

Activity: Harvesting Goal: Sensory Populations: All

## TH Activity Plan –Spots, Dots & Stripes on Variegated Leaves

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### Materials

Chart, pencils, clipboard,  
container (for leaf samples)

Leaf samples

Gloves, wipes



**ACTIVITY DESCRIPTION:** Participants will gather, observe & compare variegated leaf coloring & patterns, expanding their horticulture knowledge.

### THERAPEUTIC GOALS:

**Cognitive/Intellectual:** Expand horticulture knowledge, specifically about variegated leaves; compare, contrast & categorize leaf colors/patterns/plants

**Physical:** Improve range of motion; improve vestibular balance

**Psychological/Emotional:** Practice social emotional learning in group setting; self-initiate task of what leaves to gather

**Sensory:** Strengthen observation skills & visual processing; strengthen proprioception when picking leaves; attend to seated activity following sensory activity

**Social:** Use conscious discipline & positive action strategies for self-regulating behavior; discuss tolerance & acceptance of different people & plants; demonstrate responsible decision-making

### STEP-BY-STEP PROCESS:

1. **Pre-Session Preparation:** Pre-determine what plants can be examples for this activity. Walk the garden checking for safety & accessibility prior to session. This would be fun & educational as a field trip to a public garden or nature area.
2. Facilitator begins session by inviting group to the outdoor search party looking for leaves that have spots, dots or streaks. A few examples are shown. Any poisonous leaves/plants are identified at this point.
3. Larger group is divided into smaller groups. One chart/clipboard per group & collection bag are distributed. Some rules are presented (physical boundaries, duration of leaf gathering segment, one leaf per example). Volunteers should be available in the area or with groups.
4. Participants meet back at starting point, tallying their charts, before discussion begins in the larger group. Facilitator asks why leaves might have dots, spots or streaks with fact sharing on variegated leaves. Then questions related to number of leaves that have spots, then dots, then streaks, identification of same plant but with different colors, colored veins, or color combinations can expand engagement. Were any leaves from trees or flowers or just shrubs?
5. A deeper discussion, depending on participants, can explore the human condition & variations in hair & skin color, & the role heredity plays in these, relating this to plants' inherited coloring & patterning.

**APPLICATIONS FOR POPULATIONS:** Using sensory inputs, primarily visual cues for leaf patterns and colors can stimulate cognitive observation and develop reasoning, comparison and categorization skills that are particularly important for child/youth development. Used across therapeutic and educational disciplines including speech therapy, comparing and contrasting skills enhance critical thinking skills, promotes higher order thinking, facilitates active and lifelong learning, cultural awareness, and communication skills (Prath, 2025). These skills can be strengthened for all populations including seniors, people with intellectual delays, mental health challenges, and medical conditions like stroke recovery, cancer treatment, [neurocognitive disorder](#) (from drug and alcohol related conditions, infections, depression, autoimmune disease, degenerative disorders, breathing conditions), or mild cognitive impairment. The TH activity can be a relatively simple exercise of gathering leaves, working cooperatively with others, then sorting by color or pattern, or it can be more rigorous if discussion includes horticulture information on variegated attributes. Settings like schoolyards, public gardens, even community gardens can offer larger numbers of plants with variegated leaves.

Vocational horticulture TH sessions can focus on expanding plant knowledge, propagating plant specimens from leaf or vegetative cuttings in subsequent sessions, and horticulture practices hybridizing plants where selected colors, color combinations, or specific markings like spots are part of developing new plants.

Relating plants to humans can be general like counting the number of red leaf types or people with red hair. Or discussions can involve topics of heredity, tolerance of differences (appearance or shapes), or preferences for plants or human characteristics.

**SAFETY CONSIDERATIONS:** Facilitators are responsible for knowing poisonous and toxic plants and plant parts. Avoid poisonous plants, identifying these in pre-walk segment. With special attention paid to plants that can cause dermatitis (the juice, sap or thorns of these plants may cause a skin rash or irritation). Gloves can be provided and their use encouraged.

**NOTES OR OTHER CONSIDERATIONS:** Variegation on leaves can be both color, pattern or even leaf edges, where more than one color is present. Colors can include yellow, white, pink or red, or shades of green. Research has revealed that leaf variegation can be an adaptive function due to cold tolerance (Zhang et al., 2019), or caused by heredity or genetic mutation. [Variegation is usually the result of a cell mutation](#) and can be inherited (genetic) or occur randomly (chimeric). If genetic, the color change is stable if propagated by seed or cuttings. Sometimes a virus will show up as variegation in the leaves. Non-green sections lack the same degree of chlorophyll production as green sections, and thus can be less vigorous than ones without variegation.

Examples include (*Lysimachia punctata* ‘Alexander’) with yellow flowers, pink and green foliage, variegated dogwood shrub (*Cornus alba* ‘Elegantissima’), red salvia ‘Dancing Flame’ has gold spotted leaves, and *Salvia officinalis* ‘Tricolor’ with green, white and purple leaf markings, and *Iris pallida* ‘Variegata’ with yellow and green striped leaves. Refer to [THAD Polka Dot Plant Propagation](#) for list of toxic plants with polka dots.

Name	Description	Numbers Observed	Colors	Spot/Dot/Stripe	Shrub or Flower
<i>May be added after discussion</i>					

**REFERENCES/ RESOURCES:**

Beaulieu, D. (2022). [24 pictures of plants with variegated leaves](#). *The Spruce*.  
 Prath, S. (2025). [50+ amazing speech therapy compare and contrast targets](#). *Bilingualistics*.  
 Zhang, Z., Liu, Z, Song, H. et al. (2019). [Protective role of leaf variegation in \*Pittosporum tobira\* under low temperature: Insights into physio-biochemical and molecular mechanisms](#). *Int J Mol Sci*, 20(19).

Edits were made for THAD purposes in 2025.  
 TH Activity Plan form developed by Lesley Fleming, Susan Morgan and Kathy Brechner (2012), revised in 2024.