

Relevant Learning Standards:
Plants

DC Learning Standards

Grade	Science	English
2 nd	2.6.1, 2.6.2	2.LD-Q.3
3 rd	3.5.1, 3.6.1	3.LD-D.1
4 th	4.7.5, 4.7.1, 4.7.4	4.LD-D.1

VA Standards of Learning

Grade	Science	English
2 nd	2.4, 2.7	2.1, 2.3
3 rd	3.1, 3.8	3.1
4 th	4.1, 4.4, 4.5	4.1

INCREDIBLE EDIBLE PLANTS STATION

Look Ma, I'm a Plant!

Description

Students will pretend to be a plant.

Objective

Students will learn about the different parts of a plant.

Age Group

Pre-K - 4th grade

Materials

Any Garden!

For your toolbox: Plant part chant

*The six plant parts also make a
great cheer/chant:*

Root, stem, leaf – flower, fruit, seed!

Discussion

Our farm is full of big, healthy plants, but just like you, they need things to live and grow. **What do you need to do in order to grow big and strong?** (Drink water - plants need water, too; Eat good food - plants need nutrients from the soil; Breathe - plants need air, too; plants also need sun).

Just like people, plants change during their lifetimes. **How are you different now from when you were a baby? How are you the same? How will you be different when you're an adult? How do plants change throughout their lives? How can you tell?**

Action

Role play as a Plant.

*Before you say the name of the plant part that comes next, ask them- **do you know what plant part comes next?**

1. Pretend you're a seed (crouch on the ground, hug your knees)
 - a. Ask **what does a seed needs to grow into a plant?** Help them name all of these before moving on. (sun, water, nutrients from the soil, air)?
 - b. Once they name those items, give them each of those items one at a time. (use sounds and hand motions to symbolize each of the three)



2. Then, you'll start growing roots (kick your feet and wiggle fingers on ground)
 - a. You'll get nutrients from the soil (everyone make a slurping sound to suck nutrients). You could do the same with water here as well.
 - b. Relate to the previous soil/compost station by mentioning that these are the same nutrients that compost helps provide!
 3. Then, send up your stem (shoot straight up!)
 - a. Give them more of the three things that plants need to grow
 - b. Why do you think the plants need those things again at this point in their life cycle?**
 4. Then, grow your leaves (stick hands in the air in whatever formation they choose!)
 - a. With an older age group, you might pause and ask them a question about photosynthesis.
 5. You'll start growing flowers or fruit next.
 - a. Ask them to pick the fruit or flower they want to become and keep it in their heads. Instruct them that on the count of 3 they'll make fists for fruit or open hands for flowers, and SHOUT OUT the fruit or flower they've chosen (while jumping straight in the air).
 - b. Count to 3, shout, then ask everyone what they decided to be. Give time for quickly sharing what flower or fruit they grew into.
 - c. Those flowers and fruit will make seeds. You'll drop your fruit or seeds then go back to being a seed. FULL CIRCLE!.
-

SONGS

The Bee Song

(tune of "Do your ears hang low")

I'm a honeybee,
(point to yourself)

Got pollen baskets on my knees,
(tap on knees to the beat)

Got a stinger on my bum,
(clasp hands in a point behind back)

That's why you're afraid of me,
(shrug motion with hands near shoulders)

But I'd rather nectar,
I'm an excellent collector,
(gathering motion, point to yourself)

I'm a honeybee.

Both songs are meant to be "call and response" songs and there are hand/body motions involved for both (listed in italics below each line).

The Farmer Rhyme

I'm a farmer and I'm OK!
(point to yourself)

I sleep all night, I work all day.
(gesture sleeping and then shoveling)

**I dress in grubby clothing, and hang out
with the slugs.**
(gesture to clothes and make crawly motions with hands and fingers)

**I'm happy on the farm! With the dirt and
plants and bugs!**
(throw hands in air, point for final words)



1. Voice
2. Face
3. Body

Warm Ups and Activities

I. VOICE

- a. VOICE Warm ups
 - i. **Tongue** exercises (1. Make a point 2. Left/Right/up/down 3. Small circles and Big Circles)
 - ii. **Yawn** descending/ascending (with arm movement)
 - iii. **Short Phrase Tongue Twisters**
 1. "Red Leather, Yellow Leather"
 2. "Unique New York"
 3. "Inchworms itching"
- b. VOICE in the garden
 - i. **Big Black Bugs Tongue Twister**
 1. "Big black bugs bleed blue black blood but baby black bugs bleed blue" (clap CLAP)
 2. This can be done as short and fun intro activity. You might start out doing it very slow a few times and then slowly increase the rate at which you say the phrase. Stop when it's so fast that it's incoherent.

II. FACE

- a. FACE Warm Up
 - i. **Isolated Feature Movement**
 1. Start with the forehead and move downward through eyebrows, ears, nose, cheeks, lips and chin
 - ii. **Scrunch Face + Jaw Massage**
- b. FACE in the garden
 - i. **Don't Yuck my Yum!** (facial and miming)
 1. Use your imagination muscle. We'll use our whole mouth and face, and a little bit of miming to act as if we tasted something...interesting.
 2. Think of your most:
 - a. Favorite vegetable or fruit in the garden.
 - i. What did you choose?
 - ii. Fully act out these next parts. Harvest it from the ground (or tree or wherever it's coming from!). Wipe it off on your pant leg or wash it off in the sink.



- iii. Then prepare it in whatever way you need to in order to eat it (ie. Chop, grate, peel).
 - iv. Then, on the count of three, pop it in your mouth.
 - v. Chew and as you chew imagine that you taste that vegetable. Really use your whole mouth to chew and your whole face to express how you feel.
 - vi. Feel it all over your tongue and in your face. The sensation might even get stronger the longer you chew!
- b. Dreaded veggie or fruit to taste—something sour or tart? An unripe blackberry, green tomato, etc.
 - i. Repeat the above
3. To conclude, you should share some of the things that students used for their “yum” and “yuck.” Ask for them to raise their hand if they agree. **How might it make someone feel to have another person say “yuck” or “that’s gross” about something that they thought was delicious?** The intention is to help students realize that everyone has different tastes and that it is important to respect that! Thus, instead of saying “yuck” when you try something that you didn’t enjoy very much, you might say:
- a. “That’s not for me just yet”
 - b. “I’m not a fan of that yet”
 - c. “That’s not my cup of tea”

III. BODY

a. BODY Warm up

i. Roll Downs

1. Reach all the way up to the sky. Reach with one hand then reach with the other. Reach as far as you can go.
2. Then flop straight down. Let your knees bend slightly, your arms dangle completely free, and the same with your head.
3. Shake your neck, wiggle your arms, and bounce on your knees just a little bit to loosen up in this position. Stay there for about 30-60 seconds.
4. Then, starting at the very base of your spine (the bottom of your hips), *very* slowly roll up. Imagine that a little grasshopper is hopping up your spine one vertebrae at a time. Do this until you’ve reached the top. The last vertebrae to set in place should be at the tippy top of your neck.



- b. BODY in the garden
 - i. **The Harlequin Bug Shake** (aka Shake Down)
 - 1. At each step of this shake down you should relate the movement to a commonly found bug in the garden. For example, when you shake high, you might say “Shake really like a Japanese beetle flies high to get from one soy bean plant to the next.” For shake small, you might say “Shake small like a little tiny aphid moving its small body down the stem of a bean plant (they like Fava beans in particular!).” Reference bugs and plants that you see in your garden space.
 - 2. The Shake:
 - a. Move methodically from the top of the head to the tip of the toes
 - i. Shake each body part individually.
 - ii. Start shaking in pairs: head & knees, shoulders & torso, legs & head.
 - iii. All over body shakes
 - b. Shake their body in spaces
 - i. In a high space (reaching to the ceiling)
 - ii. Shake low (as low to the floor as they can get).
 - iii. Shake wide (reach arms and legs out as far as they will reach)
 - iv. Shake small (as close to the body you can get while still shaking)
 - v. Vary the speed (slow motion is fun)
 - ii. **Garden Games involving movement**
 - 1. Decomposer Tag (see instructions below)
 - 2. Stop and Grow (see instructions below)
 - 3. Yoga in the garden



Decomposer Tag

Process Skills: Observing, drawing conclusions and communicating results.

Purpose: To help the students understand the role the decomposers in the cycle of life.

Background: All Life is interdependent. Decomposers play a vital role in this by breaking down dead plants and animals in a way that fertilizes the soil so that new plants are nurtured. They are the producers for the start of food webs and food chains.

Materials: None required. Just the kids!

Procedure:

(before conducting this activity you might have a discussion about decomposers and look for them in the compost pile)

1. All the students except two choose the plant or animal of their choice.
2. Of the two that are left, one is "Loss" (as in loss of life, or in other words, death) and the other one is the "Decomposer".
3. Discuss what a decomposer is (i.e. worms, centipedes, fungus, bacteria and invertebrates) and the role they play on the farm and in nature.
4. When Loss tags a plant or animal, it must stop running and squat down to show that it has died.
5. The Decomposer's job is to help the dead plants and animals create new life by decomposing organic matter and fertilizing the soil. To do this, the decomposer must tag the dead plants and animals as fast as they can. When a dead plant or animal is tagged, they can stand up and rejoin the tag game as a new (could be different) plant or animal.
6. This continues indefinitely or until all the plants and animals are dead.

Variations

- Try having more than one Decomposer OR more than one Loss active in the game. You might compare that to another round that had different numbers of those two roles. Discuss the differences.

Wrap-Up

- After being tagged by Loss, **why were you able to get up from the ground as a new plant or animal once the Decomposer tagged you?**
- Sometimes death will "win" and will kill all the plants and animals faster than the decomposer can create new life. Discuss the repercussions of this.
- Imagine what would happen in the game and in the natural world if there were no decomposers at all. **What might happen then?**



Stop and Grow

(a garden adaptation of "Red Light, Green Light")

Purpose and Background: Youth learn the six parts of the plant and their functions. This is a good way to introduce children to new foods, and get them using their senses to explore fresh fruits and vegetables grown in the garden.

Play this game in an open space away from garden beds. It is a great game to play with a high-energy group, and perfect for a cool day when you want to get students warmed up.

- Roots are plants "feet", helping it stand in the soil and soaking up nutrients; Stems carry water and nutrients taken up by the roots to the leaves;
- Leaves are the food making factories of green plants;
- Flowers not only look pretty but, in fact, are important in making seeds; The fruit is the ripened ovary of a plant containing the seeds;
- Every seed is a tiny plant with leaves, stems, and root parts waiting for the right things to happen to make it germinate and grow.

Materials: None.

Procedure: Before the activity, ask the students if they know the game "Red Light, Green Light", and tell them this is a new version of that game. Have everybody stand in a starting line, and have a couple of adults stand on either end of where you want the finish line to be.

1. Ask the students if they can name the six plant parts (root, stem, leaf, flower, fruit, and seed). Help them come up with all six parts, and review the role each plant part plays to help the plant survive.
2. As you review the plant parts, have the students act them out:
 - a. Root: squat down and put hands on earth to represent roots
 - b. Stem: stand tall with arms down at sides
 - b. Leaf: stand tall and hold hands out to your sides, spreading fingers wide
 - c. Flower: hold hands at sides of face, spreading fingers out from cheeks
 - e. Fruit: make a circle with arms above head
 - e. Seed: motion with fingers as though seeds are falling from the flower, from above head to the earth
3. Review the plant parts in order several times so that students can learn the action for each. When they know them in order, call the plant parts out of order to test students.
4. To play the game, have students begin running from starting line to finish line when you say GROW! When they hear you call out a plant part, they must freeze immediately act out that plant part. If they keep running the students GROW someone (Be aware that "fruit" and "root" can sound very similar)

Extension: This game can be a great review for groups that are already somewhat familiar with vegetables growing in the garden and which plant parts they come from. Add extra challenge to the game by calling out specific vegetables, rather than the name of the plant part. For example, call out "carrot" and see how many students make the "root" action.



A R C A D I A