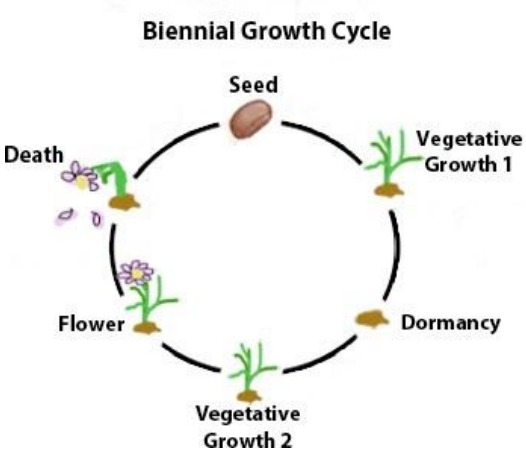

Image 1.

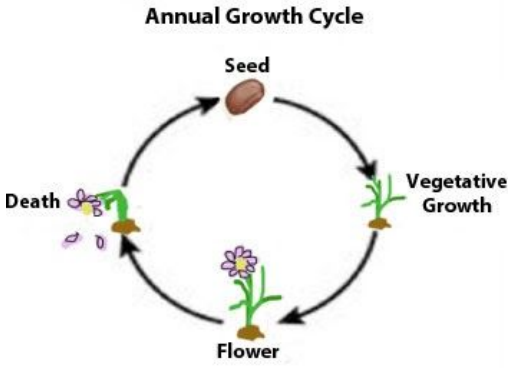

Image 2.

Image 3: *germination.*

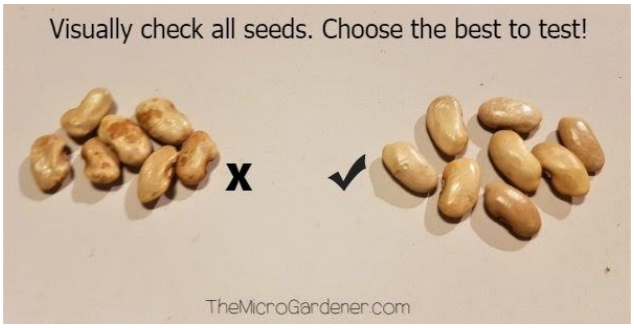

Image 4.

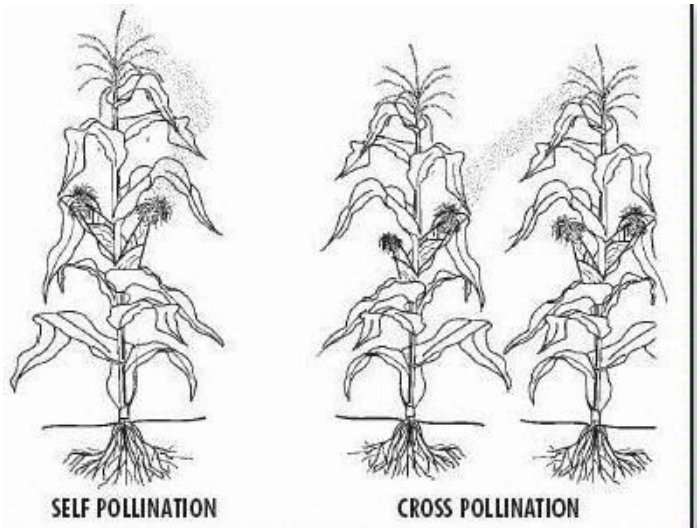

Image 5.

Image 6.

Image 7: ***direct seeding.***

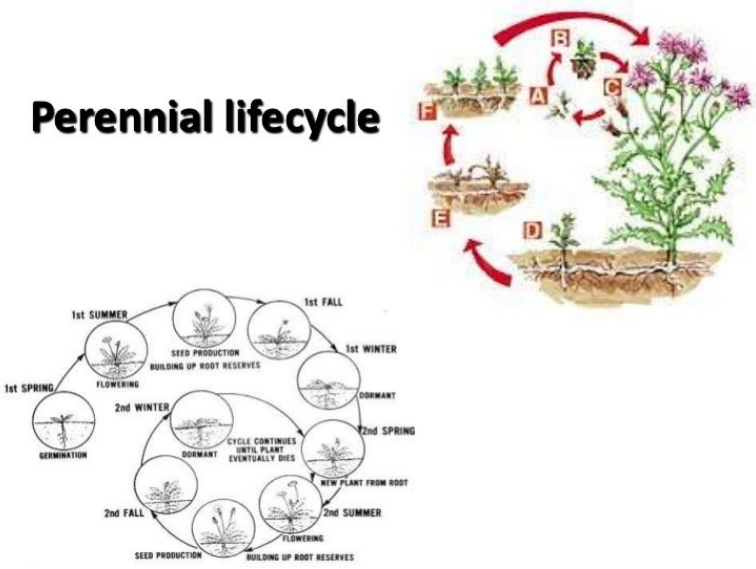

Image 8.

READ: Look at the image of a seed packet and read what the different terms on a seed packet mean. The seed packet you are reading is from Peaceful Valley Farm and Garden Supply, an organic seed company. Use the color coding below to find the information on the seed packet.

- **Planting Depth** (circled in red) helps you determine how much of a dent you should make in the soil when planting.
- **Spacing** (circled in yellow) refers to how far you should space out your seeds for optimal growth. You can also try planting seeds closer, dropping a seed every inch or two, and then thinning to the suggested spacing once they have germinated.
- **Germination** (circled in Green) refers to the number of days it takes a plant to germinate. This information helps you determine your planting dates. If your seeds do not germinate by the end of the range of days indicated, you may want to plant them again.
- **Maturity** (circled in blue) tells you how many days it will take for the plant to reach its full maturity for **harvest**.
- **Packed for (**circled in **white)** refers to the year when the seeds were packed. This will help you keep track of the age of your seeds. Different seeds have different years of viability. For example, under optimal conditions, parsley seeds are viable for two years.

DO: Complete the seed packet scavenger hunt. Look at the image of the seed packet or use one you have on hand to find the answers to the following questions. Write your answers in the spaces provided.

Seed Packet Scavenger Hunt

1. On the seed packet, find where it references the plant's life cycle. Clue: you just learned about three different terms that describe a plant's life cycle, look for one of those terms. **What is the plant's life cycle?**

2. What type of seeds are these? What is the **plant variety**?. Clue: look at your vocabulary list to understand what plant variety means.

   These seeds are_____

3. You just read about planting depth, how deep should you plant?

   Plant _____ deep.

4. When is _____(add what type of seeds) ready to be harvested? Clue: you just read about it. The term **harvest** is mentioned in the description.

   _____

5. How far should you space out your seeds? Clue: The measurement is in inches.

   Seeds should be spaced _____ apart.

6. List two other facts or information from the seed packet

a) _____

b) _____

Student Notes:

- Interested in learning more about seed viability? You can google "seed viability chart" to help you determine how long certain seeds are viable.
- Want to take all that you have learned about seed packets and to start planting? See our Direct Seeding lesson and plant some seeds!
- Try building a planter box to plant in!

References:

Jigsaw Method Teaching Strategy. *Teachhub.com.* Retrieved from https://www.teachhub.com/jigsaw-method-teaching-strategy

Scott, S., (n.d). What are Heirloom Seeds? *Terroir Seeds.* Retrieved from https://underwoodgardens.com/what-are-heirloom-seeds/

What is an Annual, Perennial, Biennial? Aggie Horticulture Texas University. Retrieved from https://aggie-horticulture.tamu.edu/wildseed/info/1.2.html

Image 1 and 2: Retrieved from https://www.psu.edu/dept/agsciences/agsci/elearning/Ocourse-samples/TURF_425_Sample/Ln_8/L8_3.htm
Image 3: Retrieved from https://www.britannica.com/science/seed-plant-reproductive-part/Germination
Image 1 and 2: Retrieved from https://www.psu.edu/dept/agsciences/agsci/elearning/Ocourse-samples/TURF_425_Sample/Ln_8/L8_3.htm
Image 4: Retrieved from https://themicrogardener.com/can-you-sow-out-of-date-seeds/
Image 5: Retrieved from https://farmwest.com/node/31
Image 6: Retrieved from https://www.gettystewart.com/onion-varieties-dont-right-type/
Image 7 Retreived from https://www.thespruce.com/how-to-direct-sow-garden-seeds-2539874
Image 8 Retrieved from http://induced.info/?s=Plant+Life+Cycles+Annuals+Perennials+Biennials+and+Beyond

Notes for Teachers and Parents

- This activity encourages students to feel that cooking and gardening are more accessible.
- This activity supports students to learn hard skills in growing and preparing food like knife technique, building a well-balanced compost pile, etc.
- This activity integrates experiences that support the development of relationships to food and the land.
- We intentionally made the questions for the *seed packet scavenger hunt* general so that the questions could apply to many different seed packets.
- For parents, this is a great lesson to complete with your kids!
- For teachers, this is a great lesson to jigsaw. You can give each student or group of students a different seed packet. Students can share their findings. You can extend with a compare and contrast between different varieties of seeds. Students can create lists of the different types of plants, their spacing, etc.
- You can create math problems looking at maturity dates, spacing, seed viability, etc.
- This lesson pairs well with our Direct Seeding lesson.