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| Lesson Title and Summary |

**Making and Planting Lettuce Seed Strips**

The children will make lettuce strips. After the strips have dried, they will plant the lettuce strips in the garden. If possible, the children will return to the garden to harvest the outer leaves of lettuce.

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| Learning Goals/Objectives (measurable outcomes) |

The children will be able to name at least three things that plants and people need to survive.

The children will be able to report which is more nutritious; head lettuce or leaf lettuce.

The children will be able to make seed strips and plant lettuce.

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| Target Grade(s)/Age(s) and Adaptation for other Grades/Ages |

Grade 3, for younger children, have more adult helpers. For older children, discuss the nutritional value of lettuce; compare nutrition in head lettuce with leaf lettuce and discuss nutrition in dark green leafy vegetables and red/orange vegetables (USDA My Plate).

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| Time required |

30 minutes to make the seed strips.

30 minutes another day to plant the seed strips

(time required depends on the number of children and the number of adult helpers)

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| Preparation, Space Requirements, Personnel needed, Supply List |

Tables on which to make the seed strips and a place to plant the strips. About 1 adult/6 children.

Supplies:

* Newspaper (or paper towels) cut into 1 to 1 1/2 inch strips, 2 strips per child if they will take one home.
* Flour and water paste: start with 1/2 cup of flour, and add water until you have a paste-like consistency that easily coats a spoon without dripping off.
* Cups for paste (depending on desk/table arrangement, one paste cup per 3-4 children)
* Popsicle sticks to dot paste and one with each child’s name to label area lettuce seed strips planted.
* Leaf lettuce seeds and seed packets
* Cups for seeds, one per child (portion cups)
* Rulers
* Pencils or markers to put names on popsicle sticks & newspaper strips, and mark where to place seeds.
* Shaker containers filled with soil to add soil over the strips when planting (Parmesan cheese containers)
* Trays to place strips on to dry and to transport to garden.

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| Lesson instructions |

Intro/Engage the Students: (2 minutes)

Jokes/Riddles: Knock, knock, *Who’s There?* Lettuce! *Lettuce Who?* **Lettuce in and we’ll tell you.**

I have a head but nobody, a heart but no blood, Just leaves and no branches, I grow without wood.

What am I? **Lettuce.**

Knock, knock, *Who’s There?* Lettuce! **Lettuce in, it’s rainy out here!**

Lettuce is the second most popular vegetable in the USA after potatoes.

We grow almost one fourth of all the lettuce grown in the world.

Lesson/Activity: (20 minutes)

1. We are very similar to plants. What do you need to live?

P – **Place**, we need a place to live and soil to grow our food

L – **Light**, sun or artificial light

A – **Air**, oxygen

N - **Nutrients**, we need vitamins and minerals

T – **Thirsty**, we need water

S – **Safety,** we need to be safe

1. What do plants need to grow, most of the things we need (sunlight, water, soil/nutrients)

Discuss safety for plants (construction on rural farmland and rainforest depletion).

1. Compare nutrition in head lettuce with leaf lettuce; discuss dark, leafy vegetables.
2. Pass out lettuce seed packets (remind to keep the packets sealed) and have the children notice the variety of lettuces then have them check the instructions on the back of the seed packets for planting instructions including when to plan, spacing, days to germination (define germination), planting depth, days to harvest.
3. Discuss germination rate and that we will plant more seeds, plant seeds at 3” apart rather than 6”.
4. Demonstrate making a seed strip: Use a ruler to mark the strips at the planting intervals (1”, 4”, 7”, 11”). Dab a very small amount of paste onto the marks (remind children that too much paste will make if difficult for the seed to germinate). Place a seed into each dab of paste.
5. Pass out newspaper strips (you may also want to give the children a full page of newspaper to protect their desks), pencils/markers, paste cups, popsicle sticks, rulers, seeds in portion cups.
6. Instruction children to put their names on their newspaper strips. Then instruct the children to make the marks, dab paste, and place seeds.
7. Have the children put the strips to dry, put away other supplies, and clean-up their area.

**In the garden:**

1. When the paste is completely dry, the seed strips may be planted in the garden.
2. Demonstrate how to plant the seed strips and how much soil to use to cover (1/8 inch, children can find on their rulers).
3. Have adults assist 2 children at a time. Place popsicle stick with child’s name to mark planting area, lay strip down, cover with 1/8 inch soil from shaker container.
4. Water well and keep moist until seeds germinate.

Reflection/Review: (3-5 minutes)

Ask what things that plants and people need to survive.

Ask which is more nutritious: head lettuce or leaf lettuce.

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| Vocabulary |

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| germination | spacing |
| sow | sprout |
| depth | harvest |

Lesson plan developed by Barbara Nordstrom, WSU Master Gardener April 2015