



# Science Content Integration *in your elementary school!*

ESD 113 is supporting our region’s elementary/K-8 schools in partnership with ESD 101, LASER, and the Institute for Systems Biology.

1. Hear Tumwater SD elementary teachers share excitement about how they integrate science and STEM! See this [inspiring video clip](#) from the Nov 2021 Washington STEM Summit.
2. Explore more on pdEnroller
3. Register as teams for one/both of these 2 complementary professional learning series...

<p style="text-align: center;"><b>Elementary Teachers and Instructional Coaches</b></p> <p style="text-align: center;"><b>“Building Equity in the Elementary Grades Through Science Content Integration”</b></p> <p style="text-align: center;"><i>a professional learning series for Teachers, TOSA’s and coaches</i></p> <p style="text-align: center;"><a href="#"><u>Register here</u></a></p>	<p style="text-align: center;"><b>Elementary School Principals</b></p> <p style="text-align: center;"><b>“P4P Principles of Science for Principals”</b></p> <p style="text-align: center;"><i>a professional learning series for elementary school leaders</i></p> <p style="text-align: center;"><a href="#"><u>Register here</u></a></p>
<p>Thursdays 4:00PM – 5:30PM via ZOOM</p> <p>Feb 10 Feb 17 Mar 3* Mar 10 Mar 31*</p> <p>[* incl. time to meet with principals in parallel workshop, to collaborate around student learning]</p> <p>Teachers may register as teams and should encourage their principal to enroll in the P4P workshop. 1.5 hours of asynchronous learning will be included in the “Building Equity” series for a total of 9 STEM Clock Hours.</p>	<p>Thursdays 4:00PM – 5:30PM via ZOOM</p> <p>Feb 10 Feb 17 Feb 24 Mar 3* Mar 10 Mar 31*</p> <p>[* incl. time to meet with teams in parallel workshop, to collaborate around student learning]</p> <p>Administrators are encouraged to enroll their teacher teams in the aligned “Building Equity” workshop to support implementation.</p>

## Teams of Elementary Teachers, TOSA's and Instructional Coaches\*

**"Building Equity in the Elementary Grades Through Science Content Integration"**  
*a professional learning series for teachers, TOSA s and instructional coaches.*

*\*administrators should register for the parallel P4P series to support their teacher teams*

### PURPOSE and Outcomes

Teachers will deepen their knowledge of the WSSLS (NGSS) and leverage strategies for content integration to increase equitable access for students to high-quality standards-aligned science and STEM experiences (a minimum of **150 minutes weekly**), interwoven with math, ELA, and other content areas through:

- **resource tools** to apply in their classroom context
- **a focus on science and engineering practices and crosscutting concepts** as a driver to improve instruction and student engagement
- **their plan of action** that is customized to their classroom, school, or district
- implementation of **science content integration** best practices

### AGENDA

- 9-hour series over 5 sessions
  - 1 ½-hr synchronous collaborative sessions, with focus on 3-dimensional science (aligned with WSSLS). Sessions address needed classroom instructional shifts, how this learning is different, and how you as a classroom teacher or instructional coach can effectively make these shifts.
  - 1 ½ hrs of asynchronous time (total) for assigned readings and next-session prep.
- Progression through 5 sessions attends to key questions:
  - ★ *What are the instructional shifts needed for the "new" science standards? What will this look and sound like in the classroom?* Focus on how 3-dimensional science, anchoring phenomena, crosscutting concepts, science and engineering practices, and disciplinary core ideas work together – allowing students to deepen their understanding of the nature of science and build their science capital.
  - ★ *How can content integration deepen student learning and engagement across the curriculum?* Putting together all components of 3 dimensional science in my school.
  - ★ *What tools/strategies can I use?* What does it look like to integrate content? Tools and strategies supporting integration of science with ELA, mathematics, and other content.
  - ★ *What does this look like in my context?* Identifying key elements in my action plan for enhancing science learning in my classroom or school.
  - ★ *STEM skills and Career Connections: How do scientists and engineers do their work?* Building student STEM identity and exploring what a STEM workplace looks like.

## Principals

**"P4P Principles of Science for Principals"**  
*a professional learning series for elementary school leaders*

**PURPOSE** Principals will enhance their WSSLS science leadership, for enacting as their school's instructional leader in STEM, with:

- **resource tools** to apply in their ongoing teacher professional development work
- **student observation protocols** for use in teacher feedback towards improvement of instruction
- **their plan of action** that is customized to their district or school

### Equitable, Quality Science

*My personal learning of the science standards lens on learning, instruction and assessment.*

### What does all standards, all students mean for our science classrooms?

- ✓ *The school program provides students opportunities to develop their understanding of Disciplinary Core Ideas (DCI), through engagement in Science and Engineering Practices (SEP), and their application of Cross Cutting Concepts (CCC).*
- ✓ *How do these 3 dimensions work together for students to express both the nature of science and aspirations for their role in science and STEM?*
- ✓ *How do the 3 dimensions of science drive instructional changes in the classroom?*

### Learning Walks

*My professional learning about students' science learning.*

### As I see the instructional changes through the eyes of students, how is their science understanding growing?

- ✓ *Frequent, short learning walks provide data on science in my school.*
- ✓ *How do I gather data to learn about student learning in science and teacher instructional practice?*
- ✓ *What are students' own perspectives of their 3D science learning? Are students showing their understanding of science through SEPs? or CCCs?*

### Actions

*My instructional leadership actions.*

### How can I initiate, enhance, and reinforce teachers as they enact 3D instruction and learning in their classrooms?

- ✓ *How can I best communicate my observations with each teacher.*
- ✓ *How do I design and build out a multi-year action plan that focuses on teachers' new learning along with changing curricular realities?*

## OUTCOMES

1. Through learning walks and data conversations, support elementary **Science content integration** best practices
2. Increase classroom science/STEM instruction to a minimum of **150 minutes weekly**
3. Create sustained Science/STEM articulation **pathways from elementary to middle school**
4. A broader outcome for school districts is development and continued support of district teams to initiate or enhance the **LASER Strategic Planning** process

## AGENDA

- 12 hour series over 6 sessions
  - 1 ½ hr synchronous collaborative sessions, with focus on 3-dimensional science (aligned with WSSLS), that address needed classroom instructional shifts, how this learning is different, and how you as an instructional leader can effectively partner with teachers as they make these shifts.
  - ½ hr asynchronous time for assigned readings and next-session prep.
- Progression through 6 sessions attends to key questions of school leaders:
  - ★ *What are the instructional shifts needed for the new science standards? How will learning feel different?* Personal learning focus on systems and system models –WSSLS across grade levels.
  - ★ *Contemporary STEM workplace and STEM vision - What does a STEM workplace look like? How do scientists and engineers do their work?* Our experience will include an ISB scientist with a focus on systems thinking skills, used by both students and scientists.
  - ★ *Moving the question from, “How do we implement new NGSS/WSSLS standards” to “what learning do we want for each of our students”. What will this look and sound like in the classroom?* Focus on how 3 dimensional science, anchoring phenomenon, crosscutting concepts, science and engineering practices, disciplinary core ideas work together – allowing students to express both the nature of science and aspirations for their role in science and STEM. This supports integration of science with ELA and mathematics.
  - ★ *As my building instructional leader, what is my part in working with science teaching as they realize WSSLS vision?* Putting together all components of 3 dimensional science in my school.
  - ★ *How are students in my school learning science?* Gathering evidence of student learning in science, what to look for, tools to use for both data gathering and sharing out with teachers.

★ *What tools/strategies can I use with teachers in my building to grow their professional practice?*  
Identifying key elements in my action plan for enhancing science learning in my school.