

Implementing Environmental Literacy at a District Level: A Checklist for Leadership Teams

Prelude

In 2015 ChangeScale presented its strategic plan to support the improvement of environmental learning experiences afforded to youth in the state of California.

<http://www.changescale.org/wp-content/uploads/2017/04/Executive-Summary-4-24-15.pdf>

At roughly the same time the state of California published *A Blueprint for Environmental Literacy: Educating Every Student In, About, and For the Environment*.

(<https://www.cde.ca.gov/pd/ca/sc/documents/envronliteracyblueprint.pdf>)

In the introduction to this document the State Superintendent of Schools noted:

Unfortunately, K-12 students in California do not currently have consistent access to adequately funded, high-quality learning experiences, in and out of the classroom, that build environmental literacy. While some students regularly participate in systematic, ongoing environmental literacy experiences, many more receive only a limited introduction to environmental content and some have no access at all.

ChangeScale seeks to change this situation so that all students have ongoing opportunities to develop environmental literacy. This will require a long-term, large-scale and well-designed effort.

Important note: through out this document the term “Environmental Literacy” is used in two ways. One meaning is the state of literacy, whereby one has a basic understanding of the important ways that humans and the environment interact and influence each other. This sense of the term is the *desired outcome* of an educational effort. The second meaning is focused on the efforts to support the development of environmental literacy. This second sense is meant to include (but go beyond) what is often thought as “Environmental Education,” “Environmental Studies” or “Education for Sustainability.”

Foundations for Implementation at the District and School Level

The Blueprint for Environmental Literacy document lays out a vision of environmental literacy – why it is important and what learning opportunities might look like. The document is labeled as a “blueprint;” technically a blueprint refers to a [technical drawing](#), documenting an [architecture](#) or [engineering](#) design. While a blueprint lays out a plan for a building, it does not provide all the details about how to actually realize the construction of that building.

A blueprint is a design that results from an architect carefully addressing multiple goals, challenges, interests and constraints. The architect (designer) must involve the client and carefully understand their interests and goals. In this case the designer is ChangeScale, community-based organizations (CBOs), and the leadership teams from school districts. When an architect designs a building, he or she to achieve the goals and priorities of the client, but the plan must also be feasible (within budget), physically sound, responsive to the community values and legal codes, and compatible with the local physical and social environment. Similarly, in this case, the design for developing large-scale environmental literacy must address the traditions and constraints of schooling; the priorities of school boards, district leaders and parents; the federal and state policy contexts; and the limits of financial realities.

A blueprint is not the same as a construction plan and timeline. After the blueprint there is a need for a new type of design and plan – a construction (or implementation) plan that outlines the strategies, activities, and timeline by which the blueprint design is to be realized. This implementation plan needs to envision the major phases of work, the sub-goals to be achieved as well as the expertise, labor, materials, and tools required to do that work.

Moreover, one cannot simply start to construct a building without preparation. In fact, to construct a tall building, paradoxically, one must first dig a deep hole – and thereby put in a place a strong foundation upon which the building can safely rest. The taller the building is to be, the deeper the hole must be, and the more effort must be spend on creating a sound foundation. Similarly, in designing the implementation of a large statewide systemic initiative that will increase the environmental literacy of all students, the foundation for that work must be planned, thoughtful and substantial.

In education as in construction the design and plans for “setting the foundation” are equally important. Educational designers (architects) must help create detailed plans by which the vision statements and blueprint strategies are to be implemented. The contexts of school and community are complex and must be understood – and addressed – to assure compatibility of goals and values. Guiding leadership must be developed and empowered, and clear visions developed and communicated. Resources must be garnered. Mechanisms for feedback and refinement must be put in place.

All of this is necessary to assure that the implementation and growth of environmental education in the school settings can be achieved with high quality and ongoing endurance.

A Checklist for the Architects of Environmental Literacy

Wikipedia describes a **checklist** as a mechanism used to reduce failure by compensating for potential limits of human memory and attention. It helps to ensure consistency and completeness in carrying out a task. A basic example is the "to-do list." A more advanced checklist would be a schedule, which lays out tasks to be done according to time of day or other factors. In aviation a checklist is used to make sure that a pilot attends to all key dimensions and factors before undertaking a journey. By identifying all critical factors that must be sound, and could be destructive if left unattended, the checklist helps assure the foundation of safe operation and traveling.

It is also important to note that a checklist is used by the pilot who has sole responsibility for the flight. One does not use a checklist to “comply” with some external demands; rather it is used by the pilot to assure themselves that they have done all they can to make sure the flight is safe.

What follows is a checklist for those community-based organization, district and school leaders who are engaged in the process of designing district-wide strategies to support environmental literacy.

- Based on the ChangeScale model, this checklist is intended for use by backbone organizations, district leaders, and district environmental literacy partner¹ leaders to guide their development efforts.
- The checklist focuses specifically on the key dimensions that designers of improvement initiatives should attend to, if they want their change work to be long lasting and effective.
- Ignoring or missing any of these dimensions and items could lead to weaker design and ultimate failure of the change strategy.

How to Use This Checklist

This extensive checklist is meant to be a device that allows leadership teams to take stock of their design, plans and implementation progress. We suggest the following ways that the checklist can be used.

¹ This could include any nonprofit, government, or community-based organization that is working with the school district to provide environmental literacy programming.

- 1) To focus initial design and planning efforts so that designs are as complete as possible

As leaders and leadership teams plan strategies for implementation, the checklist can serve as background – reminding leaders of key dimensions that must be thought about and addressed.

- 2) For periodic review of progress and self-assessment of design and implementation status

Teams can go through the checklist addressing each category and item with the goal of collective reflection and mutual education about their improvement efforts. By discussing checklist items the team can come to see areas where more work is needed, where efforts are strong, and where they need to know or understand more about what is happening in the field.

- 3) Use of the checklist as a way to generate surveys, interviews and other instruments to gather data regarding progress on key dimensions, categories and items

Internal as well as external evaluation efforts can use the checklist to generate instruments that capture key information – both for improvement and for making the case to external audiences.

Levels of detail: Here we note a few key ways that teams can work their way through the checklist:

- a) In detail, addressing each item: This will take considerable time and effort and requires at least a half-day and most likely a full-day.
- b) In summary, addressing each category using the individual items as probes for understanding the category better. This would require at least two to three hours.
- c) Addressing one major part of the checklist at a time: It is possible to take a section of the checklist and examine it in one session. For example, a session could focus on: 1) Assessing current status, 2) Building capacity, or 3) Gathering early evidence of promise and potential. Each of these could be done in different sessions.

The checklist can be printed out in its entirety or it can be used on-line with different levels of detail available and made visible, or not.

- The top-level list (unexpanded) provides an overview of the key dimensions to be addressed by the design (in PURPLE font).
- The second level (one expansion) lists key questions for each dimension. (GREEN)
- The third level (two expansions) list detailed checklist items to consider under each key question. (BLACK)

Overview of the Checklist

1) Understanding and Monitoring the Current Status of Environmental Literacy

- a) *Current status of existing practices and programs*
- b) *Current knowledge of and attitudes toward environmental literacy*
- c) *Motives for improving environmental literacy*
- d) *Understanding the barriers and constraints to improving environmental literacy*
- e) *Understanding the surrounding contexts for environmental literacy*

2) Developing Foundational Capacities for Improving Environmental Literacy in the Schools

- a) *Developing and strengthening leadership at all levels*
- b) *Developing a shared vision for environmental literacy and its improvement*
- c) *Articulating the rationale for the importance, feasibility, desirability and priority of environmental literacy*
- d) *Creating a design and plan for the improvement of environmental learning opportunities*
- e) *Capacity to address issues of inequity*
- f) *Identifying external supports and resources for the improvement of environmental literacy*
- g) *Initiation of partnerships with external organizations*
- h) *Capacity for communicating about, growing interest in, and creating demand for environmental literacy*
- i) *Capacity for gathering feedback and evolving the design of improvement strategies and activities*

3) Developing Initial Evidence of Promise and Feasibility

- a) *Comparative advantages of developing environmental literacy*

- b) *Compatibility of environmental literacy*
- c) *Complexity and cost of environmental learning opportunities and experiences*
- d) *Visibility of environmental literacy*
- e) *Incremental growth potential of environmental literacy*
- f) *Growing support for and ownership of environmental education*

Implementing Environmental Literacy at a District Level: A Checklist for Leadership Teams

1) Understanding and Monitoring the Current Status of Environmental Literacy

It is important to understand the current reality as one designs and implements plans to change that reality. You have to know the landscape you are trying to improve.

Current status of existing practices and programs

It is important to build upon what is already in place and further develop promising programs and practices. Similarly, it is important to know where significant gaps and needs exist.

- Do we have accurate knowledge of the nature and amount of environmental learning experiences currently available to our students – both in and out of school?
- Do we know the quantity and quality of environmental learning experiences our teachers and district environmental literacy partners offer their students?
- Do we know the degree to which environmental learning experiences are equally accessible to and engaged in by all of our students?
- Do we have data of participation by school site, by grade level, by gender, by ethnicity?
- Do we have good knowledge and descriptions of our most promising environmental learning programs and practices?
- Do all of our school sites have good and equal access to outdoor learning spaces?

Current knowledge of and attitudes toward environmental literacy

Good design needs to address the interests and concerns of clients and stakeholders – organizations, groups and individuals who care about this effort, one way or another.

- Who are the key stakeholders who have an interest in and influence on the efforts we make to develop environmental literacy?
- Do we understand the broader attitudes and values of our broader community toward environmental issues, environmental learning, environmental education, climate change, social issues and the environment?
- Do we know the level of understanding that key stakeholders have of environmental literacy and the ways in which environmental learning might exist in our schools?
These stakeholders include but are not limited to:
 - Community organizations: youth, science, environmental, etc.
 - Parents and guardians
 - School board
 - District leaders
 - Principals

- Teachers
 - Students
- Do we know how stakeholders (listed above) rate the overall importance of environmental literacy and environmental learning opportunities in the overall education of students?
 - Do we know how key stakeholders rate the relative importance of strengthening and improving environmental learning experiences in comparison to other subject areas and issue areas?
 - Do we know how key stakeholders understand and value pedagogical strategies that could be used to promote environmental literacy (e.g., place-based education, project-based experiences, integration with other subjects, out-of-school learning experiences)?
 - Do we understand the extent to which key stakeholders value and prioritize the improvement of education for communities and students that have been historically under-represented in environmental literacy programming?

Motives for improving environmental literacy

Good design must solve existing important problems and also create new exciting possibilities. Which problems does developing environmental literacy solve? Why are various stakeholders interested, or potentially interested, in this effort?

- Do the key stakeholders (listed above) understand the ways in which environmental literacy can support the implementation of state learning standards such as the Next Generation Science Standards, Common Core State Standards, California History-Social Science Framework, and California English Language Development Standards?
- Is there broad dissatisfaction with the nature, level and quality of the opportunities for students to gain environmental literacy?
- Is there awareness and dissatisfaction of the degree to which environmental learning opportunities are not currently equally accessible to all our students?
- Do we think that the state vision (Blueprint) and/or our own district vision, or other relevant local, regional, and/or national plans are now (or could be) an important source of inspiration that can motivate a broader desire for improving environmental literacy?
- Do we understand the degree to which each of the following potential motives are, in fact, operating in our district at this time?
 - Unhappiness with the absence of environmental learning experiences
 - Unhappiness with the quality of environmental learning experiences
 - Inspired by a vision of what environmental literacy could be
 - Inspired by other examples, programs
 - Place-based, or project-based experiences as an inspiring vision
 - Environmental literacy as a context for strengthening other subjects (e.g., science, writing)

- Environmental literacy as a way to improve learning opportunities for all students more equitably
 - Environmental literacy as a way to engage disengaged students, and make education more relevant
 - Environmental literacy as critical in a world where the health of the environment affects us all
- Overall, how would we assess the “level of demand” for strengthening environmental literacy in our schools?

Understanding the barriers and constraints to improving environmental literacy

Part of an improvement effort consists of removing the barriers that impede progress. What is the level of our understanding of the factors that block the development of environmental literacy in the schools and which serve as barriers to an improvement effort?

- Do we understand the ways in which key stakeholders see environmental learning as being incompatible with the current mission and priorities of the school system?
- Can we identify (and address) those factors that most directly tend to lower the priority of improving environmental literacy in the schools? Some factors could include:
 - a lack of importance of environmental literacy in the eyes of key stakeholders
 - a lack of clear vision and plans for an environmental literacy improvement effort
 - an absence of strong leadership for environmental literacy
 - high costs of an implementation effort
 - the complexity and time demands of an environmental literacy improvement effort
 - a lack of professional development capacity to support teachers
 - a lack of high-quality environmental learning experiences and instructional materials
 - a policy environment that constrains time and effort for environmental literacy
 - the dominance of and focus on broader assessment demands (i.e., SAT, State tests)
 - the pressures of higher education and college admissions
 - tradition and inertia in the thinking of people about what should be taught and how it should be taught
 - the political and public (parental) conflicts arising over an environmental literacy improvement effort (e.g., “math wars”)
 - other factors

How well do we understand the teacher perceptions and classroom realities vis-à-vis environmental literacy instruction? If environmental literacy instruction is to become a reality

in schools and classrooms, then teachers' motivations, interests, issues and concerns must all be understood and addressed.

- Do we understand...
 - the level of teachers' knowledge of and experience with environmental literacy?
 - their needs for curriculum and materials?
 - their need for instructional models, examples?
 - their ability to assess environmental literacy or use environmental literacy contexts in their assessments?
 - their ability to use environmental literacy to meet other priorities (e.g., standards)?
 - their interest in, and ability to participate in professional development related to environmental literacy?
 - their perception of the time they can allocate to environmental literacy?
 - their perception of school and district priorities vis-à-vis environmental literacy?
 - the relationships and resources they need to offer students out-of-classroom field experience?
 - their ability and propensity to infuse environmental literacy into other subject areas?
 - the support mechanisms (e.g., networks) they do or do not have with regard to environmental literacy?

Understanding the surrounding contexts for environmental literacy

Any improvement effort in the schools takes place in multiple contexts (federal, state, local, community) – all of which can and do have influence on that effort. What do we need to know about these contexts (affordances and constraints) that will affect the design and implementation of environmental literacy improvement efforts?

- Have we thoroughly explored sources of support for our environmental literacy improvement effort?
 - Federal programs
 - State programs
 - Local funders
 - Local district environmental literacy partners
 - Within our own district (LCAP, etc.)
- Do we know which policies (federal and local) most strongly influence our environmental literacy improvement efforts?
- What state and local institutional and programmatic resources could be most useful to us? (e.g., LCAP)
- Do we know how to identify and partner with other improvement initiatives and structures within our own district?

- Science or STEM initiatives
 - History/social science initiatives
 - Writing programs
 - ELL programs
 - Communities of practice
 - School leadership teams
 - Curriculum selection and improvement committees
- Do we know which local environmental institutions and/or environmental education institutions might be useful to us in a partner role?

2) Developing Foundational Capacities for Improving Environmental Literacy in the Schools

Designing and implementing an effort to increase and improve environmental learning opportunities inside of school systems requires key capacities. The following are seen as critically important assets and resources to design and undertake an effort to increase and improve environmental literacy within a school system.

Developing and strengthening leadership at all levels

Leadership to create the vision, design the strategies, guide the effort, and make the case to key stakeholders is probably the most critical factor in the effort to develop environmental literacy.

- Have we identified existing (and potential) leaders at all levels to lead the improvement effort and to “champion” the design, implementation and advocacy efforts for environmental literacy?
 - District leaders
 - Principals
 - Teachers
 - Community leaders
 - Parents
 - Board Members
 - Industry, Research, University
 - Community organizations and other potential district environmental literacy partners
- Do we have a formalized “leadership team or group” that is capable of and mandated to oversee the design and implementation of environmental literacy improvement efforts?
- Have we identified and supported local leading practitioners of environmental learning experiences both within and outside of our schools?
- Do we have the full support in word and deed of our superintendent?

Developing a shared vision for environmental literacy and its improvement

It is important to be able to offer people a clear vision of what the environmental literacy effort wants to do and why it wants to do it.

- Do we know how much people know about, value and endorse the CA State Blueprint for environmental literacy as a vision for our district?
- Does the District have a shared and clear vision for environmental literacy goals, programs, practices and outcomes?
- Does the district have a plan and mechanisms for sharing the vision of environmental literacy and the plan for realizing that vision?

- Are there compelling real examples (existence proofs within or outside the district) that can motivate further interest in and commitment to environmental literacy?
- Are the environmental learning programs experiences locally relevant for students and teachers?
- Is a focus on environmental literacy viewed as supportive of or in alignment with current priorities, e.g., district initiatives, curriculum, and/or facilities planning?
- Can we articulate the cross-cutting strategy that ties environmental literacy together throughout our district? This could be a curriculum focus, a facilities focus, a type of experiences, service learning, STEAM, etc.?

Articulating the rationale for the importance, feasibility, desirability and priority of environmental literacy

There are many pressing needs. It is important to state why the development of environmental literacy is a high priority in its own right as well as a vehicle for achieving many other important goals and addressing many other important needs.

- Do we have clear, accessible statements (rationales) of why it is worthwhile for people to invest their time and resources in increasing and improving environmental learning opportunities?
- Have we made it clear that it is possible to improve environmental literacy within the limits of reasonable costs and efforts?
- Are there compelling examples and arguments for showing either 1) that environmental literacy is a higher priority than other reforms and/or 2) that environmental literacy is supportive of other priorities?

Creating a design and plan for the improvement of environmental learning opportunities

Do we have a clear implementation plan that outlines the strategies and work to be done developing environmental literacy on a district-wide scale? It is important to have a compelling vision but it is equally important to be able to present a clear plan for the strategies, activities and work that will achieve that vision.

- Does the District have a clear design and implementation plan that can lead to the realization of its vision district-wide?
- Does the plan outline how to develop key dimensions of capacity needed to do the work (examples below)?
 - Professional development and support
 - Curriculum and materials
 - Out-of-school experiences
 - Place-based and/or project experiences
 - Inclusion and access priorities
 - Assessment provisions
 - Release time

- Coordination and integration with other subject areas
 - Teacher communities of practice
 - Mechanisms for administrator learning and support
 - Joint resource development (e.g., gardens)
- Have we created a feasible plan – that is, we are sure that we have the capacity (i.e., money, materials, resources, people) to successfully pursue the proposed process of development and growth of environmental learning opportunities?
 - Is there knowledge of, and “buy-in” and ownership of the implementation plan at all levels?
 - In particular, do we know that principals, teachers, and superintendents understand, accept and support the change strategy?

Capacity to address issues of inequity

Many educational improvement efforts declare their intention to serve all students, but are not very effective in addressing issues of inequality. Just as environmental literacy requires expertise in the sciences and in education, addressing issues of inequity require leadership and specific knowledge.

- Is there leadership that has the capacity and propensity to identify and address issues of inequity at all levels?
- Do we have partnerships (or potential partnerships) to help us with this effort?
- Do we have data that can help us identify where we need to work on making environmental literacy more accessible to and successful for under-represented groups?
- Do we have access to successful strategies and activities undertaken by others in this domain?
- Do we have the will and motivation to do this work?

Identifying external supports and resources for the improvement of environmental literacy

Organizations, agencies, groups, associations, industry, higher education and individuals can all help in the design and implementation of improved environmental literacy in the schools.

- Have we searched for and found external people and organizations that are willing, expert and enabled to support our environmental literacy improvement effort?
- Can we identify external resources (e.g., LHS, California Subject Matter Projects) that can be tapped to help support the effort?
- Can we find external financial resources that can be tapped to support the development effort?

Initiation of partnerships with external organizations

Crafting arrangements that are win-win – good for the schools, and good for the external organization – is key to building the capacity for improving environmental literacy on a large scale.

- Is there a partnership (working relationship) between the district and one or more external organization(s) centered around a shared vision of increasing and improving environmental learning experiences for all students in the district?
- Does the partner organization have the expertise, time and resources to substantially support the district in its effort to improve environmental literacy?
 - Expertise in environmental science
 - Expertise in environmental education
 - Experience in working as a support organization to districts
 - Experience in coordinating their youth (field) programs with districts
 - Institutional mission, mandate, and priority to work with schools
- Have the district and partner created a shared vision for the goals of their collaboration and the ways in which they will work together?
- Do both district and partner see the collaboration as a win-win arrangement? Is there shared commitment and trust?
- Are there clear communication structures and processes within the partnership (e.g., established meeting times, clear modes of communication, etc.)?

Capacity for communicating about, growing interest in, and creating demand for environmental literacy

Doing the work is just part of the work. It is equally important to have extensive communication about, even marketing for, environmental literacy.

- Do we have strong multiple ways to communicate the environmental literacy vision, rationale and approach to key stakeholders?
 - Students
 - Teachers
 - Principals, District administrators
 - Parents
 - School board
 - Community members
 - District environmental literacy partners
- Do we have examples, evidence, and arguments to make our case to outside (perhaps skeptical) audiences?
 - Research
 - Compelling examples of other environmental education programs
 - Classroom vignettes

- Teacher testimonial
- Videos
- Classroom or student data

Capacity for gathering feedback and evolving the design of improvement strategies and activities

Strong improvement efforts require iterative refinement based on evidence of progress and identifying emerging problems and opportunities.

- Do we have ways to create and receive feedback about the design and strategies we are pursuing to improve environmental learning opportunities?
- Have we identified “key metrics” or other indicators that can serve as focal points for our work and provide us with feedback?
- Are we members of a learning community (e.g., NIC) of other districts engaged in a similar effort?
- Can we learn from others (through research, evaluation, conferences) about successful strategies to design and implement improvement strategies?
- Do we have ways of gathering appropriate evidence and data that can guide our efforts?
- Do we have ways of gathering appropriate evidence to help us “make the case” for continued work and continued funding?

3) Developing Initial Evidence of Promise and Feasibility

The foundation for future work must include some early illuminative evidence and indicators of progress and future promise. It is important for the leadership team to ask itself questions about the ways in which it will know if it is successful and how it can assess the degree to which implementation efforts will be large-scale and long-standing. If we view environmental learning opportunities as an innovation, which we seek to share and have adopted, we can use the criteria for innovation adoption generated by years of research. These criteria include the ideas outlined below.

Comparative advantages of developing environmental literacy

People care about comparative advantage when they think about options for their time and resources. Why is investment in environmental literacy better than not investing in it (saving time and money,) or investing in some other priority? To be seen as worthwhile environmental literacy must convince all stakeholders that it brings advantages over the current status (where there are currently few environmental experiences being offered in schools).

- Do we have some examples and evidence that increased environmental learning experiences improve the overall quality and relevance of the student learning?
- Do we have examples and evidence that environmental literacy is a way to enhance the teaching of state learning standards?
- Do we have examples and evidence of teachers finding environmental learning experiences adding value to their ability to reach their students and teach their students more effectively?
- Do we have evidence of students valuing what they learn through environmental learning experiences?
- Do we have any evidence of district leaders, school board members, and PTA members valuing environmental literacy innovation in the schools?
- Do we have any evidence of parents valuing environmental learning experiences?
- Do we have any evidence of student attitude or achievement data improving as a result of environmental learning experiences?

Compatibility of environmental education

Environmental education must be seen as innovative (new) but also must be judged to be compatible with and supportive of the community and school values and goals.

- Do we have evidence that key stakeholders find environmental learning programs and practices to be compatible with key school goals, values, and priorities?
- Do we have evidence that key stakeholders find environmental learning programs and practices to be supportive of larger reform efforts (e.g., NGSS, Common Core, narrowing the gap, ELL)?

- Do we have evidence that environmental literacy can serve as a “capstone” or alternative arena in which students can learn the disciplines as well as multi-discipline coordination while working on real and relevant problems?
- Do we have contrary evidence that shows that environmental literacy can be seen as “too far outside” the normal bounds of what should be taught in schools?
- Do we have evidence or examples that show how environmental learning experiences can connect in-school and out-of-school learning in a meaningful fashion?

Complexity and cost of environmental learning opportunities and experiences

The introduction and pursuit of environmental learning in the school setting must be seen as practical and feasible. Too complex, or too costly, and it will not take root in the mainstream of schooling.

- Do we have examples and evidence that show that environmental education is practical in normal school settings?
- Do we have any (contrary) evidence that environmental education is too complicated, difficult or challenging to be considered for large-scale adoption and implementation?
- Do we have evidence that average teachers can successfully teach environmental education within their normal daily constraints?
- Do we have cost data about the resources and time needed to pursue environmental education programs?
- Do we have evidence or data to help us estimate the cost of full-scale implementation?

Visibility of environmental education

Real examples – case studies, vignettes, news reports, videos, testimonials – can all help make environmental literacy tangible, feasible and desirable.

- Do we have visible, shareable, and compelling examples of teacher (classroom) success through environmental education?
- Do we have compelling examples of student success through environmental education?
- Do we have evidence or examples of environmental education as a vehicle for reaching and engaging historically under-represented students?
- Do we have good documentations and portrayals of environmental education programs as a whole (such as videos or case studies)?
- Do we have good documentations and portrayals of whole schools or districts that have been successful in implementing high-quality environmental education at scale?

Incremental growth potential of environmental education

What is the initial commitment and investment that must be made in environmental education? Is it possible to grow environmental education programs and practices over time in a phased and experimental fashion?

- Do we have examples (or visions) of how environmental education can, over multiple years, be phased into the curricula of a district?
- Do we have examples of teachers and classrooms evolving and growing over time?
- Do we have plans for multiple “easy entry points” which allow districts, schools and teachers to pick up environmental education programs and practices, incrementally over time?
- Do we have information or indicators for growth in capacity of the district’s environmental literacy partners?

Growing support for and ownership of environmental education

- Do we have examples or evidence of schools and teachers growing more engaged over time in terms of their ownership of and support for environmental education?
- Do we have examples of how district policy and priorities are shifting over time to support environmental education practices?
- Do we have examples of parents and community members becoming more engaged and supportive over time?
- Do we have examples of increased involvement and support from the environmental literacy partners?