THE EDUCATION FUND

FOR EXCELLENCE IN MIAMI-DADE PUBLIC SCHOOLS

2019-2020

Ideas with IMPACT

idea packet

sponsored by:

School District Education Foundation Matching Grant Program

The Frederick A. DeLuca Foundation

Longevity Spinach

Longevity Spinach

Gynura Procumbens

The Super Food

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Table of Contents

Goals & Objectives

- Many urban communities have limited access to fresh and affordable produce, therefore it is important to learn how grow longevity spinach from cuttings.
- A diet that relies on processed foods often leads to obesity.
- Approximately 21- 25% of all American children are obese which can lead to health risks and can contribute to diseases such as diabetes and heart disease.
- We chose to plant a traditional school garden with our cuttings on our window sill from cuttings.
- Producing locally in any community space shortens the distance between farmer and consumer increasing the availability of healthy foods to city residents.
- Gardens enhance students' relation to nature, since such a relation ameliorates their physical, psychological and emotional health.

4 Goals & Objectives

1. Promoting the adoption of healthier nutrition through school gardens offer a context wherein students learn to cooperate and to accept their individual responsibility in collective actions.
2. Gardening also helps students to acquire new abilities and enrich school activities regarding language arts, health and science, as well as environmental education.
3. Classroom & school gardens can create ties among all participants in the academic and school communities.
4. Furthermore, they offer the potential for alternative teaching methods that are proven more effective in cases of cognitive, visual, hearing, behavioral and learning difficulties.

Florida Standards

SC.1.L.14.2 Identify the major parts of plants, including stem, roots, leaves, and flowers.

SC.3.L.15.2 Classify flowering and non-flowering plants into major groups such as those that produce seeds, or those like ferns and mosses that produce spores, according to their physical characteristics.

SC.4.L.16.1 Identify processes of sexual reproduction in flowering plants, including pollination, fertilization (seed production), seed dispersal, and germination.

SC.1.L.17.1 Through observation, recognize that all plants and animals, including humans, need the basic necessities of air, water, food, and space.

LAFS.3.W.1.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

- Introduce a topic and group related information together; include illustrations when useful to aiding comprehension.
- Develop the topic with facts, definitions, and details.
- Use linking words and phrases (e.g., also, another, and, more, but) to connect ideas within categories of information.
- Provide a concluding statement or section.

COURSE OUTLINE/OVERVIEW

Students are natural scientists every day in observing people, animals, and objects in their environment. They informally conduct experiments, report and record their discoveries to their peers and significant adults in their lives. Oxford (1997) agrees "Piaget portrayed the child as a lone scientist, creating his or her own sense of the world. The individual will interpret and act accordingly to conceptual categories or schemas that are developed in interaction with the environment. The knowledge of relationships among ideas, objects, and events is constructed by the active processes of internal assimilation, accommodation, and equilibration" (p.39). The constructivist approach sees children as active constructors of knowledge where learning emphasizes the process and not the product. Learning is a process of constructing meaningful representations, of making sense of one's experiential world. Science is sometimes thought of as the precise field of memorized facts that makes many teachers and students uncomfortable and is associated with activities that are often non-constructivist and developmentally non-appropriate in relation to young children. Science should be viewed as an ongoing part of the total curriculum woven into daily activities and routines. It is important to pair scientific concepts and science process skills with developmentally appropriate hands-on activities as a starting point for early childhood science education. Wasserman (1988) makes the distinction between what is important in teaching and learning science in a science environment. Learning science in a science environment is being in constant motion involving inquiry, exploration, and examination. These activities all require an action involving active experimentation, creativity, and problem solving in combination of children's interests. Teaching science is not just teaching the facts of science and expecting the students to memorize them. Haury (2002) who supports this view says "Observation in science is more than 'seeing'; it refers to skills associated with collecting data using all the senses, as well as instruments that extend beyond the reach of our senses, and it is influenced by assumptions and theoretical knowledge of the observer" (p.2-3). Chaille (1991) states "Scientists seeking to understand an unknown world by way of experiment, are continually doing the same things that we see children doing: having insights, asking questions, solving problems, tying new ideas. Scientists, like children do not simply apply systematic methods to answer predetermined questions. Scientists – filled with wonder and curiosity - are constantly puzzling, testing, and probing ideas just like children" (p.5). She also notes that there are characteristics of young children and scientists that are shared from a constructivist perspective of process of knowledge construction that are important for educators to consider: Young children are social beings and theory builders needing to build a foundation of physical knowledge. As their ideas mature, they become more independent, intellectual, and morally autonomous. The teacher's role is to be the question asker, encourager, environmental organizer, public relations manager, documenter of children's learning and theory builder. Schweinhart (1997) suggests that preschool programs that focused on child-initiated learning, activities contributed to students' short and long term academic and social development compared to programs based on teacher-directed lessons provided only a short-term advantage in academic development sacrificing a long-term contribution to their social and emotional development. On this basis, research supports a preschool curriculum approach based on child-initiated learning activities rather than on teacher-directed lessons. The role of teacher is not to dispense knowledge but to provide students with opportunities and incentives to scaffold learning. Teachers should be seen as "guides" and learners as "sense makers." Piaget's theory asserts that cognitive structures change through the processes of adaptation by assimilation and accommodation (Huitt & Hummel, 2003). Accommodation is the changing of the cognitive structure to make sense of the environment. Assimilation involves the interpretation of events in terms of existing cognitive structure. According to Piaget's theory, cognitive development consists of a constant effort to adapt to the environment in terms of assimilation and accommodation. Learning activities should involve problems of classification, ordering, location, and conservation using concrete objects. The principles of his theory include how children will provide different explanations of reality at different stages of cognitive development. Cognitive development is facilitated by providing activities or situations that engage learners and require adaptation (assimilation and accommodation). Learning materials and activities should involve the appropriate level of motor or mental operations for a child of a given age and avoidance of asking students to perform tasks that are beyond their current cognitive capabilities. At the preschool level, as part of learning new concepts, new vocabulary, and building on previous experiences, "hands-on" experiments are an important strategy along with developmentally appropriate activities. "The most effective learners are actively engaged in learning through observing, reading, and experimenting" according to Minnick-Santa and Alvermann (1991, p7). Teachers should use teaching methods that actively engage students' curiosity and present challenges, providing students a wide variety of concrete experiences to help the child learn (use of manipulatives, working in groups to get experience in seeing from another's perspective, field trips). Tobin & Fraser (1990) supports that learning science implies direct experience with objects as the process of knowledge construction is elaborated and continuously changed as the experience is negotiated with peers and teachers.

Viewing early learners as active scientists has evolved with the establishment of Project 2061 in 1985, the AAAS initiative for science reform in grades K-12 and with the definition of the concept of science literacy in 1989. *The Benchmarks for Science Literacy* (1993) outlined what all children should be able to do in science by the end of grades 2, 5, 8, and 12. The document *National Science Education Standards* (1996) defined standards for children at each grade, kindergarten through high school. In 1998, the National Research Council and the American Association for the Advancement of Science jointly published *Dialogue on Early Childhood Science, Mathematics, and Technology Education* that reinforces the idea that children learn science best when science is presented through "hands-on" meaningful and relevant activities. The National Research Council suggests students in the earliest grades should be expected to use simple tools-magnifiers, thermometers, and rulers-to gather data and learn what constitutes evidence. Conezio and French (2003) point out that science for young children should focus on the world in which children live. Science should be an integrated part of the curriculum rather than an isolated subject and they make a case that science should be used as a foundation to teach language and literacy skills.

According to the NAEYC, social and culturally appropriate preschool programs are defined as developmentally appropriate programs (DAP) that contribute to children's development by influencing the development of children's knowledge in physical, social, emotional, and intellectual areas. Bredekamp and Copple (1997) reinforce the idea that children can best learn science when it is presented through "hand-on" meaningful, and relevant activities. The teacher's role is to prepare the environment and provide guidance and support. Developmentally appropriate practices are both age and individually appropriate in reference to the child (Aldridge, 1992; Bredekamp 1987; Bredekamp & Rosengrant, 1992; Charlesworth, Harat, Burts, & DeWolfe, 1992; Galen, 1994; Gestwicki, 1995). Child-centered learning is the most essential element of DAP classrooms. Classrooms characterized by child-initiated activities appear to facilitate children's creative development. The Hyson research team found that children in child-initiated classrooms scored higher on measures of creativity (divergent thinking) than children in academically oriented classrooms (Hirsh-Pasek Hyson, & Rescoria, 1990.; Hyson, Hirsh-Pasek, & Rescoria, 1990). Higher levels of cognitive functioning are also associated with DAP classrooms as evidenced in research revealing better verbal skills (Marcon, 1992), better receptive language (Dunn, Beach, & Kontos, 1994), overall higher reading and mathematics scores (Sherman and Mueller ,1996), and more confidence in the students own cognitive skills (Mantzicopoulos, Neuharth-Pritchett, and Morelock, 1994).

Furthermore, when science process skills are emphasized in the classroom, student proficiency on individual skills increases, some skills are transferred to new situations, and the skills are retained over time (Padilla, 1990). Padilla suggests that basic science process skills provide a foundation for more complex science process skills.

These basic science skills are observing, inferring, measuring, communicating, classifying, and predicting. More complex science process skills are identifying variables, defining operations, formulating hypotheses, interpreting data, experimenting, and formulating models. Padilla affirms that as teachers we cannot expect students to develop the more complex skills if students are not provided the opportunity to practice the basic skills. According to Mancinelli, Gentili, Priori, and Valuitutti (2004), the key to effective thinking is evocation, through evocation the student uses his own mental resources slowly and repetitively building meaning of what he sees, hears, smells, and touches. Evocation involves responding, questioning, drawing out facts to make conclusions about information. The student can then voluntarily and mentally reconstruct all perceptions coming through the senses using oral and written language, especially in group discussions and writing through concept maps. These effective mental habits can be used by the student every day. Examples of meaningful learning in which children's intellect as well as growing academic skills flourish can be seen in the schools found in Reggio Emilia, Italy (Reggio Children, 1997).

One of the benefits of learning science and science process skills in a developmentally appropriate classroom and in implementing the constructivist pedagogies is in the area of social growth. Students, along with their teachers, co-construct knowledge as they solve problems. Brain research is confirming what many teachers already know: When learning is linked to real-life experiences, students retain and apply information in meaningful ways. Good habits of mind are developed when students sense and experience meaningful science activities and are provided opportunities to theorize about causes and effects, to hypothesize explanations to account for observations and to analyze and synthesize whatever information is available (Katz,1999). Social and emotional growth is seen as children are engaged in investigations of things around them in the course of which they persist in seeking answers to their questions, and solutions to the problems they encounter. Vygotsky's Cultural-Historical Theory is "the idea that child development is the result of the interactions between children and their social environment. Children are active partners in these interactions, constructing knowledge, skills, and attitudes and not just mirroring the world around them" (Leong & Bodrova, 2001, p.1). The interactions include those with teachers, classmates, peers, and family members along with any significant objects and culturally specific practices of the children. In theory of the Zone of Proximal Development (ZPD) learning could lead a child's development if it occurred in the child's ZPD. The ZPD contains the edge of emergence skills and concepts if given appropriate support by those around him. ZPD on a pre-kindergarten level may take place in the form of dramatic play whereas on an older child's level formal instruction. The range of skill and concept development depends on the teacher as a guide and ample experience with peers. According to ZPD theory, social interaction individually and collectively plays a role in the development of cognition.

Lesson Plans

Lesson Plan #1

Plant Structures and their Functions by Caitlin Hardeman

Materials and preparation

- Class set of the Name the Parts of a Plant worksheet
- Chart paper to create a vocabulary anchor chart
- Image of the Structure of a Volcano
- Whiteboard and whiteboard marker (one per group)
- Sticky notes (five per student)

Key terms

- caption
- structure
- function
- roots
- stem
- leaves
- bud
- flowers

Learning Objectives

Students will be able to create captions that describe the function of plant structures.

Introduction (3 minutes)

- Show students a page from an informational text that contains a photograph and a caption. Point to the caption and ask students to identify the name of the text feature and its purpose.
- Tell students that a caption is a text feature that gives information about an illustration or photograph.
- Explain that today's lesson will give the class the opportunity to become caption writers as they learn about plant structures and their functions.
- Guide students in a choral read of the learning objective.

Explicit Instruction/Teacher modeling (10 minutes)

- Explain that the structure of the plant is the way that it is built. It has certain parts and they each have a function, or a specific job. The structures include the root, stem, leaves, bud, and flower.
- Describe the structures of the plant and explain the function of each. Display the definitions on a word wall or an anchor chart:
    - The roots support the plant and absorb water and nutrients from the ground.
    - The stem carries the water and nutrients from the roots to the leaves. It also supports the leaves, bud, and flowers.

    - The leaves make the food for the plant through a process called photosynthesis. The leaves are the “food factory” in the plant.
    - The bud develops flowers.
    - The flowers are responsible for making new seeds, which allows for new plant growth.
- Share that you will model how to write a caption with a diagram about volcanoes. Display the Structure of a Volcano image and model how to write a caption for the magma chamber. For example, "The magma chamber is the large pool of liquid rock beneath the earth’s surface. It holds the magma underneath the ground until a volcanic eruption."
- Explain that today’s lesson will focus on creating captions for a diagram of a plant. The information about the key terms will be useful in creating captions.

Guided Practice (10 minutes)

- Distribute a copy of the Name the Parts of a Plant worksheet and five sticky notes to each student. Label the diagram together as a class.
- Model writing a caption for the root. For example, "The root is underground and supports the plant by absorbing water and nutrients from the ground." Have students copy this caption on one of the sticky notes and place it on the diagram near the roots.
- Put students into small groups of three to four students. Have them collaborate to write a caption for the stem on a whiteboard. Remind groups that they can reference the definitions of the key terms, but that the caption must be in their own words. Circulate and offer guidance and feedback as needed.
- Call on nonvolunteers to share the caption created by their group, and pull phrases and wording from the different examples to create one for the whole class to use. Direct students to record the collaborative caption on one of their sticky notes.

Independent working time (15 minutes)

- Instruct learners to write captions for the remaining plant structures on sticky notes. Remind them to keep the focus of the caption on the structure’s function.

Differentiation

Support:

- Provide sentence frames for students as they write the captions. For example, "The job of the ____ is to ____."
- Give students a copy of the definitions for the plant structures for easy reference.

Enrichment:

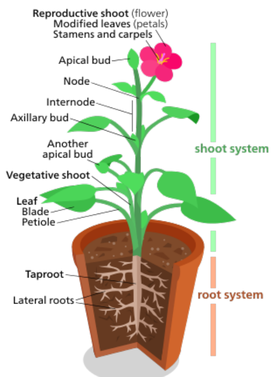
- Have advanced learners research the structures of a plant in more depth. Challenge them to create a book with illustrations, diagrams, captions, and other important information about each plant structure to share with the class.

Assessment (5 minutes)

- Put students into A-B partnerships, and have each student share the captions they wrote. Challenge them to provide feedback to each other and ask clarifying questions if necessary.
- Observe partner discussions and listen for correct explanations to serve as a formative assessment of students' understanding of plant structures and their functions. Listen for complete sentences that make sense to serve as an assessment of students' understanding of how to write a caption.

Review and closing (2 minutes)

- Ask the class to think about how a plant is like the community. Elicit answers that lead them to the conclusion that structures of a plant work together to keep it alive, while structures in a community work together to keep it thriving.
- Point out that each structure of the plant has an important function in order for it to survive.



Lesson Activity 2
Do research on how do cuttings for propagation.
Check out YOU TUBE VIDEOS

Supplies You'll Need to Propagate by Stem Cuttings

It doesn't take much equipment to start new plants from stem cuttings. Here are the basic items you'll need.

1. Good scissors or pruners to use to take cuttings.

2. Garden tool disinfectant (e.g. 1 tablespoon bleach in a gallon of water) to disinfect your scissors and pruners before and after you make each cut to avoid accidentally transmitting disease between plants.

How to Propagate Plants from Stem Cuttings and Save Lots of Money

By Tasha Greer

When I first started gardening, the term “plant propagation” scared the heck of out of me. To be honest, I was so afraid to do *it*, that I didn't even really understand what *it* was.

Now that I've spent the last several years turning my homestead landscape into a *garden of eating*, I know first-hand just how simple propagating plants from stem cuttings can be. It also saves me so much money I can't even imagine not doing it!

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The lists of plants you can start by stem cuttings are almost endless. To get you started, consider trying some of these plants to build your skills and your garden quickly.

- Herbs: rosemary, lavender, thyme, sage, true hyssop, stevia, savory, mints
- Fruits: kiwi, raspberry, grape vines, blackberries, currants, blueberry, figs, honeyberry

- Others: hydrangea, willow, holly, rose, lilac, forsythia, barberry, weigela, viburnum

Things to Know Before you Propagate by Stem Cuttings

To propagate by cuttings, it's helpful to do specific research for the plant you want to root. In particular, you'll want to find out whether the plant roots best with soft-wood, semi-soft wood, or hardwood cuttings.

Additionally, you will want to find out if the rooting hormone is necessary. Rooting hormone is a stimulant that encourages slow-growing plants to develop roots faster than they otherwise would. Some cuttings are difficult to establish without the use of rooting hormone. Many cuttings, though, just don't benefit from it.

Truthfully, since it's so cheap and easy to start plants from cuttings, I often snip plants at random and try to root them with and without rooting hormone. Then I keep notes about what works and what doesn't so I know for next time.

In general, vigorous growing plants tend to root from all three cutting types and without rooting hormone. Slower growers tend to be easier from soft or hardwood cuttings and require rooting hormone.

Now for the fun part, let's collect some cuttings! You can do this from your yard just to get the hang of it. Or, head over to an established garden to get cuttings from plants you don't already have. (Make sure you have permission to take cuttings before you start snipping!)

1. Cutting Etiquette

Most of us gardeners prefer that you cut plant stems at an angle rather than straight across. Similar to having a slanted roof, rather than a flat one, that angled cut ensures that rain runs off the cut. This helps minimize fungal risks for prone plants.

It is also very easy to transmit disease from one plant to another through the use of garden tools. Disinfect your scissors or pruners with a solution of 1 tablespoon bleach to 1 gallon water before you make your first cut. Disinfect again between plants.

Only take cuttings from healthy plants. Check for signs of stress such as discoloration of the leaves, dry stem tips, and excess insect damage before cutting.

2. Avoid the Flowering and Fruiting Stems

Plant stems that are flowering or fruiting are usually not suitable for cuttings. This is because those stems are putting all their energy into flower and seed production. So, there won't be as many natural hormones in the plant to encourage root growth.

Take cuttings before or after the flowering and fruiting time frames. For some plants, such as grape vines or roses, not all the stems are flowering or fruiting at the same time. You can still take cuttings from the stems that are not currently in production and get good results.

Also, some vigorous growing plants will still root while flowering. But it will take longer and often the resulting plants will grow slower at the outset.

3. A Note on Nodes
In general, you'll want to make sure your cuttings have at least 4-6 nodes. Nodes is merely a fancy term for the spot on the stem where the leaves grow.

4. The Long and Short of Cutting Length
You also want your cutting to be at least 2 inches long and closer to 4 inches if possible. For some plants, it's hard to get 4 inches of soft-wood.

Instead, for example, is a compact lavender that only puts on a couple of inches of growth per year. So, my cuttings from those plants are usually a little less than 2 inches. Meanwhile, grape vines often have a couple of inches between nodes, so those cuttings might be longer than 4 inches.

How to Cut Stems for Plant Propagation
Now, let's get down to the business of making new plants.

1. Disinfect your tools
Dip your scissors or pruners in your disinfectant before cutting.

2. Make the cut
Make the stem cut about a ¼ inch below the bottom node on the section that will become your stem cutting.

3. De-leaf your cutting
Remove the leaves from the bottom half of your cutting. Make sure that section includes at least two nodes.

Some people remove the top leaves too. Personally, I like to leave them on because many of my plants root so fast that the leaves survive and begin growing again.

4. Keep cuttings moist
Wrap the leaf-less ends of your cuttings in a wet paper towel or cloth to keep them moist as you collect more cuttings. Do not let your cuttings dry out. Ideally, you'll want to use them within few hours of harvesting.

5. Tip on Labeling
If you are taking cuttings from multiple plants, make sure you label the cuttings in case you can't remember what they are. This is especially important with hardwood cuttings as there is no leaf growth to remind you what you cut.

How to Start Plants from Stem Cuttings
Now, that you've got your cuttings, let's get them planted so they can start to root.

1. Prepare a pot with planting medium
Any container with drainage holes that can hold a few inches of planting medium will work for this purpose.

Water your medium thoroughly before use. This compacts it a bit so it will hold your root cuttings upright. It also prevents your cuttings from floating up after you set them.

2. Apply rooting hormone

If you are using a powdered rooting hormone, pour some out into a separate container. Dip the bottom node of your cutting into the powder.

Tap your cutting gently to shake off extra powder. You only want a fine coating of the powder on the stem. Discard the unused rooting powder that you dipped your cuttings into to prevent cross-contamination.

If using willow tea, soak cuttings for a few hours in advance of rooting.3. Poke a hole in your planting medium and plant

You can use a pencil, chopstick, or dowel stick to poke a hole in your planting medium. By poking the hole first, you prevent the rooting hormone from rubbing off as you insert your cutting into the planting medium.

You can put multiple cuttings in each pot. Just make sure to leave a 1-2 inch diameter around the base of each cutting for proper air circulation to prevent mold problems.

4. Cover your cuttings with a plastic bag
In hot, humid environments, this step may not be necessary and may increase the risk of mold. It may also add too much heat. Use your own judgment about whether to use plastic.

5. Water as often as needed

Once you know how to start plants from cuttings, it's a great way to expand your garden. You can also use this skill to grow plants to share with friends and family and give as gifts.

When you get good at this, you can make a little extra money by offering plants for sale at a local farmers market. Most states do require that you have a plant lice

LESSON PLAN #3

Garden Lesson Plan Class Garden Grade Levels: K-8 Objectives

Materials needed:

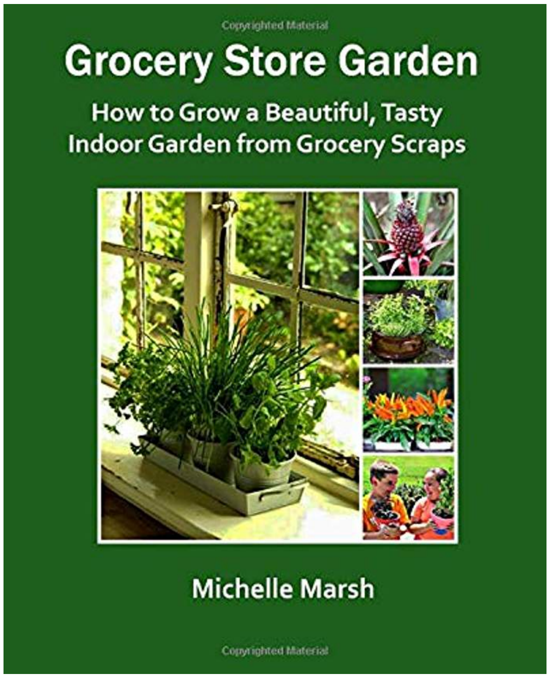
- Literature from this packet on How to Propagate Longevity Spinach
- Cuttings of Longevity Spinach following procedures from How to Propagate Longevity Spinach
- Root tone
- Recycled plastic garden pots
- Paints, stickers, and colored markers to decorate garden pots

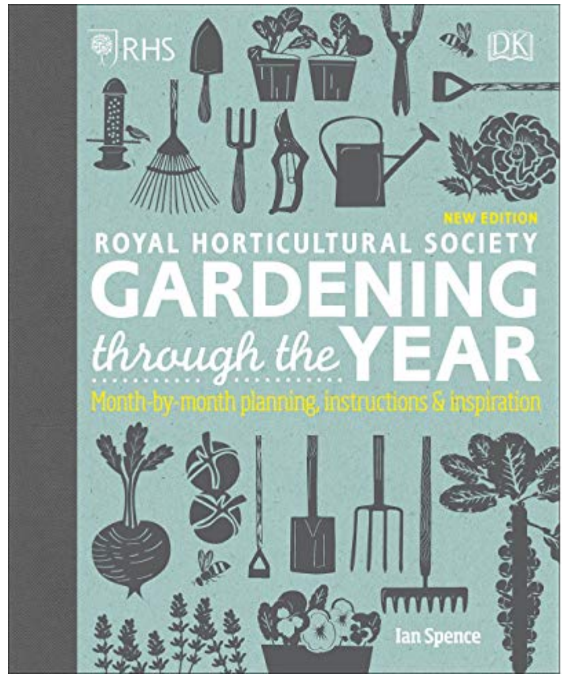
Procedures:

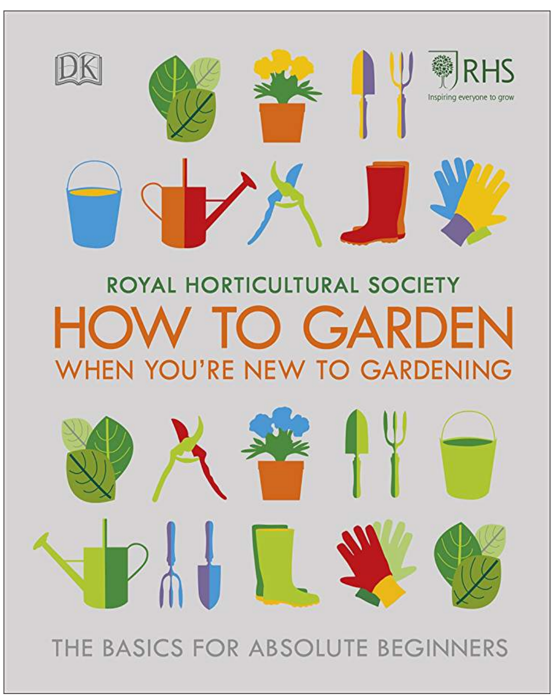
1. Follow procedures from How to Propagate Longevity Spinach to develop the cuttings.
2. Several days before planting, encourage the children to add in the dirt with their tools and shovels washing and decorating their recycled plastic garden pots.
3. Have the students put soil in the plastic pots and water them.
4. Put the pots on the window sill in the classroom where they can get adequate sunshine daily for around 21 days.
5. When ready the students will "harvest" their longevity spinach and eat them for snack.
6. Students will take cuttings home after their snack to convince family to taste.
7. After a reasonable amount of time, the student will take their plants home to share with their family and possibly start more propagation of the Longevity Spinach at home with the family.

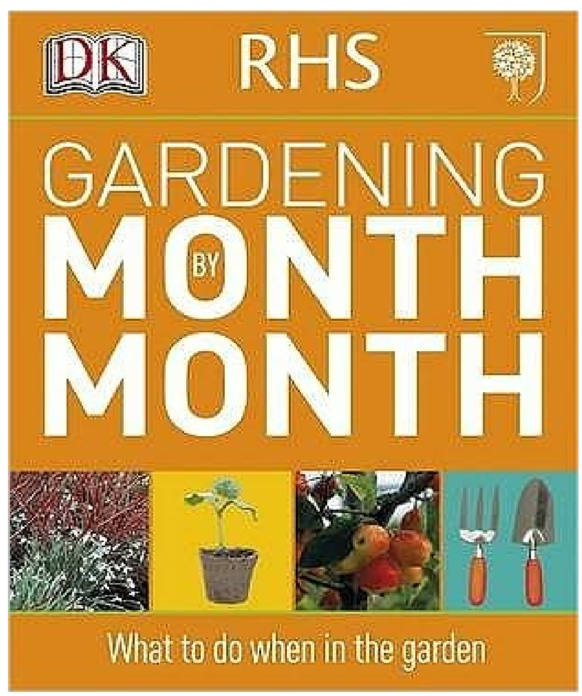
Resources

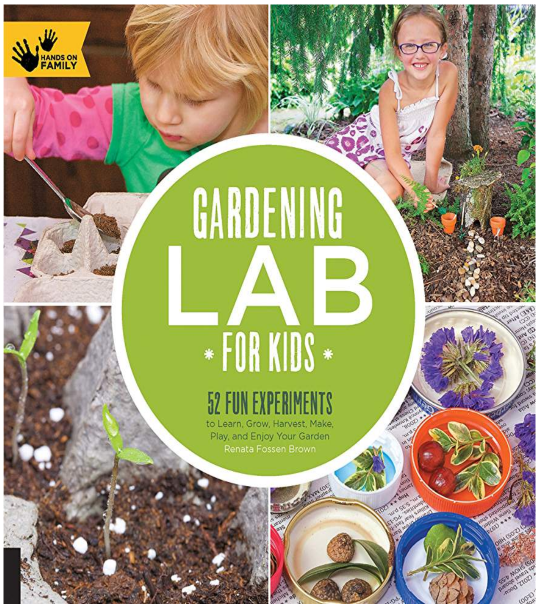
TEACHER RESOURCE BOOKS FROM AMAZON

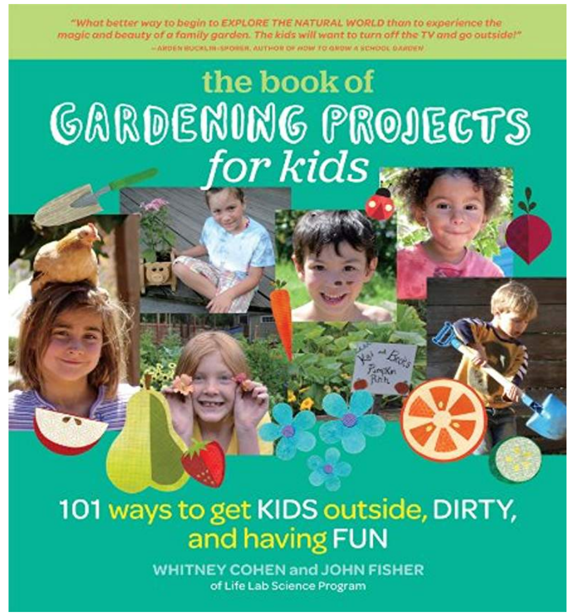


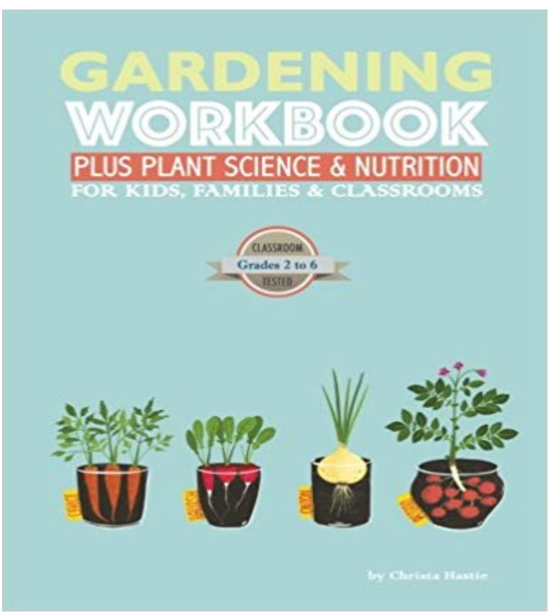


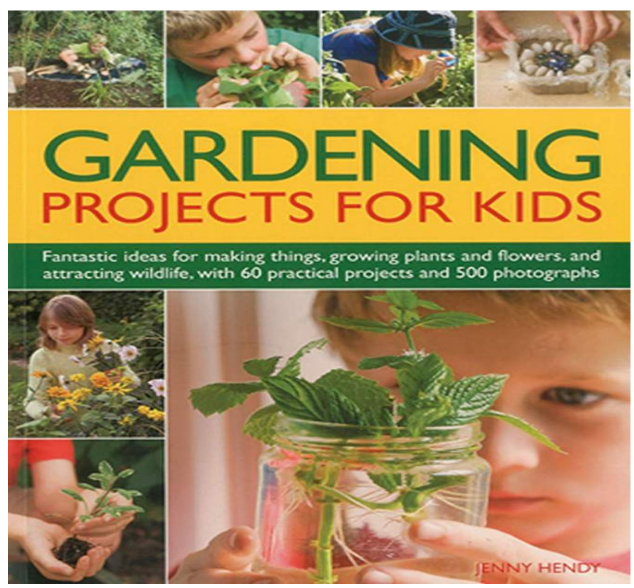





HANDS ON FAMILY
GARDENING
LAB
FOR KIDS
52 FUN EXPERIMENTS
to Learn, Grow, Harvest, Make, Play, and Enjoy Your Garden
Renata Fossen Brown


"What better way to begin to EXPLORE THE NATURAL WORLD than to experience the magic and beauty of a family garden. The kids will want to turn off the TV and go outside!"
the book of
GARDENING PROJECTS
for kids
101 ways to get KIDS outside, DIRTY, and having FUN
WHITNEY COHEN and JOHN FISHER
of Life Lab Science Program


GARDENING
WORKBOOK
PLUS PLANT SCIENCE & NUTRITION
FOR KIDS, FAMILIES & CLASSROOMS
CLASSROOM
Grades 2 to 6
TESTED
by Christa Hastie


GARDENING
PROJECTS FOR KIDS
Fantastic ideas for making things, growing plants and flowers, and attracting wildlife, with 60 practical projects and 500 photographs
JENNY HENDY

Great You Tube Videos

- How Gynura Procumbens Longevity Spinach Look Year Round
- https://www.youtube.com/watch?v=QWe6igdnfkY
- SECRET TIPS TO CLONING PLANTS IN WATER: 10 EASY GARDENING IDEAS
- AND HACKS
- https://www.youtube.com/watch?v=lLvgE6ouNBA
- Superfoods! Growing Longevity Spinach (Gynura procumbens) Plus Recipe
- https://www.youtube.com/watch?v=_EAhR7LPH60

Internet Resources

- Florida Agriculture in the classroom- http://faitc.org/ Back Yard Urban Gardening-
- http://backyard-urbangardening.blogspot.it/2011/03/why-plant-garden.html CPALMS-
- http://www.cpalms.org/Public/ Growing Minds- http://growing-minds.org/lesson-plans/
- School Garden Weekly-http://schoolgardenweekly.com/tag/lesson-plan
- Teacher Vision -https://www.teachervision.com/plants/lesson-plan/
- Better Homes and Gardens http://www.bhg.com/gardening/plans/vegetable/vegetable-garden-plan