

Preschool Waste Education and Reduction Program

One World Montessori School
San Jose, CA
2009-2010 school year

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One World Montessori School

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One World Montessori School



- Founded 1979
- Serves the Santa Clara Valley/San Jose metropolitan area
- Named the 10th Greenest School in the country by the Green Schools Guide, a division of National Geographic, in 2006

Montessori Philosophy

- Impart children with respect for the earth and all life
- Children study the life cycles of plants and animals and gain an awareness of the interconnectedness of all things
- Environmental education ties in with Montessori philosophy by teaching children how humans impact the environment around them

Commitment to a Sustainable Lifestyle

- Zero-waste lunch policy: reusable containers from home, no disposable plates or cutlery in classrooms, composting of food waste
- Use only recycled products as much as possible in classrooms and office
- Email communications with parent body
- Divert as much waste as possible from landfills, especially toxic waste

Commitment to a Sustainable Lifestyle



Organic school gardens are planted, tended, and harvested by the preschool students with guidance from Outdoor Teacher.

Waste Reduction and Education Program

- Committing to waste reduction reinforces One World's commitment to a sustainable lifestyle
- Education gives students a better base from which to make better choices concerning our environment as they grow
- Waste diversion tracking project
- Hands-on activities and experiments: landfill activity, toxic waste activity, and others

Where Does Trash Go?

Part 1: Where Should It Go?

- Gather a full bag of clean trash; include a variety of items
- Have children make boxes or even signs for the floor marked Recycle, Compost, and Landfill
- Have children help you sort the trash into appropriate piles
- Put “Landfill” items back into bag and show children the difference—that’s the amount of waste diverted

Where Does Trash Go?

Part 2: What Happens in a Landfill

- Gather a variety of items to bury in your landfill: paper, plastics, food (organic and processed), yard waste
- Take a large roasting pan and fill halfway with soil, place all items, cover with soil
- Water the “landfill” to simulate rain and set it outside
- Re-examine waste after 10 days and 20 days and discuss how things changed

Diverting Toxic Waste

- Show the children a battery and a schematic of the inside so they can see there are hazardous materials inside
- Discuss how the harmful chemicals inside the battery could leach into soil and ground water if the battery's case is breached in the landfill
- Set up two glass containers: sand in the bottom, a coffee filter in the top of each

Diverting Toxic Waste

- Put a few drops of food coloring in one coffee filter to represent the chemicals inside the battery
- Pour water into both jars to simulate rain
- Food coloring will leach into the water and sand; explain that the battery's chemicals will do the same in the landfill
- Show children rechargeable batteries and discuss other means for diverting toxic waste

Other Activities

- Have students help you come up with a recycling plan for their classrooms; discuss best placement of recycling containers and how to make sure waste gets diverted
- Discuss composting and have students examine compost with magnifying glasses to see how things break down
- Plants from Trash: grow new plants from seeds, pits, fruit, vegetable parts that might otherwise have been thrown away
- Discuss durability vs. disposability (reusable lunch containers vs. ziploc bags) and making better choices

Recycling Tracking Activity

- Get large bins/buckets with handles, suitable for children to carry alone or in pairs—helping you to carry the recycling out after weighing gives them a greater sense of ownership in the program
- Weigh each student holding an empty bin; after waste is collected to these bins weigh them again
- Math: have/help students calculate difference in weights to find out how much recyclables weighed

Recycling Tracking Activity

- Keep track of how much recyclable material has been diverted over time and share info with students
- Draw parallels they understand. Saying “100 lbs” doesn’t tell them much but saying “as much as you and your friend weigh together” gives them a scale they can grasp.
- Involvement makes recycling fun

2010-2011 and Beyond

- Repeating this program at our San Jose campus and introducing it at our second campus in Santa Clara
- Looking to expand the program to our Elementary students at both campuses
- Expanding program to include water consumption/conservation lessons through the use of rain barrels in garden, conservation activities in classrooms

Thank You!



One World Montessori is grateful for the support of the Silicon Valley Community Foundation, through the City of San Jose Go Green Schools Initiative, for the funding that made this program possible.

For More Information...

To download the slides for this presentation as well as the lesson plans used in our hands-on activities, the final grant report outlining the first year of our program, and other resources, please visit

<http://www.oneworldmontessori.org>

Please feel free to contact Lisa at any time with questions, ideas, resources—I'm happy to help!

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