

## Lesson Plan for Spring! Soil- The cycle of life-animals/ insects that live in the soil

### Word List:

Eid Nowrooz	Roots	Biodegradable
Haftseen Spread	Worms	Compost
Spring	Ants	recycle
Celebration	Beetles	
Bud	Rodents	
Blossom	Digging	
Flower	Stones	
Greenery	Sand	
Growth	Ground water	
Soil	degradable	

### This month the children learn about two interrelated topics:

- Spring and the cycle of life, how nature awakens from its winter slumber and the growth of plants starts again, the importance of soil in our lives and in nature. We want children to learn about the relationship between healthy soil and the waste that humans products.
- The Persian New Year: This section is only for programs that observe the Spring Equinox New year celebrations. Children learn about the traditions related to this holiday and prepare the traditional haft seen spread.

### Songs for Month of February *(click on link to open related document including lyrics...)*



[6. yek gol, do gol, dah taa gol](#)




[7. eyd omadeh, bahaar omadeh](#)



Model Art for March




First half of the projects are about spring, soil, cycle of life, and the second half are for Nowrooz




Category	Level	Activity	Material	Procedure	Comments
Nature / Science	2-5	<b>Examining Soil</b>	<ul style="list-style-type: none"> <li>• magnifying glass</li> <li>• digging tools</li> <li>• garden</li> </ul>	<p>Take children outside.            Explain to them that today they are scientists who are going to explore what lies beneath the ground.</p> <ul style="list-style-type: none"> <li>• Before starting show kids how to use the magnifying glass.</li> <li>• Have children pick a plot to examine it is best if they are close to the teacher so they can listen to instructions)</li> <li>• Have each child observe the top layer of soil, then have them dig deeper</li> <li>• Ask them what they see (rocks, worms, roots, dead leaves)</li> </ul>	
Science	all	<b>Filtering with Soil</b>	<ul style="list-style-type: none"> <li>• Large stones</li> <li>• Small Stones</li> <li>• Sand</li> <li>• Containers</li> <li>• Funnel</li> <li>• Dirty water – we just added some soil from the garden to some tap water.</li> </ul>	<p><a href="http://www.science-sparks.com/2013/07/12/filtering-water/">http://www.science-sparks.com/2013/07/12/filtering-water/</a></p>	



Nature	all	<b>Planting in the soil</b>	<ul style="list-style-type: none"> <li>• egg carton</li> <li>• planting soil</li> <li>• beans ( slightly soaked)</li> <li>• small spoon</li> <li>• small bowls</li> </ul>	<p>Talk about where a plant comes from and the concept of growth</p> <p>Give each child a bowl full of soil, an egg carton and a set of beans. Have them fill the egg carton with soil, then plant the beans (one in each slot)</p> <p>Place cartons near window, with sunshine.</p> <p>Have children water and watch the beans grow!</p>	 <p>Instead of egg carton you can use small planting pots, cups... Also for older kids you can have them plant several different seeds ( have them make a small sign for each one)</p>
Art	5 and up	<b>Grass Headed people!</b>	<ul style="list-style-type: none"> <li>• Old nylon stockings or pantyhose</li> <li>• Grass seeds</li> <li>• Sawdust or potting mix</li> <li>• Small yoghurt pot.</li> <li>• Decorations</li> <li>• Water-proof glue</li> </ul>	<p><a href="http://www.homemade-gifts-made-easy.com/grass-heads.html">http://www.homemade-gifts-made-easy.com/grass-heads.html</a></p>	
Science	6 and up	<b>Breathing Soil!</b>	<ul style="list-style-type: none"> <li>• Garden soil</li> <li>• Jar with a lid</li> <li>• Limewater (available at a drugstore-this is not related to lemons and limes)</li> <li>• Small container</li> </ul>	<p><a href="http://lifestyle.howstuffworks.com/crafts/other-arts-crafts/science-projects-for-kids-soil-experiments5.htm">http://lifestyle.howstuffworks.com/crafts/other-arts-crafts/science-projects-for-kids-soil-experiments5.htm</a></p> <p>This experiment shows kids the existence of microscopic animals in the soil.</p>	 <p>Very cool science experiment for older kids!!</p>
Art	all	<b>Art exploration with Soil</b>	<ul style="list-style-type: none"> <li>• soil (dried in air)</li> <li>• hammer</li> <li>• mortar and pestle (rubber-tipped)</li> </ul>	<ul style="list-style-type: none"> <li>• Gather soils of various colors. Place each dried soil sample on a piece of paper and crush into</li> </ul>	



			<ul style="list-style-type: none"> <li>● Paper cups (4 oz.)</li> <li>● pencils</li> <li>● ink pens (black, different tip sizes)</li> <li>● paint brushes (different kinds and sizes)</li> <li>● artist acrylic (clear gloss medium)</li> <li>● sponges and rags</li> <li>● watercolor paper</li> <li>● masking tape</li> </ul>	<p>pieces with hammer or mallet.</p> <ul style="list-style-type: none"> <li>● Place some of the crushed soil into a mortar. Use a rubber-tipped pestle to crush the soil into a fine powder. Repeat to crush all of the different colored soils.</li> <li>● Place the different soils in paper cups. Notice the colors and textures.</li> <li>● Lightly sketch artwork on watercolor paper with a pencil. When satisfied with composition, use ink for permanent lines.</li> <li>● With masking tape, carefully tape paper edges to table or board. This is done so that the artwork will dry flat.</li> <li>● Pour small amounts of paint in small paper cups. Add small amounts of soil. Experiment with depth of color and mixing the different soils.</li> <li>● Use different sizes and kinds of paint brushes, sponges, and rags.</li> </ul> <p><a href="http://www.soils4kids.org/files/s4k/painting-with-soil.pdf">http://www.soils4kids.org/files/s4k/painting-with-soil.pdf</a></p>	
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Property of Soils4Kids



Nature /Art		<b><i>Pressed Pansies</i></b>	<ul style="list-style-type: none"> <li>• Pansies and violas, or other dried flowers</li> <li>• Medium- to heavy-weight paper or blank pre-made cards</li> <li>• Bone folder or pencil</li> <li>• Tweezers</li> <li>• Small paintbrush</li> <li>• Clear-drying craft glue</li> </ul>	<p>The first part of this project is to have children pick their flowers (if possible) then learn to dry them. After that follow the steps in the link below:</p> <p>Click <a href="#">here</a></p>	
Nature / Art	6 and above	<b><i>Spring cherry blossoms</i></b>	<ul style="list-style-type: none"> <li>• pink tissue paper</li> <li>• branches</li> <li>• white glue</li> </ul>	<ul style="list-style-type: none"> <li>• Gather branches that have fallen outside; let dry, if necessary.</li> <li>• Cut out 2-inch squares of pink tissue, pinch tightly in the middle to create blooms, and affix them to branches with white glue.</li> <li>• Display in a tall container, such as a canning jar with the lid's center removed.</li> <li>• Click <a href="#">here</a> for instructions</li> </ul>	
Art	all	<b><i>root vegetable stamps / wrapping paper</i></b>	<ul style="list-style-type: none"> <li>• root vegetables</li> <li>• knife (kid friendly)</li> <li>• wrapping paper ( or just large pieces of paper)</li> <li>• paint</li> </ul>	<p>Click <a href="#">here</a> for ideas/inspiration</p>	<p>the wrapping paper can be saved and used when giving away gifts...</p> 


Science	all	<b>How do Bulbs Grow?</b>	<ul style="list-style-type: none"> <li>• Clear glass or container for planting</li> <li>• Marbles, stones or pebbles</li> <li>• Water</li> <li>• Plant bulb</li> </ul>	See instruction <a href="#">here</a> .	 <p>Because this month coincides with Nowrooz persian classes can plant hyacinth bulbs for the haftseen</p>
Science / nature	all	<b>Transpiration: changing colors of flowers</b>	<ul style="list-style-type: none"> <li>• vase</li> <li>• white carnation flowers</li> <li>• food coloring</li> </ul>	<p>Click <a href="#">here</a> for instructions and explanations</p> <p>Plants are not like us with pumping mechanism that pushes our blood around, so water moves up the vessel by adhesion (being attracted to the side of the vessel) and cohesion (water molecules being attracted to each other). Therefore when water evaporates from the top of the leaves it changes the pressure in the vessel and pulls up the column of water to replace the water lost.</p>	 <p>Based on the age of the kids the depth of analysis of why this happens can differ.</p>
Nature/Science	all	<b>Making a wormery (home for worms)</b>	<ul style="list-style-type: none"> <li>• An old jar, plastic would be the best.</li> <li>• Sand</li> <li>• Soil</li> <li>• Gravel</li> <li>• Old leaves</li> <li>• Water</li> <li>• Grass clippings</li> <li>• Leaves</li> <li>• Worms</li> </ul>	Click <a href="#">here</a> for instructions	 <p>Questions to ask: why do we need worms? How do earthworms breathe? How do earthworms move?</p>

<p>Science and Art</p>	<p>3 and above</p>	<p><b>Chromatography-butterflies</b></p>	<ul style="list-style-type: none"> <li>• Non-permanent markers</li> <li>• White coffee filters</li> <li>• Pencil</li> <li>• Cups of water</li> <li>• Black pipe cleaners</li> <li>• String</li> <li>• Scissors</li> </ul>	<p>Chromatography is about separating colors  <a href="http://buggyandbuddy.com/chromatography-butterflies-separating-colors-in-markers/">http://buggyandbuddy.com/chromatography-butterflies-separating-colors-in-markers/</a></p>	
<p>Science</p>	<p>all</p>	<p><b>Grow a bean in a CD case!</b></p>	<ul style="list-style-type: none"> <li>• Cd cases</li> <li>• beans</li> <li>• soil</li> <li>• Tape or rubber band (for holding the case together)</li> </ul>	<p>For more inspiration click <a href="#">here</a></p>	


Science	5 and above	<b>Shoe Box Plant Maze</b>	<ul style="list-style-type: none"> <li>• Shoebox</li> <li>• Extra cardboard</li> <li>• Scissors</li> <li>• Tape</li> <li>• Small potted plant (bean plant)</li> </ul>	For detailed instructions click <a href="#">here</a>	
Science	6 and above	<b>Building biodomes (multi day activity)</b>	<ul style="list-style-type: none"> <li>• Biodomes Engineering Design Project Workbook: Lessons 2-6</li> <li>• 2 plastic containers (1- and 2-liter bottles with lids work well,</li> <li>• Seeds (provide several types for different climates)</li> <li>• Soil (3-4 cups or .7-.9 l)</li> <li>• Sand (3-4 cups or .7-.9 l)</li> <li>• Supply of miscellaneous materials, such as pebbles, rocks, wire, small paper cups, plastic wrap, string, foil, popsicle sticks, chopsticks, etc.</li> <li>• insects ( or crickets) store</li> <li>• Masking tape</li> </ul>	<p>“In this multi-day activity, students explore environments, ecosystems, energy flow and organism interactions by creating a scale model biodome, following the steps of the engineering design process” Click <a href="#">here</a> for instructions.</p>	



			<ul style="list-style-type: none"> <li>• Duct tape</li> <li>• Glue (preferred: hot glue sticks with glue guns)</li> <li>• Scissors</li> <li>• Exacto knives (if teacher cuts the plastic bottles)</li> <li>• Butterfly nets and/or jars and paper cups</li> <li>• Drill</li> <li>• Water</li> </ul>		
Science	4 and above	<b>Ground water</b>	<ul style="list-style-type: none"> <li>• 2 large clear glasses or vases</li> <li>• sand</li> <li>• gravel</li> <li>• pitcher of water</li> </ul>	<a href="http://www.thechaosandtheclutter.com/archives/simple-science-making-groundwater">http://www.thechaosandtheclutter.com/archives/simple-science-making-groundwater</a>	 <p>Simple Science for Kids: Making "Groundwater"</p>
Science	6 and above	<b>Creating a self-sustained ecosystem</b>	<ul style="list-style-type: none"> <li>• 3 clear 2-liter (empty) soda bottles</li> <li>• clear packing tape</li> <li>• aquarium gravel</li> <li>• water</li> <li>• dechlorinator</li> <li>• rubber band</li> <li>• 4" piece of netting (I used cut up pantyhose)</li> <li>• soil</li> </ul>	<a href="http://cranberrycorner.blogspot.com/2010/07/summer-fun-ecosystem-edition.html">http://cranberrycorner.blogspot.com/2010/07/summer-fun-ecosystem-edition.html</a>	<p>This is similar to the biodome project just a little more simple</p>



			<ul style="list-style-type: none"> <li>• fish, snails, or other aquatic life</li> <li>• duckweed (which the store didn't have), anachris, or other aquatic plants</li> <li>• crickets, pill bugs, earthworms</li> <li>• a few dead leaves and small sticks</li> </ul>		
Science /Nature	all	<b>The growth of seeds</b>	<ul style="list-style-type: none"> <li>• Seeds for growing (we use seeds that are traditionally used in the "haftseen" spread like lentils, mung beans and wheat.</li> <li>• Disposable gloves</li> <li>• Sharpie pens</li> </ul>	<p>Each child gets a glove and places a seed in each finger and labels it. Then they insert an wet cotton ball in each finger. Over the month they water it and watch it grow.</p>	
Science	all	<b>Biodegradable or not?</b>	<ul style="list-style-type: none"> <li>• A selection of biodegradable/co</li> </ul>	The teachers designate a section of the outdoor space	This chart has the de-compost time of some materials:


			<p>compostable and non compostable items like fruit skins, plastic bag, penny , paper towel, cardboard, glass</p> <ul style="list-style-type: none"> <li>• Old popsicle sticks and a sharpie</li> </ul>	<p>for this activity.</p> <p>The teacher explains the concepts of biodegradable/compostable/ degradable. Then asks the kids to guess which items are biodegradable or not. For older kids they can write down their hypothesis. Then the children bury each item under the soil and make a sign for it by writing the item on the popsicle stick.</p> <p>Over the course of the 2 months, once a week they dig up the soil to see what has happened to those items.</p> <p>The teacher will need to explain if some things need more time to decompost or whether it will never decompost (like plastic)</p>	<p><a href="https://wiki.kidzsearch.com/wiki/Biodegradation">https://wiki.kidzsearch.com/wiki/Biodegradation</a></p> 
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**Persian Nowrooz Projects**

activity	all	Spring Cleaning	<ul style="list-style-type: none"> <li>• small brooms,</li> <li>• cleaning towels, rags</li> <li>• Window cleaning tools...</li> </ul>	<p>Explain to the children the about the tradition of cleaning our homes for the coming of the new year.</p> <p>Then explain that since their school is also a home, they will all work together to clean their classroom.</p> <p>Split students into groups, give them the material they need and explain what they need to do.</p>	<p>for older kids you can have them plan the cleaning process themselves...</p> 
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nature	all	sprouting seeds (growing sabz-e for persian haft seen)	<ul style="list-style-type: none"> <li>• plates ( for spouting)</li> <li>• wheat seeds</li> </ul>	<p>Explain about the “sabzeh” in the Haft Seen</p> <p>Have each child Spread seeds out on the plate, evenly.</p> <p>Water with a spray regularly (kids can take turns each day)</p> <ul style="list-style-type: none"> <li>• Remember to start this project several weeks before Eid.</li> </ul>	
Art	all	Making Haftseens	<ul style="list-style-type: none"> <li>• mdf wood</li> <li>• small sabzeh</li> <li>• garlic</li> <li>• senjed</li> <li>• vinegar</li> <li>• other haftseen material</li> </ul>	<p>First explain the elements of the haftseen spread to children.</p> <p>The basis for the project is to first decorate the wooden board , then add the haftseen elements.</p> <p>Many of the haftseen elements are a separate project which can be completed over the weeks leading up to nowrooz ( like sabz-e and colored egg- see above)</p>	  <p>clay can be used to create little containers for the elements:</p> 
Art	all	Naturally dyed eggs	You can pick a few of	Click <a href="#">here</a> for instructions	

		for the Haftseen	<p>these items or use them all</p> <ul style="list-style-type: none"> <li>• 1 cup chopped purple cabbage per cup of water — makes blue on white eggs, green on brown eggs</li> <li>• 1 cup red onion skins per cup of water — makes lavender or red eggs</li> <li>• 1 cup yellow onion skins per cup of water— makes orange on white eggs, rusty red on brown eggs</li> <li>• 1 cup shredded beets per cup of water— makes pink on white eggs, maroon on brown eggs\</li> <li>• 2 tablespoons ground turmeric per cup of water — makes yellow eggs</li> <li>• 1 bag Red Zinger tea per cup of water— makes lavender eggs</li> </ul>		
Art	2-5	Painting eggs for Haftseen	<ul style="list-style-type: none"> <li>• boiled eggs</li> <li>• tempera paint diluted in water</li> <li>• paint brush</li> <li>• small container for holding the egg</li> </ul>	<p>Give each child an egg, held within a container, have them paint their eggs with one color at a time.</p>	

Art	all	Flower (placeholders) for the Haftseen	<ul style="list-style-type: none"> <li>• Coffee filters</li> <li>• Tempera paint / Watercolor paint</li> <li>• paint brushes</li> <li>• small cups for water</li> </ul>	<p>Have each child decorate their coffee filter by dipping their brushes in water and then paint on to the coffee filters.</p> <p>Each of the painted coffee filters can be the container for one of the haftseen items</p>	
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