I teach science for grades 6-12 at Lopez Island Middle and High School. We are a K-12 school with about 200 students total. The secondary school typically enrolls around 100 students. The school assigns 1.6 FTE to science in the secondary school. This is shared between 3 teachers.

Lopez Island School teachers generally must wear multiple hats in order to provide students with diverse learning choices. For example, the same teacher that teaches Eco Agriculture and Sustainable Practices also teaches Culinary, Journalism and English 10. The other science teacher teaches Chemistry, Physics, Woodshop, and Elementary Tinker Lab. In my two years as a science teacher I taught Marine Biology, Biology, Physical Science, MS Earth and Space Science, MS Physical Science, and Environmental Science. Next year I will be teaching MS Life Science, Biology, HS Earth and Space Science, and Health. The only repeat for me is Biology.

Unlike large school districts, we do not have curriculum planners. With so many preps and new classes to create from scratch each year, time is scarce. I often find that I must choose the first curriculum idea that comes to mind and pursue it when planning my teaching.

All middle school students take Earth Science. High School Earth Science is a science elective. High school students at Lopez School would also be exposed to Earth Science concepts if they take Environmental Science, Marine Biology, Eco Agriculture, or Sustainable Practices—all of which are electives.

Lopez School is well connected with the community and local organizations. The Eco Agriculture teacher collaborates with many farms on the island to give students a hands-on experience and to expose them to sustainable efforts occurring in their own community. I share my laboratory with Russel Barsh and Madrona Murphy of Kwiaht: Center for the Historical Ecology of the Salish Sea. We often collaborate on education projects and students are exposed to working scientists on a daily basis. Last summer I participated in Teacher’s on Public Lands—a program put on by the Bureau of Land Management. Our school is connected with the local BLM office that keeps us in touch with grant opportunities and has provided Leave No Trace workshops for our students.

I keep the NGSS Standards on my desk and refer to it often. For classes like Biology, Physical Science, and Earth Science it provides me with direction. For elective classes like marine biology and environmental science, it is not as straight forward to use NGSS for curriculum planning, but more often than not, my units in these classes hit NGSS standards.

I participated in the Science Learning Network put on by the NWESD in Anacortes this year. Several teachers and curriculum planners from several school districts looked at 3-D formative assessment practices. We tried out 3-D practices in our own classrooms and discussed our results in the workshop and tried to decipher if what we did was really 3-D.

That workshop was helpful and I feel much closer to understanding the aim of NGSS. The standards are generally high caliber stuff and I am up to the challenge of administering them. I appreciate its ambiguity as it leaves the door open for exploration and teachers’ input and creation. I like that it highlights scientific practices—skills that all students should learn in science classrooms that can be applicable to all sciences and that are life skills too.

It is not easy—or time effective—to create an NGSS unit of instruction from scratch. I might be able to create one or two units over the summer, but not a whole year’s worth. Even modern textbooks fail to align wholesomely with NGSS; however many times throughout the year I only have time for a quasi-silver bullet that really does not meet the writers’ of the NGSS expectations. I find some quality NGSS-aligned curriculum resources on the NSTA website.

I am excited to get to know these InTegGrate Curriculum materials. High school students will be interested in the links between science and society—students ordinarily put off by hard science will buy-in if they see how it affects them. I seek to make my classroom more student-centered as I know that learning is solidified when students get the opportunity to think for themselves. The InTeGrate modules include many discussion and group work scenarios that allow students to express their opinions and communicate ideas and work with new skills and concepts in authentic ways.