



Dear Family,

During the next few months, our class will be learning about plant growth and development as part of our science unit. We will be using the *Brassica Rapa* (Wisconsin Fast Plant) to investigate plant life cycles.

We know that children do better in school when their families are actively involved in their learning. Here is one activity that you can do with your child at home to strengthen both your own and your child's understanding of plant growth and development.

Family Activity: Cut open some fruits or vegetables (citrus fruits and avocados are recommended) for your child and take the seeds out. Have your child look closely at all of the different types of seeds and sort and describe them according to their characteristics (i.e. color, size, texture, odor, etc.). If your child has started the *Plant Growth and Development* unit in their classroom, ask them how these seeds are the same or different from the Lima bean seed and Fast Plant seed. In order to help your child make the connection that all seeds will grow into plants, plant a few of the seeds you have collected. Avocado pits easily sprout and produce attractive miniature trees. Rinse the pit and dry with a paper towel. Peel off the pit's brown husk. Use three toothpicks stabbed halfway into the pointed end of the pit. Suspend it in the opening of a heavy glass or fruit canning jar. Fill the jar with enough lukewarm water to cover the bottom end of the pit. Add more water as that evaporates. Soon the seed will sprout roots, a stem and leaves. When the leaves appear then transplant your plant into a bucket or clay pot of potting soil, or if warm enough try setting it out in the garden. You can also plant seeds from oranges, grapefruits, lemons, apples, pumpkins, tangerines or limes. Don't let the seeds dry out. Put them in a yogurt container or a small cup filled 3/4 full of potting soil. Plant seeds near the top. Set in a sunny windowsill. Water every day and watch your little trees grow. It may take a month or more for the seeds to sprout, so be patient! After the seeds have sprouted, talk to your child about what is happening to the seed and discuss the fact that all seeds grow into plants and they all have similar life cycles.

I am always eager to have family members come in and share their knowledge and experience related to our units of study. If you have a skill or experience related to plant growth and development that you would be willing to share with us, please call or email me.

Attached to this letter is a sheet with many suggestions for supporting your child's science understandings at school, at home, and around the Seattle area. Please keep this sheet and take advantage of the suggestions as often as possible!

Thank you very much for all you do for your child.

Sincerely,

Family Strategies for Supporting Science

At School

- Talk to your child's science teacher about how your child is doing in class.
- Chaperone a science field trip.
- Volunteer to inventory a science kit for the teacher.
- Volunteer in your child's science class.

At Home

- Encourage your child to ask questions about the world as much as possible, and avoid giving answers. Encourage observation, exploration, investigation, or research instead.
- Ask your child thoughtful questions that promote the scientific skills of observing, comparing and logical thinking. Examples of question starters:
 - *What have you noticed about...?*
 - *How does it look/feel/smell...?*
 - *How are these the same or different...?*
 - *Which is longer/stronger/heavier?*
 - *How could you...?*
 - *What do you mean when you say...?*
 - *What makes you think so...?*
- Teach your child to provide evidence for her thinking by using the word "because" in her explanation (I think the fish is dead *because* it is floating upside down.).
- Encourage your child to draw detailed, colorful, labeled illustrations of things he is observing at home or school.
- Read non-fiction books together in your family's home language.
- Read the newspaper together: talk about a science-related article.
- Talk about the natural history of your country of heritage (e.g., Mt. Pinatubo in the Philippines, Mt. Fuji in Japan, tsunami in southeast Asia, Himalayas in India, Great Rift Valley in Eastern Africa).
- Cook together: talk about what you are doing as you are cooking.
- Work together in the garden: plant vegetables, start a family compost or a worm bin.
- Go through a kitchen cabinet: talk about which foods are good for you and which aren't; look at the ingredients and nutritional information on labels.
- Have your child help with small (and safe) repairs around the house.
- Find safe experiments to do together at home.
(www.exploratorium.edu/science_explorer/ has a great list)
- Listen to "Science Friday" on National Public Radio together.
(Fridays, 8-10pm on KUOW 94.9 FM)
- Choose appropriate science-related programs on TV to watch with your child:
 - Public Television (KCTS, Channel 9)
 - Discovery Channel
 - Animal Planet Channel
 - National Geographic Channel

Nature Channel

- Choose appropriate science-related websites to view with your child:
 - Bill Nye, The Science Guy (www.nyelabs.com)
 - How Stuff Works (www.howstuffworks.com)
 - Cool Science for Curious Kids (www.hhmi.org/coolscience)
 - Extreme Science (www.extremescience.net)
 - Cool Cosmos (<http://coolcosmos.ipac.caltech.edu>)
 - Science News for Kids (www.sciencenewsforkids.com)
 - Mt. St. Helen's Cam (<http://www.fs.fed.us/gpnf/volcanocams/msh/>)

In the Seattle Area

- Go for a walk around your neighborhood: talk about how people have changed the natural environment in positive and negative ways; come up with ideas for how your family could make more positive changes in your neighborhood; talk about the landforms you see and how they were formed (e.g., Mt. Rainier).
- Go to the public library: find books about animals, insects, inventions, electricity, natural disasters, space.
- Go to the beach at low tide (e.g., Lincoln Park, Alki Beach, Carkeek Park).
- Take a trip to the...
 - Pacific Science Center 206.443.2001 (www.pacificsciencecenter.org)
 - Woodland Park Zoo 206.684.4800 (www.zoo.org)
 - Seattle Aquarium 206.386.4300 (www.seattleaquarium.org)
 - Seattle Children's Museum 206.441.1768 (www.thechildrensmuseum.org)
 - Museum of Flight 206.764.5720 (www.museumofflight.org)
Admission is free the first Thursday of every month
 - Science Fiction Museum 206.724.3428 (www.sfhomeworld.org)
Admission is free from 5-8pm the first Thursday of every month
 - Burke Museum 206.543.5590 (www.washington.edu/burkemuseum/)
 - Mount Saint Helens 360.449.7800 (www.fs.fed.us/gpnf/mshnm/)
 - Mt. Rainier National Park 360.569.2211 (www.nps.gov/mora/)
 - Univ. of WA Arboretum 206.543.8800 (<http://depts.washington.edu/wpa/>)
Tours at 1pm on first and third Sundays each month (meet at Graham Visitor's Center). Information about rental of self-guided packs on-line.
 - Volunteer Park Conservatory 206.684.4743
(www.cityofseattle.net/parks/parkspaces/VolunteerPark/conservatory.htm)

Camps & Classes

- Find out about the Pacific Science Center camp every summer in Seattle. Scholarships are available. (206.443.2925)
www.cmiregistration.com/user/org/category.jsp?id=2367&org=135
- Coyote Central offers year-round classes for 5th-9th grade students that include science and technology-related activities such as cooking, building soapbox derby cars,

welding, glass blowing, robotics, and lots more. Scholarships are available.
(206.323.7276) www.coyotecentral.org/