District/School Implementation of Elementary Science Self -Assessment

Leadership

Leadership pursues opportunities to enhance science learning and minimize competing initiatives. Leadership's goals and resource allocations align to a science focus. School leaders ensure that teacher instructional practices align with integrated science education.

Desired Outcomes

L1: All elementary teachers have access to job-embedded professional learning opportunities to build teacher capacity in content and pedagogy for integrated science teaching and learning as well as in teacher leadership.

Indicators	1	2	3	4
L1.1: Elementary principal assesses teacher needs to inform content learning needs.				
L1.2: Elementary principal assesses teacher needs to inform pedagogical learning needs.				
L1.3: Elementary principal focuses professional learning opportunities on science content.				
L1.4: Elementary principal focuses professional learning opportunities on science pedagogy.				
L1.5: Elementary principal provides professional learning opportunities that promote cross-curricular connections among science content areas and other content areas.				
L1.6: Teacher leaders have support from the elementary principal in learning to assist their colleagues with accessing and learning science content, science practices, and student-centered pedagogy.				

1	Not currently part of standard practice or local environment	3	Collaboration occurs among stakeholders to develop and implement the indicator(s)
2	Awareness and development of the indicator(s) is beginning	4	Indicator(s) are fully implemented and systemic change is occurring among stakeholders

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L2: Elementary principals and teacher leaders have the capacity to monitor and improve the implementation of science education.				
Indicators	1	2	3	4
L2.1: Elementary principals identify and support the development of science leaders throughout the district.				
L2.2: District leaders identify needs of administrators' for implementing and monitoring science education.				
L2.3: Elementary principals and school leaders work with staff members to create a science education implementation plan.				
L2.4: Elementary principals and school leaders understand and advocate for science education.				
L2.5: Elementary principals and school leaders assist staff in maintaining a focus around a shared vision of science education.				

L3: Science engaged schools and/or program models focus on equitable learning opportunities for ALL students.				
Indicators	1	2	3	4
L3.1: Elementary school partners with community resources and afterschool programs to engage underserved populations in integrated science experiences.				
L3.3: Elementary school uses community role models and mentors to engage underserved populations in science in education.				

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Teaching and Learning

Curriculum, instruction and assessment support meaningful and authentic science ***learning for all students.***

Desired Outcomes

T1: All students are engaged in meaningful, authentic science related learning opportunities.

Indicators	1	2	3	4
T1.1: Learning opportunities are: - Student-centered; - Project-based, problem-based, or inquiry-based; - Connected to real-world contexts and/or regional science partners; - Interesting to students; and - Grounded in the science relevant standards.				
T1.2: Elementary students authentically use technology in multiple ways (collect data, solve problems, communicate, model, conduct research, collaborate).				
T1.3: Accelerated, rigorous and relevant science -related courses are available to every student.				
T1.4: Elementary students are supported in the development of 21st Century Skills.				
T1.5: Elementary students are challenged to authentically apply science practices and knowledge.				

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T2: Elementary schools provide adequate instructional time in science-related content areas.				
Indicators	1	2	3	4
T2.1: Every grade in the elementary school supports the students' attainment of the Washington State 2013 Science Learning Standards (NGSS).				
T2.2: Elementary school leaders facilitate teacher interactions to foster cross-curricular unit development and/or modifications (e.g. teaching teams, planning meetings, etc.).				
T2.3: Elementary school leaders leverage time by emphasizing and supporting the integration of content areas.				
T3: All science related courses of study and instructional materials are rigorous, research-based, standards-based, and inclusive of ALL students.				
Indicators	1	2	3	4
T3.1: Elementary teachers have access to and use high quality, research-based science instructional materials.				
T3.2: Instructional materials are aligned to Washington State Learning Standards (NGSS).				
T3.3: Integrated science instructional materials incorporate explicit big ideas from multiple disciplines in a cohesive storyline.				
T3.4: Course work offers opportunities for all students to reach and possibly exceed the standards.				

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T4: Elementary teachers use student-centered, engaging, high-quality science -relevant instructional practices.				
Indicators	1	2	3	4
T4.1: Elementary teachers have the skills and knowledge to enact instruction that is: - Student-centered; - Project-based, problem-based, or inquiry-based; - Connected to real-world contexts and/or regional science partners; - Interesting to students; and - Grounded in the science relevant standards.				
T4.2: Elementary teachers facilitate student discourse in order to elicit student ideas and make instructional decisions.				
T4.3: Elementary teachers are able to differentiate instruction based on learners' needs and contexts.				
T4.4: Elementary teachers have the requisite pedagogical content knowledge to enact the curriculum.				

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T5: Authentic performance-based assessments are used to gauge learning and mastery.				
Indicators	1	2	3	4
T5.1: Formative assessments are routinely used as an integral part of science instruction.				
T5.2: Elementary teachers use formative assessments to inform instructional decisions.				

T6: Culturally relevant activities and strategies are integrated into the science learning experiences.				
Indicators	1	2	3	4
T6.1: Students of all demographics have equal access to content and materials in the classroom.				
T6.2: Elementary teachers connect to students' background, culture, and life experiences.				
T6.3: Elementary schools support the use of cultural artifacts and community resources in ways that are academically meaningful and culturally relevant to the science program.				
T6.4: The elementary science program is presented through multiple representations and multimodal experiences.				
T6.5: Elementary school support systems include science role models and mentors of similar racial or ethnic backgrounds.				

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Community Awareness and Partnerships

Partnerships with science professionals and the community enrich learning opportunities for all students.

Desired Outcomes

C1: Community members value and support a science education.

Indicators	1	2	3	4
C1.1: Community members recognize that science literacy is important to everyday life.				
C1.2: Community members can identify science occupations, activities, professionals and opportunities within their community.				
C1.3: Community members recognize the value of science education for ALL students.				

C2: Every parent and student understands that science in education is essential regardless of a student's career choice.

Indicators	1	2	3	4
C2.1: All elementary students and their families have the opportunity to participate in science related experiences.				
C2.2: All elementary students and their parents have the opportunity to engage in discussions about science-related academic opportunities within the education system.				

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School Culture and Structures

The entire school community supports the desired outcomes of all four critical components (Leadership, Science Teaching & Learning, Community Awareness & Partnerships, and School Culture & Structures).

Desired Outcomes

S1: A strong collaborative and innovative culture is evident in student and staff actions and interactions.

Indicators	1	2	3	4
S1.1: Elementary students and staff show clear respect for one another.				
S1.2: Communication, collaboration, critical thinking, and creativity are encouraged and supported across all stakeholders.				
S1.3: Elementary school leadership nurtures a safe environment in which teacher innovation and risk-taking flourish.				
S1.4: School-wide norms reflect a science culture where students believe that trying and applying new strategies (inventor mindset) and risk-taking and innovation are important.				
S1.6: Elementary students, teachers, administrators, and parents believe that science is for all learners.				
S1.7: When hiring, candidates are actively recruited who are aligned with the school's science vision and instructional practices.				

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S2: The elementary school has schedules, structures, and resources in place to support their vision for integrated science education.				
Indicators	1	2	3	4
S2.1: District supports changes in elementary school structures that are needed to implement the integrated science education vision.				
S2.2: Structures exist for student science enrichment experiences (in-school and out-of-school time).				
S2.3: The elementary school schedule provides sufficient time for science instruction and teachers use that time to teach science.				
S2.4: Elementary principals and school leaders support collaborative time for teachers to develop capacity for implementing and assessing innovative science learning experiences.				
S2.5: Elementary principals and school leaders expect to see science taught in elementary classrooms and provide teachers with necessary time, resources, and feedback.				
S2.6: Elementary teachers are provided the support and resources necessary to engage in professional learning opportunities that enhance their abilities to implement a science program or course of study.				
S2.7: Elementary teachers are provided ongoing opportunities and logistical support to observe peers and collectively reflect on the implementation of integrated science education.				

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