

## Mohala Activity Plan Template

**Name of Activity:** Transplanting seedlings

**Learning Goal:** It is my hope that the children participating in this activity will acquire an understanding that as plants grow larger and change and mature their roots also grow longer and require more space in the soil. Children may be able to label the parts of the plant and the steps of transplanting a seedling.

**Chosen Because:** This activity is a part of a large-scale science unit (seed to plate/plate to seed) taking place across the school year (providing interest of the children is sustained as we go along). From the beginning of the school year we have been doing small group activities that are aspects of the seed to plate curriculum. Transplanting seedlings is the next step in one of the ongoing projects within the larger curriculum. Previously the children planted tomato, cucumber, and carrot seeds into biologically friendly containers that can easily be transplanted into the earth. We attempted to grow the seedlings indoors to make their daily growth and care easily accessible. Unfortunately the seedlings were not getting adequate sunlight so the children problem solved how to provide the sun that the plants needed to grow and we brought them out to the garden. Now many of the seedlings are thriving and ready to go into the ground.

**Place-Based:** The seedling transplanting activity is place based in that our school has a garden that is intentionally accessible to children. The garden is a part of our schools focus on outdoor learning and sustainable living. Additionally I believe wholeheartedly that providing rich and meaningful experiences in which children can involve themselves with the natural world has an enormous influence on the world we live in, specifically connected to environmental consciousness. How can children be expected or encouraged to protect and respect the earth and its natural resources without hands on experiences allowing them to 'fall in love' with it.

**Background:** The children have experience planting seeds in the classroom and the focus goal of that activity revolved around what seeds need to sprout and grow. We focused on soil, water, and sunshine. We have visited our seeds in the garden and have talked about how they have grown. Additionally a second project in the science unit was the process of growing bean sprouts. We planted some of the sprouts into the soil and have been caring for them as they grow. This week prior to the activity the children will be introduced to the parts of a plant in whole group discussion as well as in small groups and with individual children in the science center as we care for plants. During this discussion information will be provided about the parts of the plants growing both up from and into the earth.

**Standards/Benchmarks/Performance Indicators:**

The transplanting seedling activity will focus on the following Hawaii State Preschool Content Standards in Domain IV/Science:

**Standard 1: Increase sensory awareness.**

Children will *Explore and experiment using various sensory media in play* as they dig in the soil to make holes for transplanting the potted seedlings.

**Standard 3: Explore physical properties of the world.**

Children will *Explore and begin to identify changes that occur in natural and man-made materials over time* through hands on experience with the plants that were once just seeds.

**Standard 4: Explore characteristics of living things.**

Children will be able to *explore the nature of life through observation of and interaction with a variety of plants* and they may notice *similarities, differences, and categories of plants*. Children may *notice and ask questions about growth and change in plants*.

**Indicators for Learning:**

It is my hope that following this activity during the debriefing the children will be able to articulate why we planted the seedlings into the earth rather than leaving them in the starter pots. This direct questioning is a clear method of assessment. I will ask the children why we put the pots into the ground. Soon after this activity we will be transplanting other plants (mung beans) into the garden and in this activities briefing as well as during the activity itself I will be able to reassess the children's understanding through questions and dialogue. During the activity itself there may be an observable assessment correlation as the children are digging their holes for transplanting. Will they dig a deep enough hole to place the seedling without direct instruction?

<b>Learning Format (Preschool) or Phases (K-3<sup>rd</sup> Grade)</b>	
<p>During this time the class will have just transitioned indoors from the playground for a whole group gathering. Following the whole group gathering in which we greet one another as a classroom ohana. Following this daily routine I will introduce a visual cue that shows the parts of the plant (roots, stem, and leaves) and singing a newly introduced song with them about the parts of the plants.</p> <p>If this proves to be too tricky to do in a large group then I will save the song for the small group of 3-4 children whom I will invite with me to the My teaching partner and possibly a student assistant will remain in the classroom with the rest of the children for child chosen center activities.</p>	<p>I am choosing to make an effort to introduce the visual chart and the related song to the whole group because the transplanting seedling activity is a part of a larger project of which nearly all of the children have been interested in. I want to maintain whole group participation if possible and following this CREDE activity I will invite different children on different days to join me in the garden for transplanting seedlings. I am choosing to work in small groups for the actual hands on portion of the activity because I am best able to engage children in complex thinking and potentially instructional conversations in a small group. The Hoku children are still developing their ability to focus in whole group gatherings.</p>

**Activity Description:** The children will have a brief conversation about why we are transplanting the seedlings and then we will transplant the seedlings. After cleaning up we will recall the steps we took.

**Steps for teacher/children**

<b>Time</b>	<b>Setting</b>	<b>Activity Description</b>	<b>Materials</b>
9:45	Outside under tree in grass near to the garden	<p><b>Briefing:</b> If the chart was introduced at whole group then I will use it in partnership with the seedlings to be transplanted. We will use the chart as a reference to label the parts on each of the plants. I will be using questioning as a form of assistance to get the children thinking and to frame the learning experience. I will ask the children, "Where are the roots? Can we see the roots? Our plant grew out from the seed and our plant has leaves. Do you think that the roots have grown too? Why/why not? Do they have enough space?"</p> <p>(CREDE Standards: LLD, CTX, CT)</p>	Chart showing plant parts. A potted cucumber seedling, a potted tomato seedling, and a potted carrot plant.
10:00	In the Garden	<p><b>Teaching Steps:</b> Following the briefing I will lead the children to the garden where I will model the procedure for transplanting a seedling into the earth using a trowel to dig a hole into the earth, followed by placing the pot into the hole and gently using the trowel to cover the potted seedling, and finally watering the transplanted seedling. I will employ cognitive and task structuring at each step so that the children are following the step one at a time before we move onto the next step together. During the process of transplanting I will employ questioning as a form of assistance in an effort to engage complex thinking and also to reinforce the activities learning goal.</p> <p>(CREDE Standards: JPA, CTX, CT, IC, MD)</p>	Seedlings, trowels, watering cans, hose.

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10:30	Under tree	<p><b>Debriefing:</b> After we clean our trowels and return the watering cans to their hooks we will gather under the tree where we held our briefing. I will ask the children to help me make a list of the steps we took to transplant seedlings so that other Hoku friends will know what to do when it is their turn. I will write down the children's words so that we can later share them with the whole group. I will ask the children why we transplanted the seedlings in an effort to assess the activity's learning goal. (CREDE Standards: JPA, LLD)</p>	Paper on a clipboard and a marker.
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**CREDE STANDARDS**

Please write how you will (if you will) implement the following standards. Indicate (Ex. with asterisk) which standards will be your focus for this lesson.

CREDE STANDARD	How it will be used	Target Score
<p><b>JPA</b> Joint Productive Activity</p>	<p>Children will work in collaboration with myself and also with one another to transplant the seedlings that we planted as a class. I will assist this collaboration using multiple forms of assistance including modeling procedures and positive social behaviors, providing clear instruction on how to follow the steps, and sequencing the steps so that the group is working at a collaborative pace. Children will also participate in creating a document to share with peers to use as assistance for their transplanting experience.</p>	4 *
<p><b>LLD</b> Language &amp; Literacy Development</p>	<p>Children will be introduced to new vocabulary (parts of the plants, trowel, transplant, seedling) and this new vocabulary will be utilized appropriately throughout the activity as well as during the briefing and the debriefing. Learning the new</p>	5 *

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	<p>vocabulary is a goal of this activity and will be a secondary focus alongside the primary goal of conceptualizing root growth. Language expression will be encouraged during the briefing through complex thinking questioning and other forms of assistance such as direct feedback and modeling appropriate language to describe observations and theories. The focus on language and literacy will be throughout the activity and done in a developmentally appropriate manner as children experience what they are learning. Depending on how the children respond I will adjust the approach I take to scaffold individual children in their understanding.</p>	
<p><b>CTX</b> Contextualization</p>	<p>Being that this activity is part of a science unit and therefor other activities have been intentionally sequenced before this one contextualization is a major aspect of this activity. During the briefing and the activity period I will be referring children to recent activities that involved planting seeds and growing plants to further build on existing concepts. Children have had many personal classroom experiences (planting the very seeds we will be transplanting, growing sprouts and planting the sprouts we grew) to build upon with this transplanting experience. Some of the children have gardens at home and I will invite them to think about and share those experiences as well. In recalling how plants grew and changed in the classroom and</p>	<p>5 *</p>

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	<p>engaging them in dialogue about what they already know conceptual understanding will be reinforced. In an effort to integrate new information with existing knowledge I may ask the children questions such as, "What happened to the sprouts when they came out of the mung bean? How did the mung bean change? Was there enough space in the jar for the mung beans to grow? What part of the mung bean did we put in the soil to grow new mung bean plants? What about the sprouts we didn't put into the soil, did they turn into a plant or stay a sprout? Why do you think they didn't turn into a plant?"</p>	
<p><b>CT</b> Complex Thinking</p>	<p>During the briefing and the activity I will use questions that encourage complex thinking. I will ask the children Why they think the seedlings need more space? I will ask them to think about what is happening to the roots under the soil and why they think it is happening. I will ask them what they think might happen to the plants if we don't put them into the ground and instead keep them in the small biodegradable pots. As the conversation flows I will respond to children's ideas and theories in a way that encourages them to think further even if they do not have an answer. I will model inquiry and curiosity through questioning and when appropriate I will provide answers to the questions posed.</p>	<p>3</p>
<p><b>IC</b> Instructional Conversation</p>	<p>During the activity I will engage children in dialogue by questioning their understanding listening carefully to their response and assess their understanding of the learning goal,</p>	<p>3/4</p>

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	<p>namely why the seedlings need to be planted into the earth. I will also ask children why they think what they think to lay a foundation of reflective thinking/metacognition. For example if a child is able to tell me that we are putting a cucumber seedling into the ground so that there is more space for the roots to grow I may ask them why they think that the roots need more room to grow.</p>	
<p><b>MD</b> Modeling</p>	<p>I will model the procedural steps of transplanting the seedlings as well as thinking processes that encourage inquiry for the children during the activity. I will be transplanting a seedling with the children and showing them step by step how to do it. As the children practice these steps while transplanting a seedling I will assist them in following the steps. The type of assistance used with each individual child will depend on what they are able to accomplish with out assistance. If possible I will ask children to assist one another or notice how their peers are engaging in the activity.</p>	<p>4 *</p>
<p><b>CDA</b> Child Directed Activity</p>	<p>Participation in the seedling transplanting activity will be a choice for children and the alternative will be to engage in other classroom activities. Children will not be forced to participate. I will participate in the activity with the children. Within the activity itself there will be some room for choice. For example the children will choose what seedling they wish to transplant (carrot, cucumber, or tomato) and</p>	<p>3</p>

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	where in the garden bed we shall put each type of seedling.	
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**Post Lesson Reflections:**

1. Which children met the learning goals? How do you know this?
2. Which children did not meet the learning goals? How do you know this?
3. What aspects of the learning goals were not met?
4. How will you ensure the students will achieve the learning goal?