



JCCs of North America



qinat ha'yeladim

Jewish Children's Garden Curriculum

*developed by the staff of Shalom Children's Center
at the Asheville Jewish Community Center*

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Made possible by a grant from The Covenant Foundation

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Why a “Jewish” Garden for Young Children?

In today’s technological society, most of us are extremely isolated from agriculture. Ask a classroom of preschoolers where the items in their lunch boxes came from, and they will most likely respond with the name of their local grocery store. Press them further, and they can tell you that their milk came from a cow. Well, where did their bread come from? Many of them have probably helped make challah, and can explain that flour is used to make bread. Now, here comes the difficult part. Where on earth did the flour come from? How many students can tell you that flour comes from wheat (or corn or rice or whatever type of flour it may be)? Very few. And, if they know or learn that flour is made from wheat, how many of them have actually seen wheat growing?

We are often miles or states or even countries away from where our food is growing. But, food is not grown in isolation. It is grown in a community. The Jewish community is good at eating, and we are good at celebrating! Every celebration is part of our calendar cycle. In *The Sun, the Moon, and the Seasons*, Debra Robbins writes “Jewish tradition has long recognized that we need the basic cycles of nature in our lives. By heralding the first barley crops on Passover, celebrating the earth’s bounty on Shavuot, and praying for rain on Sukkot, our calendar aligns us with nature’s way. If we embrace it, the Jewish calendar can define the pattern of our lives. In cultivating a relationship with nature, we cultivate a relationship with the One who provides for us” (Berstein, 2000, p. 99). Indeed, we cannot observe Jewish holidays without horticulture.

Historically and Biblically, the Jewish holiday calendar revolved around agriculture. We read about the Biblical origins of some of the Jewish holidays in the Torah. For example, Exodus 34:18 tells us “You shall observe the Feast of Unleavened Bread – eating unleavened bread for seven days, as I have commanded you – at the set time of the month of Abib, for in the month of Abib you went

forth from Egypt.” Likewise, in Leviticus 23:39-40 we read “Mark, on the fifteenth day of the seventh month, when you have gathered in the yield of your land, you shall observe the festival of the Lord to last seven days: a complete rest on the first day and a complete rest on the eighth day. On the first day you shall take the product of hadar trees, branches of palm trees, boughs of leafy trees, and willows of the brook, and you shall rejoice before the Lord your God seven days.” For young children, the very hands-on activity of gardening is one way to make the quite abstract concepts of the Torah, holidays, and the calendar come alive. Showing them a sheaf of wheat or an etrog, or even growing these in your school garden, will tangibly connect them to Passover and Sukkot.

When working with young children, our priority must be developmentally appropriate practice. Children learn best through doing, and they relate to concrete topics much more readily than to abstract concepts. Teachers must understand child development, and they must be careful observers of the children in their classroom. In addition, teachers must be aware of the larger cultural implications when deciding whether or not something is developmentally appropriate. According to the National Association for the Education of Young Children, teachers must consider “what is known about the social and cultural contexts in which children live—referring to the values, expectations, and behavioral and linguistic conventions that shape each of the children’s lives at home and in their communities” (NAEYC, n.d.). Our social and cultural context with our students is Judaism, whether we are working at a Jewish Community Center, a synagogue, or a day school. Jewish values must guide our curriculum.

But, why are Jewish values important? Jeff Jacoby writes, “Contemporary society says, ‘The important thing is to feel good about what you’re doing.’ Judaism says, ‘The important thing is to do good, regardless of what you feel’” (Jewish Values for a

Secular World, 2010). Children who are used to doing good from a very young age will be used to doing good when they are older. And, Judaism really does not give us a choice. We commonly hear the word “mitzvah” translated as a “good deed.” However, a mitzvah is a “commandment.” It is equivalent to the phrase that all children hate to hear from their parents: Because I said so.

The Torah tells us “because I said so” quite often, even regarding gardening. Within Jewish agricultural law, we find guidance on how to live an ethical and environmentally conscious life (Bernstein, 2000). Leviticus 19:9-10 tells us, “When you reap the harvest of your land, you shall not reap all the way to the edges of your field, or gather the gleanings of your harvest. You shall not pick your vineyard bare, or gather the fallen fruit of your vineyard; you shall leave them for the poor and the stranger: I the Lord am your God.” Through agriculture, we learn about our obligations as a community. It is the perfect vehicle to use to teach Jewish values.

Certain Jewish values are more concrete than others, and given the importance of developmentally appropriate practice, these are the ones we have chosen to use for the gardening curriculum. The values mentioned in the garden lesson plans are:

- Bal Tasheet: Do Not Destroy
- G'milut Chasadim: Acts of Loving Kindness
- Hachnasat Orchim: Hospitality or Welcoming Guests
- Hiddur Mitzvah: Beautifying a Mitzvah
- Hodaya: Appreciation
- K'lal Yisrael: All are One
- Lovda U'l'shomra: To Work and Keep the Land
- Ma'asech B'reishit: Miracle of Creation
- Sayver Panim Yafot: Cheerfulness, Pleasant Demeanor
- Shmiat Ha'Ozen: Attentiveness
- Shomrei Adamah: Guardian of the Earth
- Simcha shel Mitzvah: Joy in Fulfilling a Commandment
- Tikkun Olam: Repairing the world
- Tzedakah: Justice

The lesson plans in our gardening curriculum are offered in order from Spring through Fall, as this is the most logical chronology for planting and harvesting a garden. We also offer some sample letters to parents that include activities that we suggest parents engage in with their children at home. These are provided in order from Fall through Spring, as this is the typical school year chronology. We like to think of this seeming disparity as reflective of the two Jewish birthdays we most love to celebrate – the birthday of the trees on Tu B'shevat in early Spring, and the birthday of the world on Rosh Hashanah in the Fall. Finally, we've included a list of online and printed resources that you can refer to for further learning and inspiration.

It is our hope that you will be able to take these lessons, resources, and corresponding Jewish values and use them to nurture a love for Judaism and a love for the earth in all of our children. In *Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder*, Richard Louv writes, “Time in nature is not leisure time; it is an essential investment in our children's health (2005, p. 120). This statement applies to our children's physical, emotional, and spiritual health. As Jewish educators, we are responsible for nurturing all of these aspects.

References

- Bernstein, E. (Ed). (2000). *Ecology and the Jewish spirit: Where nature and the sacred meet*. Woodstock, VT: Jewish Lights Publishing.
- Jacoby, J. (2010). Aish.com: *Jewish values for a secular world*. Retrieved from <http://www.aish.com/jw/s/48909497.html>
- Louv, R. (2005). *Last child in the woods: Saving our children from nature-deficit disorder*. Chapel Hill, NC: Algonquin Books.
- National Association for the Education of Young Children (n.d.). *The core of DAP*. Retrieved from <http://www.naeyc.org/dap/core>.

Design and Implementation of Our Garden Space

As a committee of volunteer parents and interested teaching staff - some with experience in garden design, art therapy, and Judaics - we looked for inspiration. What should a Jewish garden for little and big kids look like? How could we make this garden a place of wonder and hands-on learning, a place that the children would experience as the fruits of their own labor? How would we provide a Jewish lens on nature for the very youngest children?

The Site

Our JCC is in a downtown neighborhood, sitting on the corner of two busy streets. The JCC's outdoor space could hardly be referred to as a campus, consisting of a mulch covered playground, an outdoor swimming pool, a parking lot, and two narrow grassy areas. One of these grassy areas (20' wide x 70' long) had been a little used play yard for the preschool and also featured a paved pavilion area (20' wide x 25' long). Happily, we received permission from the JCC Board of Directors to use this space for our children's garden. Existing structures included chain link fencing and gates, stairs leading to the entrance, and a concrete, landscape block retaining wall along the East side of the garden.

To the South end, down the steps and across a section of the pool deck is the 2-story JCC building. Since this is the end with the teaching pavilion, the building eclipses little of our solar exposure. On the North end, is a huge and noisy industrial HVAC cooler that provides A/C for the entire building. The site is fenced on the West, facing the swimming pool. This western exposure gives plenty of sun, occasionally too intense for comfort for the late afternoon. (Asheville, NC is considered zone 7B.)



Rendering by Sheryll Knight
Asheville JCC Preschool Teacher



Garden Elements

Early in our planning stages, we decided that the garden would be designed to follow the cycle of the Jewish year, with additional sections for Shabbat, Havdalah, and Rosh Chodesh. Incredibly, the site we identified had many elements that lent itself to this idea, and truly inspired us.

At the main entrance to the garden, just before the teaching pavilion was a small unpaved area. This became our Havdalah garden, also known as the Havdalah Matsa. Sweet smelling herbs and flowers are planted here as well as a peace rose. This bed is the separation, or havdalah, the entrance and beginning of the garden as a sacred space.

The cool, dark shade of our pavilion, also at the entrance, was a natural fit to echo the concepts of Rosh Chodesh. We added rain barrels, to collect water from the roof of the Rosh Chodesh pavilion.

Children need a place to dig, and we knew it would be vital to identify a good place for this type of gross motor work in our garden. We identified a spot just next to the pavilion for our “Mt. Sinai” digging mound. The kids are empowered to learn to use a shovel and dig holes. This is a place to bury stuff as well as look for worms. The mound is contained on 2 sides by straw bales, and it has a tendency to

sprawl due to novice shovelers without boundaries. The straw bales have an interesting life in our garden: fresh ones are bought for Sukkot decorations and seating, then they come into the garden for fall seating under the pavilion, when we put the beds down for the winter the old bales which have had a year to decompose are layered on the planting areas, and the fresh ones move into position as the frame for the digging mound

For the rest of our garden we attempted to follow the cycle of the Jewish year pretty closely in a circular order.

A pair of dwarf apple trees are placed at the entrance to this cycle and are at the beginning of our productive garden. The children spend all spring and summer waiting for the apples to ripen for Rosh Hashanah, Who knew it takes so long to grow apples? (It is confusing that they are always available in the grocery store.) Running under and between the trees is a stone runnel, a little trough, that we use to channel rain water from our barrels through to simulate moving water for Tashlich. We also use the trough for splashing, or leaf-boat races, or cooling our feet on a hot summer day. We added a small wooden bridge to cross the runnel into the garden.

A white rose, climbing the retaining wall is present to symbolize Yom Kippur.

The vegetable producing area of the garden is a line of 6 raised beds (3' x 4' x 18"), one for each pre-school class and one for the school-aged kids. These have come to represent Shabbat symbols, a home base for each class to visit each week, where they can see what has changed in the world and reflect upon how they may have changed. The beds are a mixture of flowers, vegetables and herbs. When harvest time comes, these beds lead us into Sukkot. Our garden Sukkah is grown every year from corn, a three-sided stand of sweet corn with a few pole beans to help with nitrogen replenishment in the soil, and to eat, and a few sunflowers to help with decoration. During Sukkot we add a bamboo structure among the corn stalks to give us a ceiling.

A pair of locally made wooden benches have the likeness of Torah scrolls across the back, symbolize Simchat Torah.

Part of our effort to soften the urban machine noise of the HVAC unit at the far end of the garden from the pavilion is our living evergreen menorah for Channukah. Nine spire arborvitae stand across the width of the garden (8 + shamash), and at their base are cubical planters of annual flowers to represent twisting and turning dreidles. The evergreen menorah fits perfectly both visually and thematically in front of the HVAC unit, it could have been nowhere else in our garden.

Along the chain link fence, in a narrow (18" wide) ground-level bed, is first a riot of flowers to signify Purim. Next, along the same fence, the planted bed continues in honor of Pesach. Here we have planted a "burning bush" (*Eunomyous alatus*), as well as herbs, parsley and horseradish.

The bed extends to the apples trees, close to which we have included blue and white flowers for Yom Ha'atzmaut (Israeli Independence Day), and a tiny rock garden with dark flowers to remember Yom HaShoah. This is also where the stone runnel changes to dry-stacked river stone covering a seeping trench for drainage. The kids end up moving the stones quite a bit chasing the water along the filter cloth under the apple trees all the way to the burning bush if our rain barrels are full.

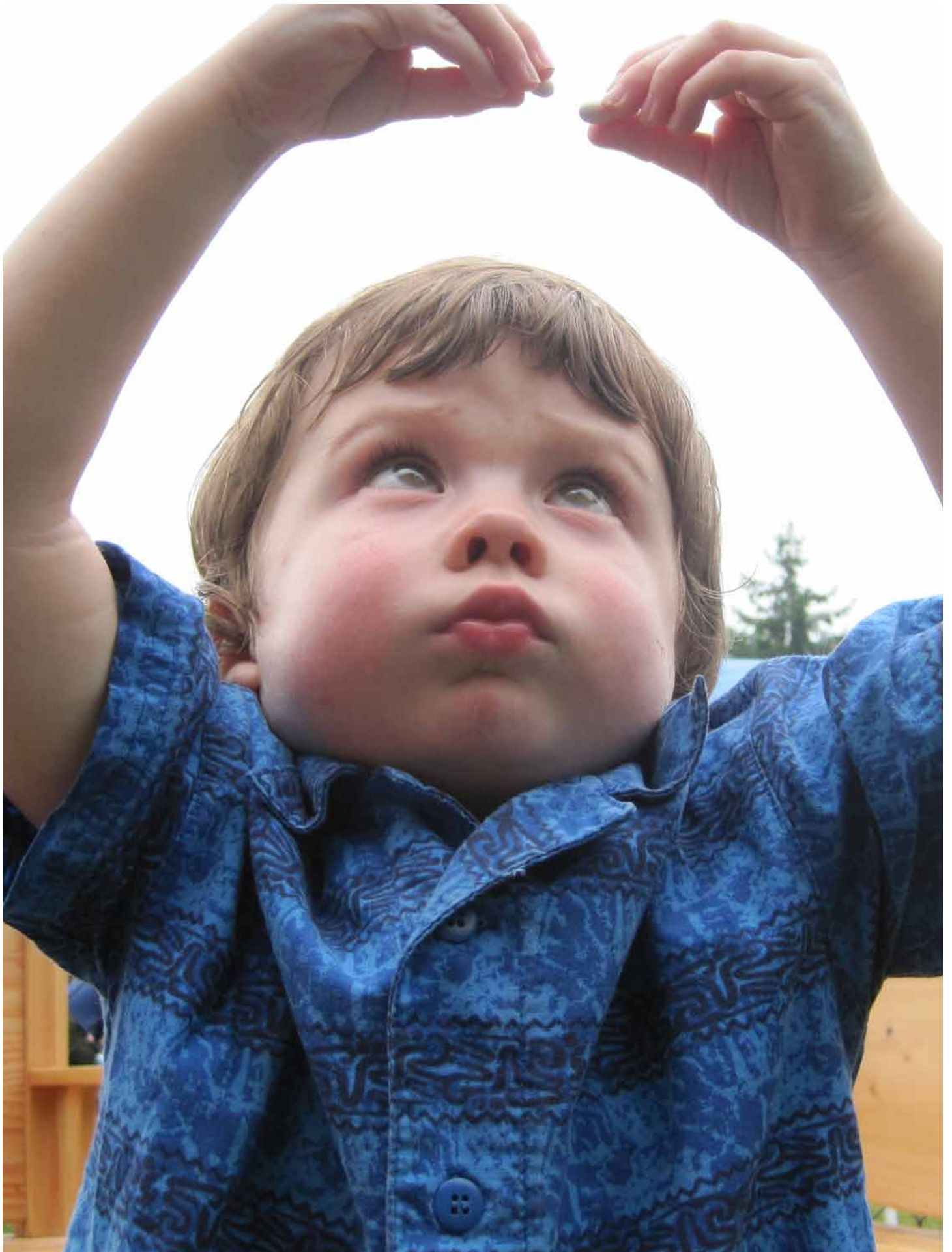


Community Participation:

It was always our intention to invite the entire JCC community, as well as the greater Asheville community to visit and participate in our garden activities. Our garden committee initially consisted of JCC parents and teachers, but we also were lucky to have representatives on our committee from the Appalachian Sustainable Agriculture Project's Growing Minds Farm to School program, our local Smart Start partnership, and a Master Gardener from the North Carolina Cooperative Extension. These relationships helped us enormously in the planning stages.

The community was invited to help fund the garden through a Children's Garden Legacy Campaign, which offered naming opportunities for each section of the garden. Some of our earliest funders included two of our preschool families, each of whom selected an apple tree in honor of their daughters. One of the fathers told us, "We would be honored to have an apple tree next to the [other] family tree. We have been raising our daughters in tandem . . . , and it seems fitting that our trees would be pollinating each other and being close to each other for years to come."

We also invited the community to help us build our garden through several phases of digging, planting, hauling, hammering, and paving. Many helpful volunteers, including our teen youth group, preschool teachers, parents, landscapers, gardeners, and many others contributed to seeing our vision come to life.



Jewish Values in the Garden

Bal Tasheet: Do Not Destroy

Brit: Partnership with G-d

G'milut Chasadim: Acts of Loving Kindness

Hachnasat Orchim: Hospitality or Welcoming Guests

Hiddur Mitzvah: Beautifying a Mitzvah

Hodaya: Appreciation

Kavanah: Intention

K'lal Yisrael: All Are One

L'ovda U'l'shomra: To Work and Keep the Land

Ma'asech B'reishit: Miracle of Creation

Sayver Panim Yafot: Cheerfulness, Pleasant Demeanor

Shmiat Ha'Ozen: Attentiveness

Shomrei Adamah: Guardian of the Earth

Simcha shel Mitzvah: Joy in Fulfilling a Commandment

Tikkun Olam: Repairing the world

Tzedakah: Justice

V'Samachta B'chagecha: Rejoicing in our festivals



Lesson 1: Early Spring Hello

Age target 2-5 years old

Object/Mitzvah to Be Taught:

Schmiat HaOzen - Attentiveness
Ma'asech B'reishit - Miracle of Creation

Goals (Measurable Outcomes):

Children will be reacquainted with the garden after winter break to exercise observation and look for signs of spring and life after winter.

Materials:

- Magnifying lenses
- Cut branches from pussy willow, forsythia, and quince, or other early harbingers
- Trowels

Discussion:

Identify the space of the garden and remember what happens in a garden. What do plants do? What do people do? (with younger children ask about specific activities, e.g. dig, water, pull weeds, pick vegetables/ fruit, find things, learn, grow, look, dance, work, pray, eat; with older children use open ended questions, such as: When do people garden?)

Identify the order of the seasons: Spring follows winter as the sun warms the earth and days get longer (have more sunlight). Do some plants die in the winter? Do all plants die in the winter? (Older children: What parts of plants “wake up” first?)

Action Instructions:

Use magnifying lenses to look at the garden as winter comes to an end. Find plants that lived through winter. Look under the hay mulch blanket. Does it look the same underneath as it does on top? Can you find any flowers? Any animals?

Spring

Classroom Follow-Up

Object/Mitzvah to Be Taught:

Schmiat HaOzen - Attentiveness
Ma'asech B'reishit - Miracle of Creation

Materials:

Jack's Garden by Henry Cole; Harper Collins, 1995

Discussion:

What did you see with the magnifying glasses in the garden? What plants were there? What animals? We can practice Schmiat HaOzen and notice many new things if we are quiet and careful in the garden! Read *Jack's Garden* and allow children to “find” different plants, animals and gardening tools on each page. Which of these things did you see in our garden? If we went out to the garden right now, could you be attentive and find some of these things? Make a list of things from the book with the children for them to try to find on their next trip to the garden.



Lesson 2: Soil Exploration

Age target 2-5 years old & school age

Object/Mitzvah to Be Taught:

Hodaya - Appreciation

Lovda U'Pshomra - To work and keep the land

Goals (Measurable Outcomes):

Children will examine, compare and record findings about soil samples from three sites in garden.

Materials:

- 3 work trays/troughs/tables
- Shovels
- Trowels
- Paper/journal and pen/pencil for recording

Discussion:

Name and briefly describe parts of soil, rock particles: clay, silt, and sand; and humus soil, which is rich in organic material (decaying leaves, etc., stuff that was once alive, and stuff that is alive: microorganisms, animals and other living things). Ask each child to think of a guiding question: You will be looking through soil samples. What would you like to learn about each one?

Action Instructions:

Divide in to three groups and go to three different areas (Havdalah Matsa, a raised bed, and diggin mound). Dig a big shovelful plug and place on table/ in trough. Examine for 10-15 minutes (repeated lessons may be less time). Adults record each child's question and discovery. Also ask: Is there anything you can count? Guide observation of smell, texture, moisture content, color, cohesion when squeezed. Compare with the other samples.

Rotate through each station. Examination may be shorter periods of time at subsequent stations. Clean-up by putting away tools, and last class will return dirt to its place.

Lesson 3: Germination View

Age target 2-5 years old

Object/Mitzvah to Be Taught:

Ma'aseh b'reishit - Miracle of Creation

K'lal Yisrael - All are One

Goals (Measurable Outcomes):

Children will gain direct knowledge of germination, especially initial root growth.

Materials:

- Sandwich-sized plastic bags
- Cheap white paper towels
- Pea seeds (or corn or beans), approximately 4 per student
- Water in a small squirt bottle or cup with spoon
- Marker to label bags with names
- Tape to adhere to window glass

Discussion:

Introduce the word "germination." Discuss: How does a seed grow at first? What does it need to begin growing?

Action Instructions:

Provide each student with plastic bag and a paper towel to fold and slide into bag. (For younger children the paper could already be inside the bag.) Place seeds in a row in between the paper towel layers, in the middle of the bag. Dampen the paper, you may need to arrange the seeds again as the paper will now stick together and hold them in place. Leave the top of the bag open/ unsealed and tape to a window in the classroom. The seeds do not need sunlight to germinate because they normally grow underground. In fact, if the window is too sunny, the paper will dry out quickly, damaging the seedlings. However, hanging them on a window allows them to be backlit, so you can see through the damp paper and watch the roots and seedlings grow!

(continued next page)

Follow Up:

Monitor the moisture in the bags and water lightly if drying out. Check daily for signs of growth. As roots grow, select a bag every few days to open and look at more closely with a magnifying lens or to measure. Observe different rates of growth and direction of growth. Older children may enjoy rotating a bag to observe the plant's response. Compare with pea seeds planted outside, and consider how long the roots are of sprouts in the garden.

Additional:

Listen and dance to seed sprouting description in Billy Jonas' song "Watermelon" (on CD *What Kind of Cat Are You?*) Book: *A Seed is Sleepy*. D.H. Aston & S. Long; Chronicle Books, 2007.

Classroom Follow-Up

Object/ Mitzvah to Be Taught:

Ma'aseh b'reishit - Miracle of Creation

Materials:

In the Beginning by Miriam Ramsfelder Levin; Kar-Ben Publishing, July 1996

Discussion:

Read *In the Beginning*. The boy in the book looks around and sees that everything is good. Why is the sun good? Why are the plants in his windowsill garden good? You were able to create new plants by spouting seeds. This is Ma'aseh b'reishit. We are all able to help with the miracle of Creation. What are some things in your life that are good? Why?



Lesson 4: Early Spring Seed Planting

Age target 4-5 years old

Object/Mitzvah to Be Taught:

Tikkun Olam - Repairing the World
Bal Tascheet - Do Not Destroy
Gemilut Hasadim - Acts of Loving-Kindness
Ma'aseh b'reishit - Miracle of Creation

Goals (Measurable Outcomes):

Children will learn/ practice care for the earth and assist in the beginning of new growth – the rebirth of spring.

Materials:

- Trowels or other small earthy tool (butter knives)
- Seeds: sugar snap peas, radishes, greens, early flowers
- Watering cans

Discussion:

Identify similarities and differences among seeds in appearance and needs. Relate to differences among people. Describe different needs for planting (e.g. under dirt vs. surface).

Action Instructions:

In last year's planting buckets, big pots, and wooden raised beds, use tool to remove weeds and loosen soil for the seeds' beginning roots to make their way down. Plant seeds, and water them.

Classroom Follow-Up

Object/Mitzvah to Be Taught:

Ma'aseh b'reishit - Miracle of Creation
Tikkun Olam - Repairing the World
Bal Tascheet - Do Not Destroy (*continued next page*)

Materials:

The Garden Around Us: A Child's Garden of Prayer
by Mira Pollak Brichto; Urj Press, 1999

Discussion:

Read the following poem from *The Garden Around Us: A Child's Garden of Prayer*:

*"Frozen ground begins to break,
Sleeping roots push up and wake.
Weeping willow, apple, pear,
Tender blossoms everywhere."*

Then, teach the following prayer from the book:

*Baruch Atah Adonai Eloheinu Melech ha'olam, asher
bara be'olamo beriyot tovot ve'ilanot tovim, lehanot
bahem benei adam.*

*Praised are You, Adonai our God, Ruler of the
universe, for wonderful creations and trees to delight
humankind.*

How do we know that winter is over and spring is here? What new things happen in the garden in the spring? How can we help the garden recover from the winter and get ready for new plants? Are there things that we might have to destroy or remove?



Lesson 5: Seed Starting

Age target 2+ years old

Object/Mitzvah to Be Taught:

Brit - Partnership with G-d
Kavanah - Intention
L'ovda U'l'shomra - To Work and Keep the Land

Goals (Measurable Outcomes):

Children will learn and practice steps to prepare pots in which to start seeds

Materials:

- Tubs with warm water and rags to wash pots
- Tubs for soil
- Germination soil
- Trowels
- Watering cans
- Seeds - quick sprouting & transplantable

Discussion:

Review plant needs and relate these to people's needs. Emphasize the need to protect and give special care to babies

Action instructions:

Wash pots. Fill with germination mix or experiment with your own mix of soil, peat and sand. Fill selected pots/cell packs/peat pots with chosen seeds. Place in a warm location or under a grow lamp. Water. Wait. Watch.

Follow-Up:

Continue to water to keep moist, following recommendations for the particular plant.

Lesson 6: Measuring Sprouts and Seedlings

Age target 4-5+ years old

Object/Mitzvah to Be Taught:

Ma'aseh B'reishit: Miracle of creation; Schmiat Ha' Ozen: Attentiveness; K'lal Yisrael: All are one

Goals (Measurable Outcomes):

Children will practice using a ruler, reading numbers, counting and using measurements to make comparisons and observations of plant growth. Measurements can be transferred to a simple chart for further recording, comparison and decorating.

Materials:

- Rulers
- Plants to measure (either individual plants or groups of plants)
- Paper or graph paper
- Pencils, markers, etc.

Discussion:

Identify and/or review plant needs, elements affecting growth and individual variation. Relate to human differences.

Action Instructions:

Help children to gently make measurements and record findings. Repeat daily, weekly or another regular interval. Compare and discuss what's happening. Have the children guess about the causes for differences.

Classroom Follow-Up

Object/Mitzvah to Be Taught:

K'lal Yisrael - All are one

Materials:

The Garden Around Us: A Child's Garden of Prayer by Mira Pollak Brichto; Urj Press, 1999

Discussion:

Read the following poem from *The Garden Around Us: A Child's Garden of Prayer*:

“Colors, tones, and shades of skin,
Black and brown and white are kin.
Whether our color be dark or fair,
The same red blood alike we share.”

Then, teach the following prayer from the book:

Baruch Atah Adonai Eloheinu Melech ha'olam,
meshanah habriyot
Praised are You, Adonai our God, Ruler of the Universe, who varies the creatures.

Have children sit in pairs. Each pair will have one minute of “quiet” to examine each other. What color is the other child's hair, eyes, skin, etc.? Who is taller? Who has bigger feet? Challenge the children to find as many differences and similarities as possible. With younger children, assist them by asking direct questions, such as “What color is Ben's hair? What color is your hair? Is that the same or different?”

After the minute is up, let the pairs report back. How is everyone different? How is everyone the same? How were the plants in the garden different and the same?

Emphasize that even though all of the plants in the garden had differences, they all made up one garden. Even though all of the children have differences, they all make up one classroom. Together, we are K'lal Yisrael.

Lesson 7: Weed Identification

Age target 3-4 years old

Object/Mitzvah to Be Taught:

Tikkun Olam - Repairing the World

Bal Tasheet - Do Not Destroy

Klal Yisrael - All are One

Hakhnasat Orhim - Hospitality to Strangers

Goals (Measurable Outcomes):

Children will learn names of plants currently living in the garden area and will determine their differences and similarities.

Materials:

- Weed identification books
- Bags or cups to collect and use to examine specimens
- Magnifying glass
- Contact paper/ packing tape to “lamine” specimens
- Heavy paper, card stock or index cards
- Marker to label
- Trowels

Discussion:

Identify that there are plants already living where we will be making our garden. Correlate this to moving into someone else's house. Identify that a way of showing respect is to learn proper names.

Action Instructions:

Go into garden area and find one to three plants. Try to get something different from your friend. Place one in each cup or bag and come to adult with identification book to look for their names. Select one of each type to label and laminate on a card (or make two sets so second could be used by other classes).



Follow up:

Review, add cards to garden/ classroom journal. Practice field identification on future nature walks or time in the garden. Share cards with other classes.

Classroom Follow Up

Object/Mitzvah to Be Taught:

Tikkun Olam - Repairing the World

Bal Tasheet - Do Not Destroy

Materials:

Where Once There Was a Wood by Denise Fleming; Henry Holt and Co., 2000

Discussion:

Sometimes, we have to pull weeds from our garden or prune existing plants so that our garden can grow properly. What types of plants did you remove from the garden? We have to be careful not to remove too many plants or trees from the earth. Bal Tasheet means that we don't destroy things. What would happen if we cut down all the trees outside? Help children brainstorm about why plants and trees are important: food for people and animals, homes for animals, shade, oxygen, etc. What happened to the woods and the animals in *Where Once There Was a Wood*? Where do you think the animals went? If we cut down trees or remove plants, what are some things that we can do to practice Tikkun Olam?

Lesson 8: Bed Planning

Age target 2+ years old

Object/Mitzvah to Be Taught:

Brit - Partnership with God
Kavanah - Intention

Goals (Measurable Outcomes):

Children will begin to envision their classroom's raised garden bed.

Materials:

- Bulletin board paper, pre-cut to the appropriate size of the garden bed
- Drawing, painting, and collage materials
- Reference photos of plants, vegetables and flowers

Action Instructions:

Have children huddle together, pretending to be seeds or small plants planted close together. Instruct the children to slowly “grow” their bodies to take



up more space as they take in more sunlight, water and soil. Tell the children to “freeze” and observe what this feels like. Then, have the children spread out and start over, growing their bodies with more space around them.

Ask the children to “freeze” and observe what this feels like. Have the children compare growing close together with growing when they are further apart. Talk to the children about the different ways that plants grow - tall, wide, vining upright, or running along the ground. Have the children choose a growth habit and act out growing in this particular way when they are close together and further apart.

Discussion:

Have the children share their observations about plants' different needs for growing. Relate this to people's different needs. Ask the children to look at their classroom's raised bed and try to imagine what could grow there. Identify some different garden themes: vegetables, flowers, leaves, herbs, “pizza,” salad, tall, small, color, etc. Help the children discuss what type of garden bed theme is most interesting to them.

Action Instructions:

Provide the pre-cut paper to the children and let them draw, paint, or glue images onto it, creating a vision for what the garden might look like. Encourage them to keep the theme they selected in mind and to think about how the growing habits of the plants that they are including.

Alternatively, the kids can use crayons to draw seeds and then tempera paint to fill in the maturing plants on the mural paper. The crayon wax will repel the paint.

Follow up:

Save these drawings to compare to the actual garden beds later in the summer.

Lesson 9: Seed Comparison

Age target 2+ years old

Object/Mitzvah to Be Taught:

Hoda'ah - Appreciation

Ma'aseh B'reishit - Miracle of Creation

Shomrei Adamah - Guardian of the Earth

Goals:

Children will explore and appreciate a variety of seeds and observe similarities and differences

Materials:

- Box lids/trays
- Variety of seeds: poppies, larkspur, hollyhocks, sugar snap peas, hosta, zinnia, marigold, sunflower, some in seed pods/heads
- Photographs of plants and flowers
- Magnifying lens

Action Instructions:

Give the children seeds to look at and explore. Compare the pictures of the plants to the seeds. Talk about what seeds will look like when they become plants. How do seeds get around? Move like a seed that: bursts out of its pod and flies and zooms across the garden or forest; hitches a ride on an animal then falls off later; falls into a creek where it bobs around in the water and is washed ashore; floats on the breeze.

Alternate Materials:

- Thin paper
- Thick crayons with paper wrapper removed
- Masking tape
- Seeds of a variety of textures

Alternate Action Instructions:

Place paper over seeds and secure paper to the table with masking tape. Select a crayon and rub over the paper to illuminate the texture and shapes of seeds.

Discussion:

What are seeds? Can you name a kind of seed?

What kind of seeds can you eat? What is a seed that is inside a fruit?

Lesson 10: Mud Painting

Age target 2-5 + years old

Object/Mitzvah to Be Taught:

Lovda U'l'shomra - To work and keep the land

Simcha shel Mitzvah - Joy in Fulfilling a Commandment

Hoda'ah - Appreciation

Goals (Measurable Outcomes):

Children will explore soil using the addition of water.

Materials:

- Soil samples
- Large cups (2# yogurt containers)
- Trowels
- Buckets of water
- Watering cans
- Paper
- Large paintbrushes, natural objects to use as brushes

Discussion:

What is the difference between soil and mud? What will happen to the mud when it dries?

Action Instructions:

Choose a trowel-full (2T- ¼ c.) of soil to make paint. Add it to your cup, add small amount of water, mix. Try using your "paint." Try using objects to paint other than a brush (grass, mulch, branch, feather, etc.). Observe and compare with someone who used different soil or more or less water.

** Idea source: "Mud Pies" in *My Big World of Wonder* by Sherri Griffin. She recommends reading *Muddigush* by Kimberly Knutson for a noisy, muddy tale.



Lesson 11: Transplanting Plants/Seedlings

Age target 2+ years old

Object/Mitzvah to Be Taught:

G'milut Chasadim - Acts of Loving Kindness
Hachnasat Orchim - Hospitality/Welcoming Guests
Schmiat HaOzen - Attentiveness

Goals (Measurable Outcomes):

Children will learn how to handle and transplant bedding seedlings, practicing gentleness and paying attention while handling delicate young plants. Children can relate this to how they like to be treated and how to treat others.

Materials:

- Young plants ready to move to bigger pots/the ground
- Pots or garden bed, prepared (pots washed, additional soil, weeded, etc.)
- Trowels
- Watering cans

Discussion:

Discuss growth and need for change: space, time and environment. Relate these needs to plants and

people. Identify plants to transplant, name and describe needs and habit (e.g. sun/shade; wet/dry; habit = pattern of growth). State location for transplanting and observe the characteristics of the site. Demonstrate handling and how to remove if in pots or cell packs.

Action Instructions:

Coach and/or observe removal of seedlings and transplanting to new site, reminding of growth habit for spacing, depth of roots/crown, and digging in or opening space in new soil. Note aloud the comparative dampness of soils, root conditions, etc. Offer welcoming words and encouragement or blessings to the new plant arrivals. Water the plants after transplanting.

Follow-up:

Maintain appropriate watering and temperature/sun or sun protection for next few weeks as needed. Watch for signs of distress or transplant shock.

Classroom Follow-Up

Object/Mitzvah to Be Taught:

Hachnasat Orchim - Hospitality/Welcoming Guests

Materials:

Michael and the Secret of Making Friends by Menuchah Beckerman; Israel Book Shop, 2004
Note that this book is better suited for older three year olds/pre-k and up.

Discussion:

What did you do in the garden to make the plants feel welcome in their new homes? Have you had any new friends join your classroom this year? How did you make them feel welcome? When you have friends over to your house to play, how do you make them feel welcome? The plants needed water after you moved them to their new homes; perhaps, you could offer your guests a drink as well. For younger children, you can encourage simple things like sharing toys and telling someone thank you for coming. For older children, you can read the book and discuss how it is sometimes difficult to share toys.

Lesson 12: Havdalah Matsa Smells

Age target 2-5 + years old

Object/Mitzvah to Be Taught:

Simcha shel Mitzvah - Joy in Fulfilling a Commandment

Hoda'ah - Appreciation

Shmiat HaOzen - Attentiveness

Goals (Measurable Outcomes):

Children will identify the Havdalah Matsa area, which separates the garden from the outside. Children will remember that sweet spice smells are a part of the Havdalah ceremony at the conclusion of Shabbat. Children will experience a variety of herb and flower smells from the Havdalah Matsa.

Materials:

- Plants in the Havdalah Matsa at this time include: Rosemary, Spearmint, Lavendar, Chocolate Mint, Thyme, Catmint (Nepeta), Cat Nip, Peace Rose, fragrant Hosta and Daylillies

Discussion:

List our 5 physical senses and correlate with our informing body part. Ask children to name a favorite smell. Practice saying "Havdalah Matsa." Ask if anyone remembers sweet smells in the Havdalah ceremony. Identify the area of the garden especially planted with good things to smell. Since "Havdalah" means a separation, in our garden this is also the edge, the bed that separates our garden from other places. "Matsa" is a word for garden bed.

Action Instructions:

Gather at the Havdalah Matsa. Identify by name each plant and pass a sample leaf around for each child to see and smell. If plants are big enough, older children can taste mint leaves or rosemary, etc. as well. Encourage any connection or association with the smells, such as thyme with pizza or pasta sauce, mint with chewing gum or toothpaste, etc.

Classroom Follow Up

Object/Mitzvah to Be Taught:

Simcha shel Mitzvah - Joy in Fulfilling a Commandment

Hoda'ah - Appreciation

Shmiat HaOzen - Attentiveness

Materials:

The Garden Around Us: A Child's Garden of Prayer by Mira Pollak Brichto; Urj Press, 1999

Havdalah set – spice box, braided candle, Kiddush cup

Discussion:

Read the following poem from *The Garden Around Us: A Child's Garden of Prayer*:

*"There's nothing in the world so nice
As all the smells of flowers and spice
Jasmine, ginger, lilac, rose,
How your fragrance tickles my nose."*

Then, teach the prayer for the spices at havdalah:
*Baruch Atah Adonai Eloheinu Melech ha'olam,
borei minei vesamim
Praised are You, Adonai our God, Ruler of the
Universe, who creates a variety of fragrant flowers
and herbs (spices).*

The havdalah ceremony is when we say goodbye to Shabbat and say hello to a new week. Shabbat is a holiday that we get to celebrate every week. What are some other holidays that we celebrate? Help children think of both Jewish holidays and other special days, like birthdays. Sometimes after a holiday, we are sad that the celebration has to end. This is why we have the spices at havdalah.

We are sad because we are losing the spirit of Shabbat, so the delicious smelling spices make us smile! What are some of the plants in the garden that smell good? Could we use those in our spice box for havdalah? Show the children the havdalah set. How could we make our own spice box? Let the children brainstorm materials for this. Making spice boxes using their ideas could be another follow up activity in the classroom.

Lesson 13: Introduction to Watering

Age target 2-5 + years old

Object/Mitzvah to Be Taught:

G'milut Chasadim - Acts of loving kindness

Schmiat HaOzen - Attentiveness

Lovda U'l'shomra - To work and keep the land

Goals (Measurable Outcomes):

Children will consider a plant's root-to-top ratio.

Children will practice testing soil for dampness using their fingers. Children will be introduced to a rain gauge and its purpose.

Materials:

- Variety of rain gauges
- Garden soil
- Water and watering cans

Discussion:

Review the basic needs of plants. Reflect upon recent weather: has it rained recently? Introduce rain gauges. Identify hands and fingers as our most important garden tools. Describe how to feel the soil for dampness.

Action Instructions:

Alongside a garden bed, ask children to remember/ imagine how deep the plants' roots are in the soil and demonstrate with their bodies. Demonstrate the "finger test" for soil dampness to determine the need for water in the garden. This is to stick your pointer finger in to the soil and wiggle a bit. Water if the soil feels dry. Demonstrate watering plants by "drawing" a circle around and around each plant with the stream of water. Retest the soil in a nearby spot (do not use the exact same finger hole, as it probably caught a lot of the water).

Additional related subjects for school-aged children:

rainfall volumes, raindrop shape, cloud types.



Classroom Follow-Up

Object/Mitzvah to Be Taught:

Schmiat HaOzen - Attentiveness

Lovda U'l'shomra - To work and keep the land

Materials:

Non-toxic potted plant of any type

Discussion:

Put the plant in the middle of the children. Does it look healthy? How do you know? Does the plant need water? How can you tell? Review how the children tested the soil for dampness in the garden. Plants in the garden get some of the water they need from rain. This plant lives indoors. How does it get the water it needs? What would happen to the plant if we didn't water it? What would happen to the plants in the garden if they didn't get enough rain and we didn't water them?

We must practice Schmiat HaOzen when we have a garden. We cannot just let the plants grow and not pay attention to them. Lovda U'l'shomra is one of our responsibilities. We must water our plants and take care of them.



summer

Lesson 14: Summer Solstice

First Day of Summer, the longest day of the year

Age target 2-5 years old

Object/Mitzvah to Be Taught:

Schmiat HaOzen - Attentiveness;
Ldor Vador - From Generation to Generation
Ma'aseh B'reishit - Miracle of Creation
V'Samachta B'chagecha - Rejoicing in our Festivals

Goals (Measurable Outcomes):

Children will learn the term "solstice" and will relate seasons to the motion of the sun and Earth. Children will identify summer as a garden's growing and producing season.

Materials:

A globe to hold with the "Earth kids" and fire-colored ribbons/scarves for the "Sun kids"

Discussion:

Ask children to describe summer weather and activities. Are the days long? Do you have to go to bed before the sun goes down? Identify that much of the energy on Earth comes from the Sun, and in summer we have more energy around. We can especially see it in plant growth and in our weather: daily temperatures and electricity in thunderstorms.

Action Instructions:

A Celestial and Terrestrial Drama: Divide the children by energy level. The calm children gather together as the Earth, and the energetic children and a teacher are the Sun at a distance from the Earth kids.

Narrator: "Now, it is winter and the sun is far away from this part of Earth." (the Earth children crouch down leaning away from the sun, sleeping and shivering)

Narrator: "But, the sun and Earth are moving. The sun's warmth comes closer to this part of Earth, waking her from her winter sleep. It is spring" (the sun comes a bit closer, the Earth children can wiggle or giggle)

Narrator: "As the Summer Solstice arrives and summer begins, the sun shares its energy with the living and moving things on the Earth" (The energy children from the sun dance around the Earth and get her dancing as well.)

Repeat as desired.

Classroom Follow Up

Object/Mitzvah to Be Taught:

V'Samachta B'chagecha - Rejoicing in our Festivals

Discussion:

What are the four seasons? What season is it now? How do you know? What are some things that we do in summer that we can't do during the winter? What holidays happen in the summer? Point out that we don't really have any major Jewish holidays during the summer (Tisha B'Av, which is not normally celebrated at the JCC). What Jewish holiday do we get to celebrate every week? Explain that Shabbat happens every week, no matter what season it is. Since we do not have many Jewish holidays during the summer, what are some other "Jewish" things we can do? What Jewish things can we do in the garden? Help children think of mitzvot or Jewish values, such Tzedakah, Tikkun Olam or Shomrei Adamah that they can easily perform every day. Point out that every day can be a "Jewish" day.

Lesson 15: Hydrologic Cycle (Water Cycle)

Age target 2-5 years old

Object/Mitzvah to Be Taught:

Hodaya - Appreciation;
Ma'aseh B'reishit - Miracle of Creation

Goals (Measurable Outcomes):

Children will gain a basic understanding of the Hydrologic Cycle: that water moves in a cyclic pattern participating in living things and weather on Earth.

Materials:

- Globe
- *Drip and Drop*, story poem by John Griffin* from *My Big World of Wonder: Activities for Learning About Nature and Using Natural Resources Wisely*, Sherri Griffin; Redleaf Press, 2004
- Poster-sized newsprint or other large paper
- Paint or markers

Action:

Tell the story of “Drip and Drop” or make up your own version using names of local rivers and bodies of water. For example, we tell about a drop of rainwater that falls into the pool at the Asheville JCC, which is adjacent to the garden, where a child was swimming and accidentally swallowed it. Later, it was flushed down the toilet where it traveled in the sewer to the water treatment plant in Woodfin, NC. Once it was cleaned, it was released into the French Broad River, later joining the little Tennessee River, on to the mighty Mississippi, and eventually to the Gulf of Mexico becoming part of the ocean. All the while, some drops from these bodies of water evaporate and join clouds forming and drifting. Some clouds drift back to Asheville over the JCC where they might be a summer afternoon thunderstorm and rain into the pool. The places in the story can be drawn in a big circle around the paper as the story is told.

Discussion:

Water is necessary for living things. Consider the globe and how much of our planet is covered by water. Also, consider what makes our bodies soft. What fills our bodies? Water! Where does water come from? Ask each child to name a place there is water.

Additional:

Create a cloud in a jar. Put several inches of hot water into a cold jar (not too extreme, take care not to break the jar, a table knife in the jar can temper the change). Put the lid on and place an ice cube on the lid. As the warm air rises, it is cooled and forms fog, or a little cloud. (source: *My Big World of Wonder*, p. 98)

Drip and Drop, story poem by John Griffin from *My Big World of Wonder*

Classroom Follow Up

Object/Mitzvah to Be taught:

Hodaya - Appreciation;
Shomrei Adamah - Guardian of the Earth

Discussion:

When do we use water at school? We use water to wash our hands, to drink, to wash things, to flush the toilet, for water play, etc. What does it mean to “waste” water? How can we avoid wasting water? We turn the water off as soon as we are done using it. We only flush the toilet one time. Where does the water we use at school come from? All of our water gets to us through the Hydrologic Cycle. What happens when we have a drought and it doesn't rain enough? Is it possible for us to run out of water? Becoming a Shomrei Adamah helps us to conserve water and ensure that we always have enough water to drink, live and play with.

Lesson 16: Evaporation

Age target 2+ years old

Object/Mitzvah to Be Taught:

Schmiat HaOzen - Attentiveness;
Ma'aseh B'reishit: Miracle of creation

Goals:

Children will make observations about water evaporation.

Materials :

- Colored construction paper
- Paint brushes and cups for water
- Chalk
- Magnifying lenses
- Permanent marker (for labeling paper)

Discussion:

Review the hydrologic cycle (water cycle) to identify evaporation. Portray evaporation with body movements. Does evaporation speed up in sunlight? On a warm day?

Action Instructions:

Provide each child with a water cup, brush, paper, and magnifying lens. Label paper. Direct children to paint some water on page (without covering or flooding it), and use chalk to outline the water. Leave it in place and go paint on other surfaces. Notice how water changes appearances after 5 minutes and 10 minutes. As children return to check on the paintings, look for evidence of evaporation. Mark new outline of water as desired. Return to observe the other places you painted.



Lesson 17: Air

Age target 2-5 years old

Object/Mitzvah to Be Taught:

Hodaya - Appreciation;
Schmiat HaOzen - Attentiveness;
Ma'aseh B'reishit - Miracle of Creation

Goals (Measurable Outcomes):

Children will make observations about air.

Materials:

- Straws
- Objects to move with air: feathers, string, foil, rocks, leaves, garden features, etc.
- Bubble liquid and wand
- Globe

(continued next page)

Discussion:

Identify elements in the natural world that we have studied: soil (earth/ mineral/ solid), fire (sunshine, plasma) and water (liquid and vapor). Describe air (gas). Describe the thickness of the air we experience, the Troposphere (like that of a sheet of paper on the globe). Consider how sound and light move in the air (air helps us hear). We need oxygen (O₂) from the air. Plants use CO₂, and corn uses nitrogen from the air also.

Action Instructions:

Provide each child with a straw. Using the straw, try to move objects with air. Observe bubbles. Breathe.

Classroom Follow Up

Object/Mitzvah to Be taught:

Hodaya - Appreciation;
Schmiat HaOzen - Attentiveness;
Ma'aseh B'reishit - Miracle of Creation

Discussion:

Have children sit quietly and close their eyes. Tell them to focus on their breathing. See if they can count how many times they breathe. Every person breathes 23,000 times a day! That is a lot of breaths! The Hebrew word for breath is ruach, which also means spirit.

Our breath and our spirit is what makes us alive. Have children name things in the garden that breathe and things in the garden that do not breathe. Do animals breathe? Trees? Dirt? Rocks? How do we know? What is alive in the garden and what isn't?

Lesson 18: Wind

Age target 2+ years old

Object/Mitzvah to Be Taught:

Schmiat HaOzen - Attentiveness;
Ma'aseh B'reishit - Miracle of Creation

Goals:

Children will make observations about wind and air movement, review information about air, and experiment with airborne seeds, bubbles, or crepe paper.

Materials:

- Copies of The Beaufort Wind Scale diagram
- Seeds
- Magnifying lenses
- Crepe paper or ribbon streamers or bubbles

Discussion:

Remember that air is comprised of tiny particles. Air is a gas. Describe how wind is created through the uneven heating of the Earth (soil and water) and its atmosphere. How do plants use wind? How do animals use wind? How do people use wind?

Action Instructions:

Use your body to demonstrate the difference between warm air energy and cooler air energy. Dance with crepe paper or ribbon streamers. Observe how they move in the wind and compare with The Beaufort Wind Scale. Blow or float airborne seeds. How long can you keep the seed up?

Other Information about Wind:

Moving air will cool a body much faster than still air. This is what is known as wind chill (If the wind is 20 mph at 50 degrees, then the temperature feels 32 degrees). This is important survival information when lost in the woods. This could be a safety teaching opportunity for older children.

Lesson 19: Insects

Age target 2-5 years old

Object/Mitzvah to Be Taught:

Bal Tashchit - Do Not Destroy;
Hachnasat Orchim - Hospitality/Welcoming Guests;
Hodaya - Appreciation

Goals (Measurable Outcomes):

Children will find, capture, identify and observe insects present in the garden. Children will observe use of a field guide for identification of insects present in the garden.

Materials:

- Insect field guides
- Bug jars or clear plastic jars (from peanut butter, parmesan cheese, etc.)
- Magnifying lenses
- Paper
- Markers

Discussion:

Identify/ define insects. What is different about spiders? What harm can bugs do? What good can bugs do? Since we planted this garden, we have invited many creatures to live here. Even though we can feel that this garden is “ours,” we are visitors to the creatures who live here. Because we are both “hosts” and visitors, we have the responsibilities of both roles.

Action Instructions:

Find and collect several types of insects for observation. Use gentleness and respect in collecting and observing bugs. Note the capture location in order to release bugs at the same site. Identify specimens. As time allows, children can complete a bug portrait to aid in observation. Identify insects by their food source: predators, herbivores and scavengers. Knowing an insect's diet can teach you where to look for it.

Classroom Follow Up

Object/Mitzvah to Be Taught:

Bal Tashchit - Do Not Destroy;
Hachnasat Orchim - Hospitality/Welcoming Guests;
Hodaya - Appreciation

Materials:

In the Tall, Tall Grass by Denise Fleming; Henry Holt and Co., 1995

Green Thumbs: A Kid's Activity Guide to Indoor and Outdoor Gardening by Laurie Carlson; Chicago Review Press, 1995

Discussion:

Have children lay in the grass as you read *In the Tall, Tall Grass*. After you finish reading the book, have them look in the grass to see if they see any insects or any of the other animals mentioned in the book. Ask them if they are scared of insects? Are they scared of bees? Spiders? Ants? If so, why? Explain that each insect and animal in the garden can be appreciated. Explain that we should not destroy insects. Give specific examples of helpful insects from *Green Thumbs*, pages 51-55.





Lesson 20: Corn Study

Age target 2-5 years old

Object/Mitzvah to Be Taught:

Schmiat HaOzen - Attentiveness;
Hodaya - Appreciation
Ma'aseh B'reishit: Miracle of Creation

Goals (Measurable Outcomes):

Children will observe and explore corn plants.

Materials:

- Yard stick
- Measuring tape
- Bulletin board paper
- Paint
- Corn plants in tassel with silks
- Ears of corn in husks, purchased or picked
- Corn seed and seed packet
- A stem of grass, crabgrass works well

Discussion:

Americans eat a lot of corn – almost $\frac{1}{2}$ of the items in a grocery store have some form of corn in them. Name some items with corn in them. Corn is a giant grass. Corn is native to the New World, and so it was not around when the Bible was written or when Moses lived. What is corn-on-the-cob called when it is growing? Examine the seeds and compare the dried seeds to the kernels on the ear. Note: prevent the youngest children from tasting the seeds.

Action Instructions:

Look at the corn plants. Find a regular stem of grass that looks like corn. Find the corn ears growing on the stalks and look for the silks. Hold an ear up to your own ears to show how they stick out from the stalk and therefore why they are called “ears.” Shake the stalk gently to watch the pollen fall from the tassels to the silks to pollinate. Each strand of silk is attached to a different kernel of corn. How tall is it? Find the tallest and measure (count the feet altogether).

Follow-up:

Remember the corn plants while eating lunch/ snack and identify foods made with corn.

Lesson 21: Flowers Up Close

Age target 2-5 years old

Object/Mitzvah to Be Taught:

K'lal Yisrael - All are One;

Hiddur Mitzvah - Beautifying a Mitzvah;

Sayver Panim Yafot - Cheerfulness or Pleasant

Demeanor

Goals (Measurable Outcomes):

Children will consider the purpose of flowers, as well as how flowers are alike and how they vary. Children will hear and see the names of the parts of flowers.

Materials:

- Labeled diagram of flower anatomy
- Variety of flowers from the garden
- Magnifying lenses

Discussion:

What is the purpose of flowers for the plant? Why do so many flowers look beautiful? Younger children can name colors of flowers. Older children can look at the anatomy diagrams while they are read aloud.

Action Instructions:

Examine the array of flowers selected using magnifying lenses. Use words to describe each flower's



differences. Identify flower parts: pistil, stamens, petals, sepals. Explore in the garden to find what plants the flowers came from.

Follow-up:

Continue to identify flowers and products of flowers.

Classroom Follow Up

Object/ Mitzvah to be taught:

Hiddur Mitzvah: Beautifying a Mitzvah

Materials:

- Variety of flowers from the garden that children can pick
- Vases

Discussion:

We can use our garden to beautify a mitzvah. It is a mitzvah to celebrate Shabbat each week. Why is Shabbat a special day? What do we do at school to make it a special day? We sing songs, recite blessings, and eat challah. One way we can make Shabbat beautiful is by dressing nicely, cleaning our classroom, and decorating our classroom. Allow children to pick flowers from the garden to place in vases to bring back to their classrooms for Shabbat. As they pick flowers, identify the flowers and their parts and discuss what color each flower is. What are some things you can do at home to make Shabbat beautiful?



Lesson 22: Garden Mural

Age target 2-5 years old

Object/Mitzvah to Be Taught:

Schmiat HaOzen - Attentiveness

Goals (Measurable Outcomes):

Children will kinesthetically and visually impart their experience of the garden.

Materials:

- Paint
- Paint brushes
- Mural paper

Discussion:

Observe and identify plants and animals in the garden. Give each group of children an orientation to their class's raised bed. Identify all of the colors that are present in the garden.

Action Instructions:

Paint what you observed in the garden. Use a bucket of water for preliminary washing. Older children can use pieces of the garden, such as leaves or flower petals, as brushes, collage elements, or crush on the paper as ink.

autumn

Lesson 23: Color Hunt

Age target 2-5 years old

Object/Mitzvah to Be Taught:

Schmiat HaOzen - Attentiveness;
Hodaya - Appreciation

Goals (Measurable Outcomes):

Children will reacquaint themselves with the garden space after a break in lessons and children new to the garden program will be able to explore. Children will practice finding and recognizing colors in an outdoor environment.

Materials:

- Paint chip sample cards in a variety of colors

Discussion:

Repeat discussion from “Early Spring Hello” - identify the space of the garden, and remember what happens in a garden. What do plants do? What do people do? With younger children, ask about specific activities (for example: dig, water, pull weeds, pick vegetables/ fruit, find things, learn, grow, look, dance, work, pray, eat). With older children, use open ended questions, such as when do people garden?

Action:

Let's go on a color hunt to see what is different and what is the same as we remember in our garden. Who can see the color red? Orange? Pink? You can also use the paint chip cards instead or sequentially. Tell the children “Look for something natural in the garden that matches a color on your card.”

Classroom Follow Up

Object/Mitzvah to Be Taught:

Klal Yisrael - We are All One;
Vocabulary - Israel

Materials:

Paint chip sample cards in a variety of colors

Colors of Israel by Laurie Grossman; First Avenue Editions, May 2001

Discussion:

Ask children what colors they saw in the garden. Let them pick these colors out from the paint chip sample cards. Which colors are most common in the garden? Were there any colors that you didn't see? Introduce the Hebrew names for different colors. Select a few colors and read the corresponding pages from *Colors of Israel*. Note: Be sure to review each page in the book for appropriateness. For example, one of the examples is a robot approaching a suspected bomb.



Lesson 24: Fall Crops Cool-Season Vegetables

Age target 2-5+ years old

Object/Mitzvah to Be Taught:

Lo'vda U'l'shomra - To Work and Keep the Land;
Schmiat Ha'Ozen - Attentiveness

Goals:

Children will learn that different plants have different temperature needs. Children will plant or observe cool-season vegetables.

Materials:

- List of cool-season vegetables
- Seeds/ transplants/ sets

Discussion:

Review basic needs of plants. Imagine or remember what spring and summer plant growth is like (abundant). Consider that some plants evolved to “wait” for more room, fewer bugs, etc.

Action Instructions:

Look in the garden for plants that are cool-season vegetables. Identify: Which plants were warm-season vegetables?

Follow-up:

Identify vegetables in children's lunches as cool or warm-season plants.

Cool-Season Plants:

Beets, Broccoli, Cabbage, Carrots, Cauliflower, Collards, Garlic, Leeks, Lettuce, Mustard Greens, Onions, Peas, Irish Potatoes, Spinach

Lesson 25: Bees and Honey, Rosh Ha'Shannah

Age target 2-5 years old

Object/Mitzvah to Be Taught:

Schmiat Ha'Ozen - Attentiveness;
Lo'vda U'l'shomra - To Work and Keep the Land;
Hodaya - Appreciation

Goals:

Children will consider honeybees and relatives as beneficial and agriculturally vital insects. Children will be exposed to honeybee concepts including social and physical structure of hive, forms of communication (smell and dance) and honey production.

Materials:

- Comb-in honey
- A spoon for each child
- Insect field guide and pictures of honey bees and hives
- Different varieties of honey to taste.

Discussion:

The Rosh Hashanah tradition of eating apples and honey gives us an opportunity to celebrate our insect helpers in the garden, Honeybees! Honeybees make honey using nectar from flowers. It is made in their own bodies. Bees make honey because it is their food, and people help them make extra so that we can have some too.

Many honeybee workers work together to take care of their bee family that lives together in a hive. They communicate where to find nectar using dance and smell. They identify hive members using smell. Gardeners and farmers and people who like to eat need bees and other pollinators to help many of our plants grow food.

Pollen sticks to the fur on pollinator's bodies and gets transferred from one plant to another helping plants grow fruits (and seeds). Honey comb is a series of little hexagonal cells made of wax, also made by the bees' bodies. It holds bee eggs and larvae and honey and other foods in separate sections of the hive. [There is so much you can learn about honeybees it is easy to lose a young audience!]

Action:

Look at the comb in the honey jar. Provide each child who wants to try a small chunk of comb to chew, or if they prefer just a taste of honey. It is ok to swallow the comb but provide an appropriate place to spit it out for those who will want to. Look in the garden for honeybees pollinating.

Classroom Follow Up

Object/Mitzvah to Be Taught:

Hodaya - Appreciation;
Bal Tasheet - Do Not Destroy

Materials:

Bee & Me by Elle J. Macguinness;
Accord Publishing, 2008

Discussion:

Read *Bee & Me*. Have children raise their hands if they are afraid of bees. Why? What other insects or bugs are you afraid of and why? What did the boy learn about bees in the book? Why are bees so important to our gardens? Why shouldn't we kill bees? What would happen if we didn't have any bees?

With older children, you can study Colony Collapse Disorder to learn how devastating the loss of honeybees is. Go to the American Beekeeping Federation <http://abfnet.org> for more information.



Lesson 26: Autumnal Equinox First Day of Fall

Age target 2+ years old

Object/Mitzvah to Be Taught:

Schmiat HaOzen - Attentiveness;
Ma'aseh B'reishit - Miracle of Creation

Goals:

Children will observe and consider seasons changing from summer to autumn.

Materials:

For school aged children 5+, use these materials to make a model of earth/sun rotation:

- orange
- clove
- knitting needle
- rubberband
- flashlight

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For 2-5 year olds:

- symbols for leaves, flowers, and fruit (full-size construction paper in a variety of colors: green, yellow, orange, brown for leaves; pink, red, yellow, purple for flowers, etc.).

Action Instructions:

Dance /Movement - Each child choose several symbols (leaves, etc.) to hold. Teacher narrate plant lifecycle, telling the story of the cycle of the year.

These are short days, cold, and dry. You are a seed or underground (crouch down and hide your leaves, flowers and fruit inside your body shape). It becomes wetter and warmer as the days get a little longer. There is initial growth, and roots grow down first (stand up). As the days get longer and warmer, you become full grown and have leaves and start to flower and bear fruit (hold out leaves, etc.).

When the days are the hottest, and getting drier, your fruit is full-grown. Then the days become shorter and cooler, and it is time to let go of your leaves and fruit. The shorter days are colder. When you let go of the last of your leaves and maybe your stems, you fold back up or crouch down underground to protect your life force, or you only live on in your seeds.

Discussion:

Where are we in the cycle of the year? State observations of the change from summer to fall. Jews start the year at harvest time. Why do you think this is a good idea? When does our other calendar change to a new year? Name the seasons during the cycle (review with the body movements). How did it feel to let go of your leaves, flowers, or fruit?

Lesson 27: Root Vegetable Harvest/Digging Potatoes

Age target 2-5+ years old

Object/Mitzvah to Be Taught:

Łovda U'l'shomra - To Work and Keep the Land;
Ma'aseh B'reishit - Miracle of Creation

Goals:

Children will experience digging root vegetables for harvest. Since white or Irish potatoes are in the Night Shade family we must avoid growing them among young children, but sweet potatoes/yams are not related.





Lesson 28: Sukkot, Shemini Atzerat and Praying for Rain

Age target 2-5 years old

Object/Mitzvah to Be Taught:

Hodaya - Appreciation;

Simcha shel Mitzvah - Joy in Fulfilling a Commandment;

Lovda U'Ishomra - to work and keep the land

Goals (Measurable Outcomes):

Children will place the celebration of Sukkot in an agricultural context. Children will consider both endings and beginnings, expressing gratitude and joy in the harvest and optimism and anticipation for next year's garden. Children will review basic plant needs, in particular, water. Children will review the American Sign Language (ASL) signs for "water" and "rain." Children will be exposed to the diversity of ways and the creativity with which people express hope.

Materials:

- A mature corn or sunflower house in the garden
- Bamboo for additional framework, roof
- String/ yarn/ twine
- Scissors
- Lulav and Etrog, and/ or willow branches
- Flowers and herbs, strung beans, okra, etc.

Discussion:

If you were a farmer dependent upon your crops to feed yourself and your family, how would you protect your ripening harvest from animals and thieves? Some people would go live in their fields to watch over their food. This is one reason Jews build Sukkahs at this time of year.

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Materials:

- Spading fork (with older kids) or small shovel
- Mature sweet potato vines or other root vegetables to harvest (radishes, beets, onions and carrots. These don't usually require digging, just pulling!)

Discussion:

What are root vegetables? Name several. Where do they grow? Does growing and storing energy underground provide protection from some things (for example, protection from animals that eat plants)? How do we get things out from under the ground?

Action Instructions:

Study the top of the plant. Count how many there are. Guess how big it was when it was planted. Look at how long it is now. Use the shovel/ fork to loosen the soil for the children to find the tubers, and have the, dig with hands or trowels. Look at how the tubers are attached to the top of the plant. Count the number of potatoes/yams/tubers. Remember aloud how many plants there were.

Follow-up:

Wash and cut one open to look and sample. Prepare sweet potatoes for eating in the classroom. You can cook a whole sweet potato in the microwave to eat.

We shake a lulav and etrog to honor and celebrate having enough rain and water in the previous year. The third day of the festival of Sukkot is called Shemini Atzerat, which is a particular day to beat the ground with willow branches (one of the branches in the lulav is willow) to hope or pray for enough rain in the coming year. Water is important because plants need it to grow and provide us with food. Who knows the ASL sign for “water” or “rain”?

Action Instructions:

People hope and pray for things in different ways. Some people draw or paint pictures, write poems, tell stories, or make music. Lots of people sing or dance or put their body in a special position. If you were to pray for rain for your garden how would you do that? Children can lead the group in brief dances or songs or take a turn with the willow branches.

Classroom Follow Up

Object/Mitzvah to Be Taught:

Hodaya - Appreciation;
Simcha shel Mitzvah - Joy in Fulfilling a Commandment;
Lovda U'l'shomra - To Work and Keep the Land

Materials:

Paper, pens, and paint for drawing/painting a prayer

Discussion:

Ideally, the discussion would happen outside in the sukkah. Why is it good for us to spend time outside? What do you like to do outside? With younger children, you can ask “Who likes to _____ outside?” For Sukkot, we are supposed to eat our meals outside. Who has been on a picnic? Sukkot is supposed to be a joyous holiday. That means you should be happy! Are you happy outside when it is very cold? What if it is raining? Would you want to eat outside in the pouring rain? Since we are supposed to be joyous on Sukkot, we do not have to eat outside in the sukkah if the weather is very bad and would make us miserable. Older children can write, draw or paint about rain or praying for rain.

Lesson 29: Lunar Phases

Age target 2+ years old

Object/Mitzvah to Be Taught:

Schmiat HaOzen - Attentiveness;
Ma'aseh B'reishit - Miracle of Creation

Goals (Measurable Outcomes):

Children will gain basic knowledge of phases of the moon and be introduced to Rosh Chodesh.

Materials:

- Lunar calendar
- Paper, sky colors (black, dark blue and light blue)
- Crayons, all colors with extra white, grey/silver, and black
- For younger kids, pre-cut lunar shapes: crescent to $\frac{3}{4}$ to full circle

Optional:

- Images of phases of the moon, especially arranged in a circle
- Close-up picture of the moon
- Picture of the solar system
- Older children - mobile sculpture of the sun
- Earth/moon (as described in *The Kids' Nature Almanac*, Smith, 1995)

Action Instructions:

Remember the different ways the moon looks. Choose your paper and colors (demonstrate crescent shapes) and draw the moon.

Alternate:

(With older kids or using adults as the Earth and moon.) Cluster a group in an open place to be the sun, and have a person representing the Earth hold hands with one who is the moon. The Earth and moon walk around the sun. The moon always faces the Earth while circling the Earth.

Discussion:

Younger children: Have you ever seen the moon? What did it look like? (offer images, "like this?") Was it always the same? Was it always at night? Identify the difference between the moon and sun generating light (the sun is on fire, the moon shines like a mirror). Demonstrate a shadow to illustrate the Earth casting a shadow on the moon to create its phases. This cycle of waxing and waning, full to new/ dark, takes 29 ½ days. This is how ancient people (and people today) kept track of months. The Jewish people call the day of the first crescent after the new moon the beginning of the month "Rosh Chodesh." (Since we are teaching this shortly after Rosh Hashannah, relate the words.) Teach the ASL sign for moon and also the Hebrew word.

Older children:

Have you ever seen the moon? What did it look like? If you did not have a clock how would you count your time in a day? Similarly, if you did not have a calendar how would you count days? Ask for details about the moon that they know. Identify how the moon affects our lives (for example, tides, planting/ harvesting guide).



Lesson 30: Seed Saving

Age target 2-5+ years old

Object/Mitzvah to Be Taught:

Tikkun Olam - Repairing the World;
Shomrei Adamah - Guardian of the Earth;
Hodaya - Appreciation

Goals:

Children will participate in seed saving - picking, drying, processing and packaging

Materials:

- Flower and vegetable seeds from the garden
- Envelopes or paper and glue/stapler to make envelopes
- Planting instruction tags
- Markers/colored pencils to illustrate the flower or vegetable
- Example seed packets

Action Instructions:

Choose your seeds. Make, label, date and decorate your envelope, attach or write the planting instructions. Separate dried flower seed heads into loose seed (or wash and dry vegetable seeds, as necessary). Insert seeds and close envelope, store in a cool, dry location.

Discussion:

Review how the garden came to be full: we planted and cared for seeds and plants. Where did the seeds come from? If we didn't have a "store" how would we get seeds? Did our plants make seeds? Let's make little packages of seeds to keep for next year.

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Lesson 31: Autumn Leaf Color

Age target 2+ years old

Object/Mitzvah to Be Taught:

Ma'aseh B'reishit - Miracle of Creation;
Shmiat HaOzen - Attentiveness;
Hodaya - Appreciation

Goals:

Children will consider the fall leaf color display. Children will briefly learn about the two different processes that bring about the changing colorful leaves. Children will be introduced to the word "Chlorophyll," as well as both the Hebrew word and the ASL sign for "tree".

Materials:

- a collection of colorful leaves or access to an outdoor space to gather leaves
- crayons (fat ones) and paper to make leaf rubbings

Action Instructions (Part I):

Collect or view colorful leaves from/on different trees. Ask the children to name the different colors they see in the leaves. Remember aloud what colors were the leaves in the summertime.

Discussion:

Let's talk about how and why the leaves change to so many colors from green. The green is from chlorophyll, which helps plants get energy from the sunlight. Yellow pigments are part of the leaves already, and when there is less and less sunlight because the days get shorter in the fall (after the Autumnal Equinox), the trees make less and less chlorophyll. So when there is no more green in the leaves, we get to see how yellow the leaves are without it. "Anthocyanins" are red pigments mixed in the sap of trees (sap is like a tree's blood, getting food and water to all of its parts like blood in our bodies).

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Classroom Follow Up

Object/Mitzvah to Be Taught:

Tikkun Olam - Repairing the World;
Shomrei Adamah - Guardian of the Earth;
Hodaya - Appreciation

Materials:

Noah's Wife: The Story of Naamah by Sandy Eisenberg Sasso

Note - This book will have to be adapted for younger students due to its length. In addition, you may want to provide some background information to children based on their familiarity with the story of Noah and/or what a midrash is.

Discussion:

Why is Naamah a Shomrei Adamah? Which seeds was she asked to save? Why did she neglect the dandelions, and what happened because of this? Are all plants equally important to our earth? What would happen to animals and humans if there were no more plants? How can you practice Shomrei Adamah and Tikkun Olam?

List things that children already do at school and home to practice Shomrei Adamah and Tikkun Olam. For example: turn off the lights when leaving the room, only use one paper towel after handwashing, recycling, turning water off while brushing teeth, buying used toys/clothing instead of new, giving clothing that is too small to a friend, walking or riding bikes instead of driving, etc.

There are sugars in the sap which help make the anthocyanins (reds). But when it gets cold (below 45 degrees but above the mid- 20 degrees where frost damage would stop the bright colors from showing) the sugars get stuck (slowed down) in the leaves, and the anthocyanins (reds) pile up to become very vivid. Warm sunny days and chilly nights create the most vivid color displays. (Smith, p. 164-165)

Action Instructions (part II):

Select a leaf or leaves for a rubbing, use colors similar to the leaf's pigment at this time.

Classroom Follow Up

Object/Mitzvah to Be Taught:

Hodaya - Appreciation;
Schmiat HaOzen - Attentiveness;
Ma'aseh B'reishit - Miracle of Creation

Materials:

The Fall of Freddie the Leaf by Leo Buscaglia;
Slack Incorporated, 1982

Discussion:

Read *The Fall of Freddie the Leaf* outside (if possible). Look around. What do the leaves look like? How do you know it is fall? What was Freddie afraid of? Why do leaves fall off of the trees? Why is that important? Our seasons are a cycle. They happen every year. What Jewish holidays happen in the fall? (Rosh Hashanah, Yom Kippur, Sukkot) What Jewish holidays happen in the winter/spring/summer? Help younger children by naming some of the holidays and associating temperature or other clues (for example, Hanukkah happens when it is cold outside in the northern hemisphere).

Lesson 32: Frost Effects

Age target 2+ years old

Object/Mitzvah to Be Taught:

Ma'aseh B'reishit - Miracle of Creation;
Schmiat HaOzen - Attentiveness

Goals (Measurable Outcomes):

Children will view the range of damage done to garden plants by frost – from unscathed cool-season crops to dead warm-season plants. Children will be exposed to the Hebrew word and ASL sign for “cold” or “ice.”

Materials:

Garden plants after light frost and, later, after a killing frost

Action Instructions:

Walk through the garden and look for plants that have frost damage. Identify the plants. Remember what color/ texture the leaves were prior to frost.

Discussion:

Review how the garden came to be full. We planted and cared for seeds and plants. Where did the seeds come from? If we didn't have a “store” how would we get seeds? Did our plants make seeds? Let's make little packages of seeds to keep for next year.

Follow Up:

On frosty mornings, children can find frost and watch what happens when sunlight shines on it versus what happens to the frost in the shadows. They can also experiment with touching frost crystals.

Lesson 33: Animals in Winter

Age target 2-5+ years old

Object/Mitzvah to Be Taught:

Ma'aseh B'reishit - Miracle of Creation;
Hoda'ah - Appreciation

Goals (Measurable Outcomes):

Children will be introduced to the varied strategies of winter survival, including: migration, hibernation, timing of life cycle, and physical adaptations.

Materials:

- Pictures of a variety of animals in winter
- Illustrations of people in winter, engaged in activities listed below
- Globe
- A cold day is a good environment for this discussion

Discussion:

How do humans cope with winter weather and darkness? (e.g. wear coats and more clothes, less time outside, heat inside, use electric lights, eat more, eat and drink warm foods and beverages, sleep more, travel to warmer places or live where it doesn't get cold) What of these things can animals do? Introduce the words "migration" and "hibernation". Include insects, sea animals, reptiles and amphibians in addition to land mammals, birds and butterflies.

Action Instructions:

Include observation and count of insects in the garden, compare with the population count before frost.

Follow-up:

This lesson is clearly an overview, there are many topics which could be studied in greater depth, depending upon the children's interest.

Lesson 34: Winterizing/Tucking In the Garden

Age target 2-5 years old

Object/Mitzvah to Be Taught:

Lovda U'lshomra - To Work and Keep the Land;
Shomrei Adamah - Guardian of the Earth

Goals (Measurable Outcomes):

Children will participate in preparing the garden beds for rest in winter. This may include removing debris, loosening soil and covering the garden with degradable mulch, such as straw or chopped leaves.

Materials:

- Trowels
- Pruners (for adult use)
- Mulch

Discussion:

Remember that most of our garden plants were warm-season vegetables and flowers. As you can see, they are already dead. We have a few cool-season plants living among the brown stalks. Also, remember that decaying plant material helps feed the worms and good soil bacteria to add nutrients for next year's plants. We'll use different plants (straw or chopped leaves) to cover and feed the soil over the winter because we don't want to keep any of the bugs or plant diseases we had this year.

Action Instructions:

Pull remaining plants except selected cool-season or perennial plants. Allow children to loosen soil with trowels and layer mulch over soil. Sing a lullaby, say a blessing, "good-bye," or "good long winter's sleep."

Follow-up:

Children can observe the selected plants during the winter break in formal garden lessons. Children can also observe the condition of the mulch layer (including lifting it to look at the soil/worms/pill bugs and observing the temperature difference).

Classroom Gardening Provocations

New Materials:

- Put handfuls of several different kinds of seeds in small bowls or trays. You can find seeds that are strikingly different.
- Fill the sensory table with organic potting soil.
- Place a beautiful vase with fresh flowers on the art table.
- Display small gourds, pomegranates, or other sturdy fruits/veggies around the room or in the kitchen area.
- Place a large coffee table book about gardening on a table.
- Read a book about gardening.
- Offer an unusual fruit (maybe a fig from the seven species!) for snack and then say the Shecheheyanu.
- Then, sit back, observe, and take notes!
- For ideas on “beautiful” new materials for your classroom, see *Beautiful Stuff!: Learning with Found Materials* (1999) by Cathy Weisman Topal and Lella Gandini.

Children's Books:

Most children are very removed from the agricultural process and have no idea where or how our food grows. An easy way to begin this discussion is with a children's book. Different books will provoke different discussions. Do you want to talk about the life cycle of a plant? The tools necessary for gardening? Jewish connections to gardening? An appropriate children's book exists. Be mindful of your children's ages and attention spans. Not all books will work for all groups of children. Try reading *The Carrot Seed* by Ruth Krauss with younger children or *Jack's Garden* by Henry Cole with other children. To integrate some Torah and Midrash into your gardening curriculum, *Noah's Wife: The Story of Naamah* by Sandy Eisenberg Sasso; Jewish Lights Publishing, October 2002, is excellent.

Brachot:

Many classrooms say HaMotzi before eating snack or lunch. In the chapter “Five Seconds a Day that Can Change Your Life” from *Soul Judaism* by Rabbi Wayne Dosick (1997), Dosick reminds us how important the few seconds it takes to say the brachot really are. If we are talking about growing things and then eating them, then we have to talk about blessing them. Dosick, however, focuses on saying HaMotzi. However, in Judaism, each food actually has a different blessing. For a thorough overview of which blessing is used when, you can see the Brachot Wizard at Chabad.org. Once you know the different brachot for foods, you can talk with young children about blessings and why we say them. If you look at the blessings for fruits and vegetables, you can use them as a provocation for a discussion on how different foods grow – On vines? Close to the ground? On trees? On perennial trees? What is a perennial tree anyway? So, blessings become a way to talk about from where our food comes.





Parent Letter #1

Dear Parents,

Fall is busy with the start of school and a barrage of Jewish holidays. In the garden, children learned about cool season vegetables, tasted local honey and our own apples, discussed the change of seasons, built a garden Sukkah, and did a rain dance for Shemini Atzeret. Some of the Jewish values integrated into these lessons were:

Ma'aseh B'reishit – Miracle of Creation

Lovdah U'Pshomrah – To Work and Keep the Land

Shmiat HaOzen – Attentiveness

Shomrei Adamah – Guardian of the Earth

One of the books that was read to expand on these garden lessons was *Bee & Me* by Elle J. MacGuinness. *Bee & Me* explains that there is no reason to fear bees because they do so many important things for our earth. If we didn't have bees, we wouldn't have flowers, fruits and vegetables! At the end of the book, the boy promises not to harm bees. The children then tried to think of other animals that are helpful to our garden. As a follow up at home, you can do the following activity:

Location: Outside

Materials required: Watch, paper, pen

Jewish values: Shmiat HaOzen and Shomrei Adamah

Find a comfortable spot in your yard or at a park where you can sit in the grass. Explain to your child that you are going to see how well s/he can see and hear. Being attentive is practicing Shmiat HaOzen. Tell her/him that s/he will have one minute to look for as many animals (bugs and insects count also) as possible, but s/he cannot move from the spot s/he is sitting in. Ask her/him to point to or call out the animals as s/he sees them. Time one minute on your watch, and write down the animals as s/he names or points to them. After that minute is over, tell your child that s/he is now going to listen for animals. Have her/him close her/his eyes and listen for animal sounds, and again, you will write down the animals as s/he names them.

After the second minute is over, examine the list of animals. How many animals did s/he see? How many did s/he hear? Which was easier? Explain that being attentive involves both listening and watching carefully. Now, look at the list and ask which animals are helpful to our gardens. Are any of the animals harmful to our gardens? Shomrei Adamah is being a guardian of the earth. How can you be a guardian to these animals? Is there anything that you do that harms any of the animals on this list? What would happen if there were no more of a particular animal on the list? How can you be a better guardian to the animals that live near you?

Parent Letter #2

Dear Parents,

We are getting ready to say goodbye to our garden for the winter! The children have learned how to collect and save seeds, what the effects of frost are, and how animals prepare for winter. Some of the Jewish values integrated into these lessons were:

Hodaya – Appreciation

Simcha shel Mitzvah – Joy in Fulfilling a Commandment

G'milut Chasadim – Acts of Loving Kindness

Shomrei Adamah – Guardian of the Earth

We discussed how some animals hibernate for the winter and how many animals store food. As a follow up at home, you can do the following activity:

Location: Inside and outside

Materials required: Pine cone, peanut butter, bird seed, plate, butter knife, yarn, scissors

Cut a long piece of yarn with the scissors. It should be long enough to tie around the top of the pinecone and then to a branch of a tree. Tie one end around the top of the pinecone. Using the butter knife, spread peanut butter all over the pinecone. Pour a small amount of birdseed onto a plate, and then roll the pinecone in the birdseed. The birdseed should stick to the peanut butter and coat the pinecone. Roll multiple times as necessary. When the pinecone is well coated in bird seed, hang in a tree.

Ask your child:

How long do you think it will take for a bird to come visit our bird feeder? What kind of bird do you think it will be? How is the bird feeder helping the birds?

Spend 5 minutes a day observing the bird feeder. What birds visit your feeder? What birds do not? Is there anything we can do to encourage birds to use our bird feeder?

Parent Letter #3

Dear Parents,

We are beginning our spring gardening with a study of soil. Every gardener knows that good soil is necessary for healthy plants! But, as adults, we often make the mistake of viewing soil as boring. When combined with children, we view soil as a potential mess!

Some of the Jewish values that were integrated into our first spring lessons were:

Ma'asech B'reishit – Miracle of Creation

Hodaya – Appreciation

Lovda U'l'shomra – To work and keep the land

The children have been learning about different types of soil (clay, silt, sand and humus), and they have also had the opportunity to do mud painting. As a follow up activity you can do this activity:

Location: Outside

Materials required: trowel or small shovel, disposable pie tin (you can use a regular pie tin if you don't mind washing mud out of it), bucket for water or easy access to garden hose, several spots in your yard to dig small holes

Take a walk around your yard with your child and select several spots to dig holes. Using the trowel, dig a hole so that you have a small amount of loose soil available. Spend some time feeling the soil. How does it feel? Wet, dry, sticky, lumpy, sandy? Try to come up with several adjectives to describe the soil, and then move on to the next spot and do the same thing. Is the soil in each area the same or different?

Using your bucket of water or a hose, slowly mix water into one of the holes. There's no exact science here – you're just making mud! Once you have a good amount mixed up, start squishing. If you're brave, take your shoes off and squish with your toes. How does it feel? Do you see why children love mud? Now, take that pie tin and pack it full of mud. When your mud pie is finished, find some leaves, twigs or flowers to decorate the top of your pie.

When you're done with your exploration and your "baking," find a good spot to leave your mud pie. Check back in a few hours and then the following day to see how your mud pie has changed.

Parent Letter #4

Dear Parents,

We have been busy planting and watching things grow in our garden all spring!

Some of the Jewish values that were integrated into our spring lessons were:

Simcha shel Mitzvah – Joy in Fulfilling a Commandment

Hoda'ah – Appreciation

Shmiat HaOzen – Attentiveness

The children especially enjoy tasting and using what they have grown in the garden. They have become very good at using all of their senses to experience the garden. As a follow up sensory activity, you can do the following:

Location: Inside

Materials required: 3 or 4 dried spices, such as basil, oregano, thyme, or garlic (look through your kitchen cabinets and use what you already have!), 1 or 2 fresh herbs/spices that correspond to your dried selection, olive oil, plates, challah

Take the top off the dried spices and allow your child to smell them. Does s/he have a favorite? Are there any that smell unappealing? Now, smell the fresh herbs. See if your child can match the fresh herb to the corresponding dried herb. Next, sprinkle the dried spices on the plate and have your child taste them. Again, see if it is possible to match the fresh herb to the corresponding dried herb, this time using the sense of taste.

Have your child pick out his/her favorite spices from the available selection. Pour some olive oil on the plate and sprinkle the spices in the oil. Use this as a dipping sauce for your challah. Before eating the challah, recite the following blessing:

Baruch Atah Adonai, Eloheinu Melech HaOlam, HaMotzi Lechem Min Ha'aretz.

Blessed are You, Adonai our God, Ruler of the universe, who brings forth bread from the earth.

Parent Letter #5

Dear Parents,

It is hot, hot, hot outside! This summer, we have been studying wind and rain and learning about the water cycle.

Some of the Jewish values that were integrated into our summer lessons were:

Ma'aseh B'reishit – Miracle of Creation

Hoda'ah – Appreciation

Shmiat HaOzen – Attentiveness

Tikkun Olam – Repairing the World

When it is hot, we really start to value water. The children have talked multiple times about not wasting water. Sometimes, our plants are watered by the rain, and sometimes, they need our help. As a follow up at home, you can do the following activity:

Location: Outside

Materials required: Bucket or large bowl, clock or watch, rain storm!

When the rain starts, put the bucket or bowl outside. How long do you think it will take to become full? Check on it every 5 minutes and see what is happening. After the rain ends, examine the water. Is it clean? What can you use it for?

Explain that some people have rain barrels in their yards in order to catch the rain and use it for watering plants. You can go online and search “rain barrels” to look at different types. Perhaps, one is right for your house!



Gardening and Jewish Values Book Resources

Bernstein, E. (Ed). (2000). *Ecology and the Jewish spirit: Where nature and the sacred meet*. Woodstock, VT: Jewish Lights Publishing.

Brennan, G., & Brennan, E. (1997). *The children's kitchen garden: A book of gardening, cooking, and learning*. Berkeley, CA: Ten Speed Press.

Brichto, M. (1999). *The God Around Us: A Child's Garden of Prayer*. Urj Press.

Brickner, B. (2002). *Finding God in the garden: Backyard reflections on life, love, and compost*. Boston: Little, Brown and Company.

Brown, M. (1998). *The Jewish gardening cookbook: Growing plants and cooking for holidays and festivals*. Woodstock, VT: Jewish Lights Publishing.

Carlson, L. (1995). *Green Thumbs: A kid's activity guide to indoor and outdoor gardening*. Chicago: Chicago Review Press.

Handleman, M. S., & Schein, D. L. (2004). *What's Jewish about butterflies? 36 dynamic, engaging lessons for the early childhood classroom*. Denver: A.R.E. Publishing.

Hareuveni, N. (1980). *Nature in Our Biblical Heritage*. Kiryat Ono, Israel: Neot Kedumim, Ltd.

Griffin, S. (2004). *My big world of wonder: Activities for learning about nature and using natural resources wisely*. St. Paul, MN: Redleaf Press.

Kite, L. P. (1995). *Gardening wizardry for kids*. Hauppauge, NY: Barron's.

Louv, R. (2005). *Last child in the woods: Saving our children from nature-deficit disorder*. Chapel Hill, NC: Algonquin Books.

Sasso, S. E., & Schmidt, D. (1999). *God's paintbrush celebration kit: A spiritual activity kit for teachers and students of all faiths, all backgrounds*. Woodstock, VT: Jewish Lights Publishing.

Smith, A. (1995). *The Kids Nature Almanac: Great Outdoor Discoveries and Activities for Parents and Children*. Three Rivers Press.

Starbuck, S., Olthof, M., & Midden, K. (2002). *Hollyhocks and honeybees: Garden projects for young children*. St. Paul, MN: Redleaf Press.

VanCleave, J. (1996). *Ecology for every kid*. New York: John Wiley and Sons, Inc.

Gardening and Jewish Values Online Resources

North Carolina Arboretum

<http://www.ncarboretum.org/>

Asheville Botanical Gardens

<http://www.ashevillebotanicalgardens.org/>

Careers in Horticulture

American Society for Horticulture Science

http://www.ashs.org/index.php?option=com_content&view=category&layout=blog&id=53&Itemid=177

School Gardens

University of Florida , Florida School Garden

Competition

http://www.gardeningsolutions.ifas.ufl.edu/school-gardens/school_gardens/index.shtml

Sustainable Practices for Vegetable Production in the South

<http://www.ncsu.edu/sustainable/>

My First Garden : A Guide to the World of Fun and Clever

Gardening, University of Illinois Extension

<http://urbanext.illinois.edu/firstgarden/>

Junior Master Gardener Game for 3rd through 5th graders Texas Cooperative Extension

<http://aggie-horticulture.tamu.edu/county/smith/JMGElectronic/introduction.html>

The Apple Project

Early Childhood Research and Practice, Vol. 4, No. 2, Fall 2002

<http://ecrp.uiuc.edu/v4n2/danyi.html>

Jewish Virtual Library

Exodus 34

<http://www.jewishvirtuallibrary.org/jsource/Bible/Exodus34.html>

Leviticus 23

<http://www.jewishvirtuallibrary.org/jsource/Bible/Leviticus23.html>

Chabad Brachot Wizard

http://www.chabad.org/library/howto/wizard_cdo/aid/278541/jewish/1.-Why-a-Blessing.htm

Know Your Etrog

Judaism 101 <http://www.jewfaq.org/etrog.htm>

Looking at the Trees Around Us

Early Childhood Research and Practice, Vol. 6, No. 1, Spring 2004

<http://ecrp.uiuc.edu/v6n1/bellous.html>

Asheville JCC Children's Garden Plant List

Havdalah Matsa

Rosemary, Lavender, Thyme, Fever Few, Cat Mint, Cat Nip, Peace Rose, Lemon Balm, Mint (*Chocolate & Spearmint*), Love-in-a-Mist (*Nigella*), Perilla (*purple basil*), Daylilies (*fragrant variety*), Hosta (*fragrant variety*), Annual Vinca, Lunaria

Classroom Beds

(*Spring 2010 - these beds change based on input from classrooms each year*)

Taglit Class

Sunflowers, Purple Coneflower, Spinach, Red Cabbage, Swiss Chard, Chives, Basil, Parsley, Sugar Snap Peas (*later, Green Beans: Asian Zi 28-2*), Squash, Yellow Straight-neck

Kesem Class

Sunflowers, Sweet Annie (*herb*), Snapdragons, Sugar Snap Peas (*later, Green Beans: Scarlet Runner*), Kohlrabi, Radish, Beets, Carrots

Olam Echad Class

Sunflowers, Tick-seed Coreopsis, Borage, Marigold, Snapdragons, Spinach, Big Max Pumpkin Vine

Re'im Class

Nasturtiums, Sunflower, Mullien, Borage, Marigold, Snapdragons, Lettuce, Cabbage, Swiss Chard, Cucumbers, Red Velvet Okra

Teva Class

Radishes, Beets, Sugar SnapPeas, Cabbage, Borage, The "Three Sisters": Corn (*transplanted from the "Germination View" lesson at the kid's insistence*) Green Beans, Blue Lake Pole Beans, Squash

Just Kids Afterschool/ Camp Ruach

Sugar Snap Peas, Benning's Green Tint (*a large scalloped squash, Yum!*), Basil, Calendula, Edamame

Rosh Hashanah

Apple Trees (*2 Dwarf – one Fuji and the other its best pollinator*)

Yom Kippur

Iceberg Rose (*a white-flowering climber*)

Sukkot

Sweet Corn, Sunflowers, Pole beans
(*These are grown as walls for the frame of our living sukkah*)

Hanukkah

Arborvitae (*9 for the "menorah"*) Degroot's Spire
"Dreidle" Pots: assorted annuals, with white, yellow and blue flowers, in winter, pansies and violas; in summer marigolds, flowering vinca, cosmos

Purim, Passover, and Flower Beds:

Winter Jasmine, Daylilies, Verbena Bonarensis, Zinnia, Sunflowers, Flax, Calendula, Sweet Annie, Burning Bush (*Euonymous a.*), Horseradish, Parsley, Sage, Dill, Chives, Swamp Sunflower (*helianthus augustifolium*), Perennial Geranium, Columbine, Miniature Rose, Blue Spruce Sedum, Autumn Joy Sedum



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