

# Garden Architect: The Secret Life of a Spring Garden

## Lesson Overview

In this lesson, Olivia will transform into a botanist and a garden designer. She will discover what makes plants "tick," learn the secret stages of a plant's life, and design her very own spring garden plot.

## Learning Objectives

- **Identify** the five essential things plants need to grow (L.A.W.N.S.).
- **Describe** the four main stages of a plant's life cycle.
- **Design** a garden map that accounts for spacing and sunlight needs.
- **Demonstrate** proper planting technique by starting a "seed nursery."

## Materials Needed

- A variety of seed packets (e.g., sunflowers, radishes, lettuce, or marigolds)
- A sheet of graph paper or plain paper
- Colored pencils or markers
- A ruler
- Small pots, egg cartons, or "biodegradable" cups
- Potting soil
- A spray bottle with water
- Small sticks or popsicle sticks for labels

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## 1. Introduction: The Magic Within a Seed (The Hook)

**The Scenario:** Imagine you are a tiny seed the size of a freckle. You are buried in the dark, cold ground. You have no map, no flashlight, and no snacks. Yet, in just a few weeks, you will turn into a towering sunflower or a crunchy carrot. How do you do it? Today, we are going to unlock the "Superpowers" of plants and plan a home for them to grow!

**Discussion:** If you were going to build a "dream house" for a plant, what things would it absolutely need to have inside?

## 2. Body: The Science of the Garden

### I Do: The L.A.W.N.S. Framework (Instruction)

To be a successful gardener, you must remember the acronym **L.A.W.N.S.** These are the five things every plant demands:

- **L - Light:** The sun provides energy (food) through photosynthesis.
- **A - Air:** Plants "breathe" carbon dioxide just like we breathe oxygen.

- **W - Water:** It carries nutrients from the dirt up into the leaves.
- **N - Nutrients:** Think of this as "plant vitamins" found in the soil/compost.
- **S - Space:** Plants don't like to be crowded! They need room for their roots to stretch.

## **We Do: The Journey of the Seed (Guided Practice)**

Let's look at the back of your seed packets. Together, we will identify the "Life Cycle" stages we expect to see over the next few weeks:

1. **Germination:** The "Wake Up" call. The seed absorbs water and the first tiny root breaks out.
2. **Seedling:** The "Toddler" phase. The first tiny leaves (called cotyledons) reach for the sun.
3. **Vegetative:** The "Growing" phase. The plant gets tall and strong, growing many leaves.
4. **Flowering/Seeding:** The "Legacy" phase. The plant makes flowers and new seeds to start the cycle over again!

*Check for understanding:* Olivia, look at the packet for [Seed Name]. How deep does it need to be buried? How much space does it need between its neighbors?

## **You Do: The Garden Designer & Nursery (Independent Practice)**

### **Activity A: The Map**

Using your graph paper and colored pencils, draw a bird's-eye view (looking down from a helicopter) of your garden plot.

- Use the ruler to mark out sections.
- Label where the "Tall" plants go (so they don't shade the short ones!).
- Color-code your map so you know where the flowers are vs. the vegetables.

### **Activity B: The Planting**

Now, let's start your nursery!

- Fill your pots 3/4 full with soil.
- Poke a "finger-tip" deep hole (check your packet for exact depth).
- Drop in 2 seeds (just in case one is a "sleepy" seed).
- Cover gently with soil and give it a "gentle rain" with the spray bottle.
- Create a label stick with the plant name and today's date.

## **3. Conclusion: The Garden Pledge**

**Recap:** What are the five things we need to provide for our new "green roommates" (L.A.W.N.S.)? Which stage of the life cycle are our pots in right now?

**Closure:** Gardening is a lesson in patience and observation. Your mission is to check your "nursery" every morning. When you see the first green "elbow" poking out of the dirt, you have successfully mastered Germination!

## Success Criteria & Assessment

### Success looks like:

- A completed garden map with at least 3 different types of plants labeled.
- Accurate identification of the L.A.W.N.S. requirements during the recap.
- Seeds planted at the correct depth according to the packet instructions.

**Formative Assessment:** Ask Olivia: "If a plant's leaves start turning yellow and the soil is very dry, which part of L.A.W.N.S. is missing?"

**Summative Assessment:** The Garden Map serves as the final project, demonstrating her ability to plan for the spatial needs of various plants.

## Adaptability & Extensions

- **For an extra challenge:** Research "Companion Planting." Which plants are "best friends" (like tomatoes and basil) and should be planted next to each other?
- **Scaffolding for younger learners:** Provide a pre-printed "Life Cycle" coloring sheet to fill in while discussing the stages.
- **Digital Option:** Use an online garden planner tool or take a "time-lapse" photo every day of the pot to create a movie later.