Fun with Food in the Garden

Monday, July 25th - Garden Planting

Location(s): Various plots

Learning Objective: Students will understand what a seed needs to grow

Activities in 3 small groups

Supplies: clipboard, paper pencil, Garden hoe, rake, popsicle sticks, hand trowel, seeds, label and marker

Start with have campers recall the rules

* Move slowly
* Walk on the mulch or the grass
* Treat everyone and everything with respect
* Always ask before picking plants
* Wait for the whistle to move

Today we will be planting seeds.

1. Start with open ended question about planting, share some stories
2. Identify the area that the students will be working in.
3. Take a minute to make observations
4. Demonstrate  planting of the seed
5. Assign roles for each person in the group to work together
	1. Marker
	2. Shoveler
	3. Planter
	4. Coverer
	5. Labeler
	6. Waterer (s)
6. At the end, group discussion:
	1. After all groups have finished bring the group back together to go over what this plant needs to grow and be healthy?
		* 1. Water - How does water help the plant grow?
			2. Sun - What does the sun do for the plant?
			3. Nutrients in the ground - Why do we plant the seeds in the ground and not lay them on top?
			4. Air - What is in the air that helps the plant grow?
	2. Take it a step further.
		* 1. What does your body need to grow and be healthy? (where do nutrients come from?)
			2. What does your group need to grow and be healthy?
			3. Expand- family, community, etc.

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Tuesday, July 26th - Composting

Location(s): Compost station

Learning Objective: Students will understand decomposition and food waste

All together- web of life activity with compost as per [ecosystems](https://docs.google.com/document/d/1h-5AXrX0xv-5b2JNdgaPaBzFIj5yMPBtlfEqDhNfgmg/edit)

Start with have campers recall the rules

* + - Move slowly
		- Stay on the mulch or the grass
		- Treat everyone and everything with respect
		- Always ask before picking plants
		- Wait for the whistle to move
1. Small groups. Start with open ended question about compost.
2. Take a minute to make observations
	1. Compost recipe - green, brown, water
	2. Possibly make a chart or diagram in their notebooks
	3. What do you notice about the compost?
		1. Use the 5 senses - what do you see, smell, feel, etc.??
3. Demonstrate compost
	1. Choose greens and browns
	2. What different greens and browns can you use?
	3. What don’t you want to use and why??
4. Game - compost ID/bingo
	1. Have flashcards with different bugs found in compost and see if they can identify them
	2. Compost/trash/recycle sort
		1. Have cut outs with different objects and have them decide and sort which object goes into which bucket
5. Make a small compost bin that they can use the rest of the week??
	1. Have them construct and decorate the bin
	2. OR\*\* have them make individual compost bins <http://www.gardeningknowhow.com/special/children/composting-ideas-for-kids.htm>
6. Pokemon Go- bugs in the garden…
	1. Make up characters for each kind of insect you can observe in the garden (fruit fly, big black neon native bee, honey bee, bumble bee, tiny native bees, wasps, flies, spirders, ground beetles, others..)
7. If you find a worm
	1. [Wriggling wigglers](https://docs.google.com/document/d/1Ga-HoWqW7YP2i9W-L1_cA07LrfBRXgdF211WS5NvfhQ/edit)
8. At the end, group discussion:
	1. Why is soil important to the garden?
	2. ask students if they see anything in the garden that they have already learned about.
	3. what a ladybug does to help the garden (eat insects, aphids in particular, which can suck nutrients and juices out of a plant) and how the ladybug depends on the garden to live.  (The aphids eat the plants, and the lady bugs eat the aphids).

Fun with Food in the Garden

Wednesday, July 27th - Permaculture

Location(s): Permaculture section,

Learning Objective: Understand the benefits of permaculture, Three Sisters Plot

1. All together- discussion: We’ve already learned about planting, and even done some planting ourselves, but there’s a good reason we plant things where we do.
	1. (Show Three Sisters)--How do these plants work together in order to be successful?
	2. (Show Permaculture)--This plot is supposed to imitate nature...How does nature work?
		1. What do we see in this section?
		2. Look for bugs--how do they help? - Especially bees. Talk about pollination helping the plant, nectar helping the bees (and helping us because we get honey)--Define synergy (it’s a beautiful word)
2. Games to emphasize cooperation:
	1. Human knot (cooperation and interdependence)
	2. Yarn around the room--one thing you like to do, throw the yarn to someone that likes the same stuff (web, connections)
		1. Supplies: yarn, cards for the “web of life”
	3. Break into teams, see who can build the tallest marshmallow/spaghetti towers--it can’t fall (teamwork)
		1. Supplies: marshmallows and spaghetti noodles

Next Step:

* Plan a garden. Get into groups and plan a garden based on what we’ve learned today.
	+ Paper
	+ Pencils/Crayons/Markers

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Tuesday, July 26th – Harvesting (Potatoes)

Harvest potatoes- 3 beds. - Digging for hidden treasure

Three heirloom varieties of potatoes planted: - find labels to tell stories

Lay them out on a blanket in the sun - 30 minutes to cure in the sun on each side

Do activities while they dry and then flip them

[Potato harvest tips and facts](https://www.youtube.com/watch?v=Z0ey4hk8gwI&index=7&list=PL3VEy0_tuFgSA596wd13Ka2UfA3Pw0S1s)

Location(s): Potato plot

Learning Objective: Students will understand life cycle of potatoes, nutrients of potatoes

Activity in small groups - teams, work together to harvest potatoes

1. Start with open ended question about potatoes –
	1. what is your favorite way to eat potatoes?
	2. Can you name different varieties of potatoes?
2. Identify the area that the students will be working in. - can they guess which plants are the potatoes?
3. Harvest and lay potatoes in the sun
4. Take a minute to make observations
	1. What do you notice before we get the seeds?
	2. Talk about what part of the potato is the seed - have a seed potato to show them so they understand the whole life cycle
5. group discussion:
	1. After all groups have finished bring the group back together to go over what this plant needs to grow
		1. Water - How does water help the plant grow?
		2. Sun - What does the sun do for the plant?
		3. Nutrients in the ground - Why do we plant the seeds in the ground and not lay them on top? Talk about the nutrients of potatoes and where the nutrients are located in the plant
		4. Air - What is in the air that helps the plant grow?
	2. Life cycle of a potato - seed, plant, new potatoes
		1. <https://s-media-cache-ak0.pinimg.com/736x/a2/e8/a5/a2e8a5e37c2a61ba1f969420faeb0e1b.jpg>
		2. Have them draw the life cycle in their notebook??
		3. Talk about potato diseases - what is happening and what to do to prevent disease
	3. Preparing and Eating Potatoes
		1. Talk about ways different countries prepare potatoes
		2. Nutritional information for different foods, e.g. French fries
6. Game
	1. true/false trivia game based on potato facts - one side of a line is true and one side of the line is false
	2. <http://www.sciencekids.co.nz/sciencefacts/food/potatoes.html>
	3. <http://www.potatogoodness.com/nutrition/>

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Friday, July 29th – Seed Saving

Location(s): various

Learning Objective: students will understand the life cycle of a plant and preservation of genetic diversity

Activity in three small groups

Supplies: paper bags, sharpies/markers

Start with have campers recall the rules

1. Start with open ended question about seeds
	1. What do we know about seeds?
	2. What kinds of seeds have we seen?
2. Identify the area that the students will be working in.
3. Take a minute to make observations
	1. What do you notice before we get the seeds?
4. Demonstrate seed saving techniques for the plant chosen for seed saving
	1. Peppers, dill, daikon radish, lettuce if ready
	2. Show tomato seed saving technique--maybe later
5. game--The first group to fill their baggie to “this line” (line on bag) wins
6. Assign roles for each person in the group
	1. Three designations in each group
		1. Labeler (can also be a collector)--label with month and year, type of seed, and “Central College Garden”--If they want to all put their initials on the other side, they could
			1. Baggie, marker
		2. Collectors--collect the seeds
			1. For peppers, will need paper plate.
			2. For lettuce, there can be some “collectors” who blow on the fluff to get the seeds separated.
7. At the end, group discussion:
	1. After all groups have finished bring the group back together to go over what we’ve learned about seeds, the benefits of saving seeds from a garden
		1. Why do we save seeds? How does that help us?
		2. Seed ID quiz--what seeds are these? ...and these?
		3. In some fruits, it’s very obvious where the seeds come from, like with apples or oranges or pumpkins. Can we think of any that aren’t so obvious?
			1. Celery, carrots, potatoes, bananas, etc.
			2. *All* plants produce seeds! (Even the ones we don’t think about producing seeds, like those we listed) We just don’t always see the seeds in the grocery store
8. Next Step: Show them other seed saving techniques--tomatoes

**Wrap up:** Ask students how different elements about which they’ve learned in previous lessons or elements about which they have common knowledge connect to each other.  For example, “Why is soil important to the garden?” “Why are plants important to us?” “What happens if it doesn’t rain?”