

Making Scientists

By Helen Menasian, RVOEP Education Coordinator



How do we make scientists?

Well, at the RVOEP, we start from scratch with one eager class of children. Next, we add a 45- acre forest, some specially trained adult leaders, and then we throw in some interesting questions about nature. Questions lead to investigations. Each investigation leads to an adventure in Moonlight Meadow, the forest, or the Russian River. Pretty soon the children are hooked -- another batch of scientists has been created! In the process a lot

of important learning about how our planet works has taken place.

As part of their investigation of Earth's soil, second graders ask the question "What is soil made of?" Of course the only way to find out is to dissect a block of topsoil bit by bit, and keep track of everything that is found. With squeals of excitement, small groups of budding scientists carefully take apart their block of soil, putting the earthworms, roly polies, millipedes, and fungus into a category of "Alive" things. The dead leaves, sticks, bones and exoskeletons go in the "Once Alive" category; and the rocks, air, and water go in the group of "Never Alive" things. The billions of little bacteria that can't be seen get added to the list at the end. After their list of soil ingredients is complete, the students visit the soil kitchen where they are challenged to see if they can actually make a batch of topsoil from scratch using the ingredients on their list. Of course, they only have 20 minutes and that turns out to be too short a period of time by about 99.999 years; but it was worth the try and we learned that it is not easy to take the place of Mother Nature!

Each visit to the RVOEP brings its own set of questions, investigations and adventures. Can we prove that our forest is actually a community of plants and animals that all have important jobs? What important jobs do birds perform in our ecosystems? What habitat at the RVOEP supports the greatest diversity of birds? What challenges do birds face on their migration routes from South America to the RVOEP? Is our river a good home for salmon and steelhead? How have people impacted the riparian habitat at the RVOEP? What can we do to improve the habitat for wildlife at the RVOEP? As students participate in these investigations they experience being scientists. They learn to ask important questions, gather information with all of their senses, interpret their findings, and reach conclusions. Their conclusions invariably lead to a new

understanding about the interdependence of plants, animals, soil, and water. Often they see how humans can have a positive or negative impact on the wellbeing of these plants and animals. Most importantly, students begin to understand and appreciate that our own health depends upon the health of the ecosystems in which we live.