

NWESD Assessing with Learning Progressions in Science Project (NW ALPS) LOGIC MODEL

Theory of Action: Student achievement will improve when teachers know the content that is needed to teach their curriculum, create learning progressions based on that content knowledge and implement those learning progressions by applying formative assessments in their classrooms.

	Strategies		Objectives	Goals
	Participants	Activities		
<p>Partners</p> <ol style="list-style-type: none"> NWESD 3 high needs school districts Ferdale SD LaConner SD Mt Vernon SD 2 other partner school districts Lakewood SD Snohomish SD 1 private school Immaculate Conception Regional School Skagit Valley College Applied Research Northwest <p><u>Background (NWESD)</u> Previous exp. as MSP grantee Exp. with NCOSP Exp. with LASER Experience Regional Coordinator</p> <p><u>Alignment with state and national standards.</u> Program aligned with state and national standards.</p> <p><u>Needs assessment</u></p> <p>Student Data: WASL and MSP data from 2008 – 2010 for partner district schools shows students consistently meeting standard at a lower rate than the state average.</p> <p>Teacher Data: Needs assessment survey data shows partner district teachers do not feel adequately prepared to teach a number of topics in elementary science curriculum and in the areas of formative and summative assessment and learning progressions.</p>	<p>Design Team of two teachers with leadership experience and content expertise from partner districts: Caitlyn Gregory, Snohomish School District, and Dale Fournier, Mount Vernon School District; Brad Smith, higher education faculty from Skagit Valley College; Adrienne Somera, Regional Science Coordinator, NWESD; Joanne Johnson, NW LASER Alliance Director, NWESD and Pamela Jull, Applied Research NW, project evaluator, Kathy Darrow-Joiner, Teacher on Special Assignment: Science, NWESD.</p> <p>Twenty-two elementary teachers from our partner districts working in Teacher Teams to build learning progressions for ten 4th, 5th, and 6th grade science kits.</p>	<p>Design Team meets in the summer of 2011 to design the professional development process Teacher Teams will use in the fall. (2 half days)</p> <p>Teacher Teams meet to learn about formative assessments and draft a learning progression with associated formative assessments for specific 4th, 5th, and 6th grade sets of science materials.(2 days)</p> <p>Higher Ed faculty from Skagit Valley College uses the results of the pre-assessment and DRAFT learning progression documents to design material-specific professional development to deepen pedagogical content knowledge for Teacher Teams.</p> <p>Teacher Teams work with higher ed faculty to deepen their pedagogical content knowledge and use <i>Curriculum Topic Study</i> to finalize their learning progression documents.(2 days)</p> <p>Teacher Teams use science kits winter quarter in their classrooms, testing the formative assessments and fine tuning the learning progressions, reflecting in an online community and sharing their learning with other teams. (1 hour per week online site-related facilitated learning in Moodle.)</p> <p>Teachers Teams apply learning from the first science kit on a second kit, creating learning progressions and formative assessments and deepening their content knowledge. (2 days workshop plus implementation spring quarter plus one hour per week online site-related learning in Moodle.)</p> <p>During the Summer of 2012, Teacher Teams ready the team developed learning progressions and imbedded formative assessments for ten science kits for publication.(2 days)</p> <p>Culmination of project, summer of 2012, the Design Team finalizes the products of the project:</p> <ul style="list-style-type: none"> Professional Development templates and manuals Teacher Guides Learning progressions and imbedded formative assessments for ten science kits: <ul style="list-style-type: none"> STC Ecosystems FOSS Environments FOSS Landforms FOSS Levers & Pulleys FOSS Magnetism & Electricity FOSS Mixtures & Solutions FOSS Models & Design STC Motion & Design FOSS Variables FOSS Water 	<p>Evidence of a 5% increase in student scores as measured by student results on pre and post HORIZON Research science content assessments in participating teacher classrooms by project end.</p> <p>Students recognize improvement in their own learning with increasingly better performance on formative assessments imbedded in the teacher created learning progressions by project end.</p> <p>Increased student intellectual engagement with the science content in classrooms</p> <p>Evidence of increased teacher content knowledge as aligned with WA State Science Standards and commonly used materials in WA State and measured by HORIZON Research Content specific teacher pre and post assessments.</p> <p>Learning progressions and imbedded formative assessments for ten commonly used sets of science materials in 4th, 5th, and 6th grade classrooms in NW ALPS partner districts by project end.</p> <p>Increased availability of online educational resources that can be used to replicate the professional development done to create learning progressions and formative assessments for other science materials by project end.</p>	<p>Improve student achievement.</p> <p>Increase teacher pedagogical content knowledge in science as aligned with WA State Science Standards.</p> <p>Design, develop and implement a professional development process which can be used to create learning progressions and imbedded formative assessments for commonly used science materials in WA state.</p> <p>Create material specific summative assessments for 4th, 5th, and 6th grade sets of science materials used in our partner districts.</p>