



Dear Family,

During the next few months, our class will be learning about the properties of balls and ramps as part of our science unit, Balls and Ramps. The first half of the unit focuses on balls and ball behavior (what makes a ball a good bouncer and a good roller). The second half of the unit focuses on how balls behave on ramps. Students will work on observation skills, learn how to ask scientific questions, conduct "fair tests" (investigations) to find the answers to their questions, and analyze the results of their "fair tests".

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 engage your child in thinking about things that affect ball behavior.

Family Activity:

Find several things, some of which are round. Have your child observe each one and then explore how it rolls and bounces. Remind your child that s/he is a scientist, so the object must be controlled. After your child has had time to explore with each thing, ask them about the properties of each one. What shape is it? How big is it? How heavy is it? How does it feel? What is it made of? Then, ask your child how it behaves? What happens when you bounce it? Roll it? Is it a good bouncer? Roller? What does it do that makes you think so? Your child should give reasoning for their thinking, e.g. I think it is a good bouncer because it bounces really high or a lot of times.

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 balls and/or ramps 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.jxp?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/

