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Environmental Climate Change Leadership Administrator Culminating Assessment

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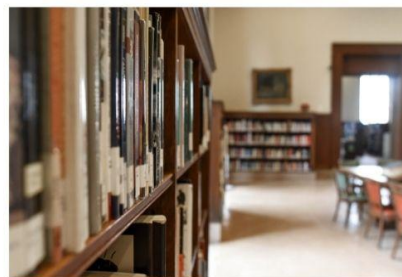
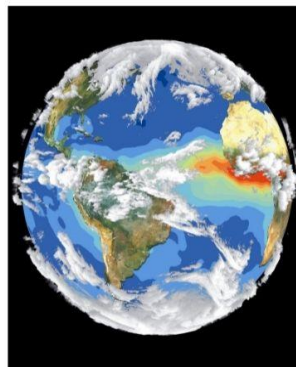
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Environmental Climate Change Leadership Administrator Culminating Assessment



Stuart Grant Work Group | SDSU



Environmental Climate Change Leadership: Planet, People, Resources, Facilities, and Planning

Abstract

The harmful effects of climate change on students' lives are alarming at all levels. For example, access to adequate education and school buildings, health services, proper nutrition, and housing are threatened or even eliminated in the wake of a disaster. The effects of displacement, migration streams of families, and entire communities will continue to occur rapidly as scientists predict radical changes in weather patterns by the year 2050 (USGCRP). Educational Leaders must be ready for this change and be proactive. *Environmental Climate Change Leadership* focuses on people, resources, facilities, and planning and is the topic of the proposed culminating assessment made up of four case scenarios. This document is a supplemental assessment to be used in addition to the California Administrator Performance Expectations (CAPE) as the topic of *Environmental Climate Change Leadership* is absent from the current three cycles of the California Administrator Performance Assessment (CalAPA) and the educational leadership literature in general. The urgency to prepare educational leaders for the effects of climate change on student learning along with support from San Diego State University to establish a dedicated workgroup on the topic, and funding from the Stuart Foundation, are the impetus for this project. The objective of the assessment is to equip instructors with materials to prepare educational leaders for the effects of climate change on student learning. The effects of fires, hurricanes and flooding, drought, and mass migration due to climate changes must motivate leaders to plan now in order to act in favor of students and avoid learning disruptions.

Introduction

The Chronicle of Education just released a report titled, [*Preparing for Climate Change and Cyber Attacks: How Institutions Can Plan for Existential Threats \(2021\)*](#), which outlines why college leaders must prepare and forecast how to manage what used to be unthinkable disasters related to climate changes. The same preparation applies to TK-12 educational leaders and the communities they serve. Anisa Heming, director of the Center for Green Schools at the U.S. Green Building Council, points out regarding the newly proposed *The Resilient Schools Act*, "To take meaningful action in response to climate change and to be centers for community resilience into the future, our schools need resources to plan and prepare" (Mackey, 2021). Recently, across the country, schools have been used as shelters and even command centers to respond to the natural disasters occurring due to climate change. In the west, [*water levels at Hoover Dam*](#) are dropping and may affect electricity production. Beyond local communities, climate changes provoking flooding in some areas and drought in others are fueling student migration and family migration from the southern hemisphere to the northern hemisphere. While natural disasters have destroyed educational facilities across TK-16

organizations, and pose near future threats to access to power and water, focused thought around rebuilding sustainably would assist educational leaders to plan for uninterrupted learning.

In order to equip instructors and aspiring educational leaders with tools to engage in the topic of *Educational Climate Change Leadership* the assessment consequential tasks include: 1) Background of the Case 2) Literature Review of the case scenario topic 3) Case Scenario 4) Next Steps to take following the CalAPA Investigate, Plan, Act, and Reflect (IPAR) model 5) Rubric and 6) References. The idea of governance versus government is woven through the case scenarios as educational organizations orchestrate communication with community stakeholders and services to plan for learning continuity despite natural disasters. The unpredictability of natural disasters, which can arguably be written now as predictability of natural disasters, must propel leaders to deepen their collective understanding of how to respond to climate emergencies. Leaders must think beyond restorative practices and start thinking in ways to be adaptive, sustainable, and regenerative. Furthermore, leaders should consider integrating eco-justice principles, and climate action, and education in their school vision and mission in order to bring awareness to this

The objective of the following case scenarios, which compile the Assessment Consequential Tasks is to inspire future educational leaders to be change agents and consider policy, local solutions to local problems, and think beyond today to affect current students as well as newcomer students who may arrive as a result of climate disasters. Specifically, the goals of this consequential task are:

- 1) Analyze and evaluate the impact of climate change on education in a global, national, regional, and local context.
- 2) Synthesize and effectively communicate associated risks associated with local environmental conditions, and management strategies to the school community.
- 3) Develop leadership and capacity skills to respond, mitigate and adapt to the impact of climate change on the school community.
- 3) Apply new knowledge associated with climate change to reorient teaching and learning and provide mechanisms for learning continuity.
- 4) Plan and recommend steps for climate-proofing related to facilities, infrastructure, and operations.

The Assessment Consequential Tasks provide case scenarios focused on the topics of Climate, Facilities, and Health in line with the structure used by the CalAPA to Investigate, Plan, Act, and Reflect (IPAR). The case scenarios and IPAR model enable instructors and students to explore educational leadership topics that are not currently

explicitly assessed in the three CalAPA Leadership Cycles. The components of each task are listed below:

1. Background of the Case
2. A brief literature review of the case scenario topic
3. The Case Scenario
4. Next Steps to take include tasks following the CalAPA Investigate, Plan, Act, and Reflect (IPAR) model
5. Rubric
6. References

Each task includes activities and assessments to be completed as a group investigation or individual plan. The tasks are designed for instructors to adapt and adjust depending on students' needs as well as existing courses.

The Assessment Consequential Task Case Scenarios

1. Adapting to Environmental Change: A Plan for Learning Continuity
2. Migration and Climate Change: Creating Welcoming Schools for Vulnerable Populations
3. School-Based Health Centers in a Learning Continuity Plan
4. School-Based Community Gardens as a Sustainable Resource

The urgency to provide instructors and aspiring leaders with additional case scenarios and assessment materials under the topic of *Educational Climate Change Leadership* is grounded in our current reality of TK-12 students experiencing interrupted learning resulting in learning loss due to natural disasters as well as the pandemic. The literature and case scenarios will hopefully help school leaders plan for disasters and also plan to mitigate learning disruptions. Educational leaders must be proactive in planning to ensure all students have access to learning despite natural disasters. Climate change affects entire ecosystems (i.e., individual health and wellness, learning, environment, dwellings, food sources, etc.); therefore, leaders must be systems thinkers to see the connections and interdependence among these systems.

In order to be proactive about mitigating learning disruptions due to natural disasters, educational leaders may consider communication, technology, stakeholders, and even the creation of a school or district learning continuity plan. Through **communication** with police, fire chiefs, health services, and food pantries, educational leaders can draw on expertise in planning for the protection of students and the use of

facilities or school site relocation depending on the disaster. Partnerships with local **technology** and internet providers may also help districts plan for students access to online learning should a school site not be habitable. A regular effort of including **stakeholders** and community members in planning conversations around how to mitigate learning disruptions is also recommended. Together, in partnership, stakeholders along with educational leaders could regularly discuss facilities, health measures, and technology to enable teachers, administrators, and students to carry on with education no matter the weather or disaster.

A regular review of schools through the lens of *Educational Climate Change Leadership* may look at simple as the following table:

Areas	Student Health & Wellness	Facilities & Operations	Climate Change	Teaching & Learning
Information	Dissemination of Latest Health Concerns	Current facilities and operations status, sustainability audit, and efforts	Local Weather Patterns, Fire Patterns, Drought, Floods	Research-Based Evidence, school data, Climate Education
School Plan	School and District Nurse, District Leaders, Community stakeholders	Solar energy, reduce electricity consumption, water usage, zero waste, transportation Internet provider, hot spots	Paradise community burns – what is the plan for students to be absorbed in neighboring schools?	McKinney-Vento: families or students move to a different state as a result of disasters like hurricanes – school records? Unaccompanied minors arrive in San Diego, Los Angeles County – how can schools plan and support?
Stakeholder Input & Inclusion	County and Local Experts, Public Health Officers, Counselors, Mental Health	Fire Dept., Police Dept., Water and Power, Contractors	Partnership with higher education to conduct risks assessment	Teachers, Underrepresented communities, higher education experts

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CASE SCENARIO 1

Adapting to Environmental Change: A Plan for Learning Continuity

Background of the Case

The COVID-19 pandemic significantly disrupted education. With the closure of school buildings due to mandatory lockdowns and quarantines, school leaders were compelled to rapidly adopt new instructional modalities to ensure continuity of learning in the new normal.

Even as COVID-19 begins to fade, challenges to learning continuity remain due to changing environmental conditions. In California, climate change has caused an increase in wildfires and rolling blackouts. Californians are also deeply concerned about the ongoing drought's impact on local water supplies (Lawler, Rosser, & Sencan, 2021).

Indeed, in my own practice as a high school administrator in a desert environment, the only school closures I experienced were water-related. Once, the pipes froze due to an unusually frigid cold snap thus preventing the use of bathrooms. The other time, an unusually late and large tropical storm threatened flooding. While school could technically continue in this second situation, the transportation needs of bussing students from outlying areas to the school site and back home again were not safe with the forecasted floods, and school was canceled.

The loss of water, either short or long term, presents a real scenario in some California schools as the ongoing drought depletes existing water supplies. Dry forests and grasslands present abundant fuel supplies for future wildfires. Some schools or their surrounding communities have already been devastated by wildfire. Other schools face short-term disruption as facilities are used for fire-fighting command centers and long-term needs to accommodate wildfire refugees whose own schools and communities no longer exist. Still, other schools face loss of learning as rolling blackouts try to prevent fires by shutting down electric grids affecting communities far from the actual fire location.

Despite the ongoing threats to learning continuity, requirements for school effectiveness including maintaining enrollment, passing rates, and scores on standardized assessments remain in place. Schools are not absolved of their responsibility to educate students and to do so in a manner that meets accountability requirements including attendance and standardized test results. A quick review of any district or local education authority's Learning Continuity and Attendance Plan (LCAP) from the height

of the COVID-19 pandemic demonstrates the seriousness of meeting the legal and ethical imperative of continuing education despite significant challenges.

This project asks candidates to select a school, assess the school's potential environmental challenges, and develop a change plan to work with the school community to ensure continuity of learning. Candidates produce a concise and action-oriented change plan (Fullan, 2016) in both a written and oral presentation format.

Literature Review

The impact of a changing climate on local lives, communities, and education forms the context that establishes the need for this learning continuity project. At heart, however, this project is about change leadership. "How might educational leaders adapt to a new normal?" forms this project's core question.

To explore this core question and to guide candidates in developing their own change leadership capacity, this literature review explores several key themes including:

- change models (Dietz, Ostrom, & Stern, 2003; Fullan, 2016),
- change leadership (Burns, 2005; Grissom & Condon, 2021; Stewart, 2006).
- learning continuity plans (Cortezano, Catapang, & Cortezano, 2021; Rayburn, Anderson, & Sierra, 2020)

The emphasis is therefore on the processes of change. Yet, while leadership brings stakeholders together and engages in dialogue for collaborative problem solving, educational leaders should also have some ideas regarding what the new methods of learning in a crisis-induced learning continuity plan might entail. Hence, literature is included regarding Universal Design for Learning (Basham, Smith, & Satter, 2016; Dell, Dell, & Blackwell, 2015; Houston, 2018) and learning modalities (Daruwala, Bretas, & Ready, 2020; Torres, 2021; Yazon & Callo, 2021).

All of the literature provided here is intended to provide immediate resources for the instructor. The literature may also activate individual instructor prior knowledge and lead to creative changes or additions to fit individual styles. It is in this vein that approaches the first of the proposed change models presented in this project.

I was introduced to the concept of adaptive governance, sometimes referred to as robust governance, as a doctoral student in Educational Leadership out of my own interest in taking an elective class in Environmental Policy. At the time, I was exploring policy studies and thought, correctly I believe, that there might be some lessons for

educational policy to be gleaned from the environmental world. As already discussed, the organization and systems of education face an uncertain future due in part to the environmental conditions already discussed. Likewise, the environment also faces an uncertain future. Leadership in both disciplines are faced with the challenge of recognizing future trends, responding to those trends, and realizing that there remain significant unknowns about what the future might look like. Put simply, we have to adapt to a changing and largely unknown world.

Further, educational leaders including principals and superintendents are beset by multiple crises and challenges that consume their days. They do not necessarily have the time or energy to stop and explore in deep and philosophic manners the mysteries of change and the world. Indeed, Fullan (2016) suggests that even if educational leaders were to develop deeply thought-out change plans, the very disconnect from the realities on the ground at their schools creates a key indicator of future failure. Instead, Fullan (2016) suggests that change planning should be action-oriented and concise. This suggestion matches my view born from my experience as a principal at a large comprehensive public high school that busy school leaders need a change model they can easily refer to and apply in starting and managing a change process.

Dietz, Ostrom, and Stern (2003) provide one such model. Rooted in the Nobel Prize winning work of Elinor Ostrom, Dietz et al. suggest institutions must evolve to meet changing and often unknown new conditions by addressing five key areas: providing necessary information, dealing with conflict, inducing compliance with rules, providing infrastructure (including physical and technical), and encouraging adaptation and change (see the yellow boxes in Figure 3, page 1910). Action-based principles such as involving interested parties in analytic conversations and devising accountability mechanisms are also provided (see Figure 3's green boxes). A candidate preparing a change plan, or a principal implementing one, might be well advised to address each of the five adaptive governance requirements when initiating and implementing change. Brunner (2010) addresses this adaptive governance as a reform strategy, albeit from an environmental and rather educational perspective but does provide a connection with new forms of institutionalism by contrasting the old centralized bureaucratic models of change with the new adaptive and networked models (see Box 1.1 on page 307). Such a comparison should be familiar to those interested in the new institutionalism theory that formed the basis of Dietz et al.'s (2003) work as well as educational change work (Bidwell, 2006; Meyer, 2006).

For those interested in pursuing a change model rooted in work specific to education, Fullan (2016) discusses the new meaning of educational change. While Dietz et al. (2005) provided five requirements for change, Fullan (2016, p. 46) directs our attention to six guidelines for the change process: defining closing the gap as the overall goal, recognize change is socially based and action-oriented, work on building capacity,

leverage leadership to stay the course, build internal and external accountability, and establish conditions for the evolution of positive pressure. Fullan's guidelines provide another easily accessible model to guide the change essentials for which a busy educational leader must address. Note also the similarities with Dietz et al. (2005). Both address the need for accountability. Both address the need to encourage change. Both address capacity needs. Both emphasize involving stakeholders in careful deliberation.

Both Fullan (2016) and Dietz et al. (2005) address the role of leadership again emphasizing a networked and collaborative rather than a top-down and bureaucratic approach. To supplement the leadership discussion, I suggest utilizing Burns (2005) which provides a succinct summary of Burns' transformational leadership theory and emphasizes leadership's moral imperative. Stewart (2006) provides a nice theoretical overview of transformational leadership and related education-based leadership literature. Grissom and Condon (2021) contrast this theoretical approach by providing timely insight into school leaders' responses to the COVID-19 crisis. The crisis response to COVID-19 induced learning disruptions might inform our candidates' more deliberate thinking in planning for future disruptions.

Narrowing our focus from the broad themes of leading change, another set of suggested literature provides insight into learning continuity plans specifically. Cortezano et al. (2021) explore issues of learning continuity planning in the light of COVID-19. Rayburn et al. (2020) provide a student, albeit higher education student, perspective on crisis management. The two documents from the United States Department of Education provide guidance for schools emerging during the COVID crisis. Likewise, candidates might be encouraged to explore their own district's or other local education authority's Learning Continuity and Attendance Plan (LCAP) for ideas to inform their own more intentional planning.

Narrowing our focus even further, educational leadership addressing significant change should have some concrete ideas to bring to their discussions with stakeholders. To provide ideas regarding this, thoughts on learning modalities including potential conflicts involved in starting new modalities (Daruwala et al., 2021), addressing learning gaps (Torres, 2021), and looking at teachers' self-efficacy in adopting new modalities (Yazon and Callo, 2021) are provided. Universal Design for Learning (UDL) provides a framework for effective online learning but could, and in my view should be incorporated in many aspects of learning. UDL is addressed through Basham et al. (2006), Dell et al. (2015), and Houston (2018). Note that the literature chosen not only addresses key content, but does so from diverse perspectives including student, teacher, and international (specifically the Philippines).

The literature suggested here provides research-based theoretical and action-oriented models for change, builds leadership capacity generally and in addressing challenges to learning continuity specifically, and suggests specific learning design and modality ideas

for effectively continuing learning. We now turn our attention to the work products candidates will complete through and with their newfound learning.

Case Scenario

For this project, you will apply models of organizational change to create your own plan for ensuring effective continuity of learning in a school organization. You may choose the school that you currently work in, that you have studied for other elements of your program, or choose a different school setting such as one in which you hope to work someday. Regardless of your school choice, you will investigate the school context and develop a plan to work with the school community in creating a continuity of learning plan to ensure effective instruction despite potential environmental disruptions.

Your planning will be action-oriented and concise (Fullan, 2016) and will take the form of two significant work products.

First, present your change plan in a well-written paper following APA 7th edition style that is about 3,500 words inclusive of title page and references. Use the questions regarding Investigate, Plan, Act, and Reflect, found in the *Next Steps to Take* section of this document.

The paper will be graded using the Adapting to Environmental Change: A Plan for Learning Continuity Paper Rubric found in Appendix A.

Second, share key ideas in an eight (8) minute presentation that addresses the following:

1. Your school context such as geography and school demographics.
2. Likely environmentally-related disruptions to your school's continuity of learning
3. Your plan for addressing one change requirement (Dietz et al., 2003) or guideline

(Fullan, 2016) to effectively address continuity of learning in your school.

Your presentation must be supported by clear visuals (e.g., PowerPoint, Prezi) and will be graded using the Adapting to Environmental Change: A Plan for Learning Continuity Presentation Rubric found in Appendix A.

Next Steps to Take...	
Investigate	Describe your school's context including geographic and demographic details. What are likely environmentally induced disruptions to your school's continuity of learning? Consider both short-term disruptions (e.g., rolling blackouts) and long-term disruptions (e.g., school closure due to wildfire or water loss). What likely problems will arise based on your investigation?
Plan	Discuss change models such as adaptive governance (Dietz, Ostrom, & Stern, 2003) and the new meaning of educational change (Fullan, 2016). Which change strategy is appropriate to your context? Why will you utilize this model to guide your change efforts?
Act	Describe steps that may be taken to address three change requirements (Dietz et al., 2003) or change guidelines (Fullan, 2016). What challenges might arise as you plan for and affect these changes?
Reflect	Discuss how this planning affects your leadership. What strengths do you bring to the process? In what areas might you seek additional growth? How will your approach to change management promote equity and effectiveness?

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RUBRICS

Adapting to Environmental Change: A Plan for Learning Continuity Presentation Rubric

	Exceeds Expectations	Meets Expectations	Approaches Expectations	Needs Improvement
Visuals	Creative and clear visuals support the presentation.	Clear visuals are the presentation.	Visual's relationship to the presentation is vague or otherwise hard to understand.	Visuals are missing or inappropriate.
Presentation	Insightfully addresses one key change requirement or guideline that promises contextually responsive and authentic reform.	Moderately addresses one key change requirement or guideline that promises contextually responsive and authentic reform.	Vaguely addresses one key change requirement or guideline. Connection to context and/or authenticity unclear.	Presentation is missing or inappropriate.
Timing	Complete presentation made within eight-minute time allotted.	Presentation slightly outside of time limits OR is obviously cut short to meet time limit.	Presentation significantly outside of time limits.	Presentation is incomplete or rambles.

Adapting to Environment Change: A Plan for Learning Continuity Rubric

<i>INVESTIGATE</i>	4	3	2	1
	Demonstrates the ability to construct a clear and insightful problem statement with evidence of all relevant contextual factors.	Demonstrates the ability to construct a problem statement with evidence of most relevant contextual factors, and problem statement is adequately detailed.	Begins to demonstrate the ability to construct a problem statement with evidence of most relevant contextual factors, but problem statement is superficial.	Demonstrates a limited ability in identifying a problem statement or related contextual factors.
<i>PLAN</i>	4	3	2	1
	Proposes one or more change strategies that indicate a deep comprehension of the problem. Strategies are sensitive to contextual factors.	Proposes one or more change strategies that indicate comprehension of the problem. Strategies are sensitive to contextual factors.	Proposes a change that is, "off the shelf" rather than relevant to the specific contextual factors of the problem.	Proposes a change strategy that is difficult to evaluate because it is vague or only indirectly addresses the problem statement.
<i>ACT</i>	4	3	2	1
	Proposes change solutions consistent with the change strategy that addresses thoroughly and deeply multiple contextual factors of the problem.	Proposes change solutions consistent with the change strategy that addresses multiple contextual factors of the problem.	Proposes change solutions consistent with the change strategy that addresses some contextual factors of the problem.	Does not propose change solutions consistent with the change strategy and/or contextual factors.

REFLECT	4	3	2	1
	Shows initiative in team leadership of complex activities accompanied by reflective insights or analysis about the aims and implications of one's actions.	Shows initiative in leadership of complex activities accompanied by insights or analysis about the aims and possible implications of one's actions.	Shows leadership of activities accompanied by insights or analysis about the aims of one's actions.	Does not engage in effective reflection.

Investigate Section Rubric Adapted from:

https://www.uh.edu/tech/instructional-design/learn-with-cot-id/best-practices/blackboard-rubric-tool/problem_solving_rubric_word.docx

CASE SCENARIO 2

Migration and Climate Change:

Creating Welcoming Schools for Vulnerable Populations

Background of the Case

Over a decade ago, UNESCO published the manuscript *Migration and Climate Change* (2011), a collection of experts' perspectives worldwide on this urgent topic. Demographers, climatologists, economists, geographers, anthropologists, and lawyers "acknowledge that tropical cyclones, heavy rains and floods, drought and desertification, and sea-level rise are increasingly influencing migration." This is one of the most significant challenges of our time. The impact of relocation and migration streams, particularly on vulnerable populations, will be unprecedented on communities and schools' systems. Environmental refugees are a reality.

The University Network for Human Rights (April 2021) report indicates that by the year 2050, climate change will displace four million people from what is called the Northern Triangle (El Salvador, Guatemala, and Honduras). Moreover, the number of accompanied minors has grown from 10,146 in 2012 to 55,109 in 2019 and is expected to surge. According to the report, "In recent years, migration from Honduras, Guatemala, and El Salvador has also increased significantly due to gender-based and

gang violence, as well as economic and political instability, among other factors. As a result, an unprecedented number of families and unaccompanied minors have been forced to flee their homes and seek asylum in the United States" (p.5). As of the writing of this manuscript, an estimated 15,000 Haitian refugees arrived at the U.S. border at Del Rio, Texas, seeking asylum escaping from hunger and devastation from recent storms and earthquakes (Press, T.A., 2021)

The drought in Central America has decimated the cornfields, and the effects of climate change on farming and agriculture have resulted in famine. As a result, malnutrition is widespread in Guatemala, and a large percent of communities are heading north. Migration to the northern hemisphere added to the internal migration occurring in the United States due to drought, fire, and rising sea levels will require school leaders to be prepared for student population fluctuations and provide unique services to migrant students.

In order to prepare for these types of complex circumstances, school leaders will need to educate themselves, organize and unify their schools and communities for these extraordinary changes. The purpose of the following case scenario will provide you with a situation where you will need to exercise your decision-making skills, learn how to optimize and maximize school resources and finances, plan to communicate with stakeholders, welcome students and their families, among many other tasks.

Literature Review

Climate change transcends geographical and political boundaries and disproportionately affects children's health and security (Philipsborn & Chan, 2018). These disparities are exacerbated by poverty and lack of proper education. Aspiring leaders will have tremendous influence in the decision-making of their schools, the public, and the development of innovative practices that should have equity at the center of their vision. The idea of introducing elements of sustainability and eco-justice into the leadership and management curriculum at the university level is long overdue. Educational leaders will be responsible for generating new educational policies and technologies to provide equitable education and resources and promote cultural diversity and environmental stewardship. Now more than ever, leaders must widen their perspectives and consider marginalized cultural groups whose voices have been constrained and advocate for them in the decision-making process. Carr (2016) concurs, "Global challenges, such as inequalities, environmental degradation, loss of biodiversity, and hunger, are complex, multi-faceted and interconnected, and require new ways of thinking and relating, mobilising new types of co-constructed knowledge" (p. 128).

Sixty years have elapsed since the *Brown v. Board of Education* (1954) ruling, which called for the eradication of school segregation. However, according to Bennett deMarrais and LeCompte (1999), "communities and school districts continue to struggle over the issue of desegregation as large number of poor and minority children continue to attend schools that offer separate and unequal educational opportunities" (p. 272). To increase awareness of equitable and fair practices, the administrators must champion an appreciation for multiculturalism, foster tolerance, and generate a school climate that provides equal-opportunity educational access to all students.

Paulo Freire (1998) warns, "Citizenship implies freedom—to work, to eat, to dress, to wear shoes, to sleep in a house, to support oneself and one's family, to love, to be angry, to cry, to protest, to support, to move, to participate in this or that religion, this or that party, to educate oneself and one's family, to swim regardless in what ocean of one's country" (p. 90). In a democratic society, educators have the duty to provide equitable educational resources and opportunities to students regardless of their social status, race, ethnicity, gender, special needs, and/or cultural background. School leaders must act with professionalism and practice fairness and integrity. Equity should be present in developing quality educational programs and addressing the unique needs, interests, and abilities of all students. It entails school leaders to have high performance and behavior expectations for themselves, teachers, and all students. Furthermore, Rhiel (2000) points out, "A key strategy available to school principals for accomplishing this is the promotion of democratic discourse within the school community" (p. 61). Democratic discourse is characterized by authentic discussions with teachers, parents, and the community about beneficial results for all students. In addition, administrators must incorporate culturally responsible practices and coordinate with community organizations to better serve students.

Pedagogical Constructs

The following five core pedagogical themes and key constructs (Figure1) can help broaden perspectives and expand conversations to tackle forthcoming challenges such as a very likely migration and climate change scenario impacting schools and communities. These topics will probe leaders to consider issues from different perspectives, encourage connections across time, place, and scale, and provide bridges to learners' lives, cultures, and local and global communities (Santone, 2018). These themes can be addressed vis-a-vis issues at the local level and/or journal articles.

Figure 1. Essential core pedagogies guidelines for the Educational Leadership Curriculum. Developed by Somoza-Norton, based on Santone, S. (2018). *Reframing the Curriculum: Design for Social Justice and Sustainability*. Routledge and Bowers, C. A (2002) and Toward an eco-justice pedagogy. *Environmental Education Research*, 8(1), 21-34.



These topics are transdisciplinary in nature and show the way to solutions that transcend disciplinary boundaries. This approach will improve skills and dispositions in systems thinking, empathy, social consciousness, critical thinking, equity-literate communication skills, self-efficacy and agency, creativity, and local and global ecological sustainability. The topics can be introduced using an "arc of inquiry" type format over

three clear phases: Stage 1: The story begins, Stage 2: The plot thickens, and Stage 3: Decision-Making and Action. In the story begins, the instructor will present central topics, people, and places, followed by the heart of the unit, students investigating the issue. To conclude, students will assess solutions, make ethical decisions, and create solution-oriented projects (Santone, 2018).

Case Scenario

You are the new principal of one of the lowest-performing middle schools in the state. Recently, you have noticed a continued influx of students enrolling in the school from Central America. Students and their families have immigrated from these regions due to failing crops, famine, lack of health services, and dangerous and unstable government conditions caused by the climate crisis.

At least 25% of these students are unaccompanied minors living with relatives in the neighborhood. The already strained school's resources, overworked faculty, and staff feel the impact of the growing English learners population. In addition, a large portion of this student population is beginning to show signs of trauma and poor cognitive skills due to long-term malnutrition.

Although the faculty and staff are willing to go above and beyond to support the new students, not all community members are as welcoming and empathetic. Based on insensitive comments posted on social media, such as "send them back" and "they don't belong here," the environment in the school has become tense. There is a palpable division forming in the school community regarding climate refugees.

This morning, you received an urgent phone call from your school superintendent. She has learned from the human and health services department that 30 unaccompanied students from Central America will be placed in your school next month as they have been situated with their relatives in the community. You are sure this arrival will increase the school's already exceeding teacher/student ratio. With only 30 days to prepare for the arrival of the children, the leadership team will need to have a solid plan of action.

In making your recommendations to address this change, consider utilizing the five requirements of adaptive governance (Dietz et al., 2003):

1. What physical, technical, and institutional infrastructure is needed?
2. What information is necessary to make informed change?
3. How will you encourage adaptation and change with your stakeholders?
4. How will you deal with conflict?
5. How will you induce compliance with new rules?

In addition to the above questions, how would you reframe the current narrative to ensure the school recognizes the connections between social-environmental, sustainability, and equity by "a) support well-being for all, b) sustain ecological and cultural systems, and c) provide equitable access" (Santone, 2018).

Next Steps to Take...	
Investigate	Select your own school or a school in your district as a site to solve your case scenario. First, examine and assess the school capacity (i.e., resources, staff, building) to receive 30 unaccompanied students from Central America in 30 days by conducting interviews and examining documents (i.e., CA Dashboard, School Strategic Plan). Then, on one page (250 words), describe your findings. What are the school's current strengths, opportunities, and limitations to support vulnerable student populations? Develop a problem statement that summarizes fundamental limitations and challenges from your findings.
Plan	Based on what you have learned about the adaptive governance model (Dietz, Ostrom, & Stern, 2003) and sustainability for social justice framework (Santone, 2018), in one page (250 words), develop an action plan to address the case scenario potential needs and challenges. Then, consult with a stakeholder to receive feedback and adjust the strategies, and plan accordingly.
Act	Prepare a 10-minute presentation (i.e., PowerPoint, Google Slides) to share your action plan with a larger group of stakeholders (i.e., administrative team, faculty, parents, community members). In addition, prepare a brief survey to request feedback from the group. Developing material is required. Actual presentation to stakeholders is optional.

Reflect	In one page (250 words), using Gibbs' (1988) reflective cycle, respond to the following questions: What happened? What were you thinking and feeling? What was good and bad about the experience? What sense can you make of the situation? What else could you have done? If it arose again, what would you do? Lastly, describe how this experience impacts your leadership.
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RUBRIC

Migration and Climate Change

	Exceeds Expectations	Meets Expectations	Approaches Expectations	Needs Improvement
Visuals	Creative and clear visuals support the presentation.	Clear visuals are the presentation.	Visual's relationship to the presentation is vague or otherwise hard to understand.	Visuals missing or inappropriate.
Presentation (Optional)	Insightfully addresses one key change requirement or guideline that promises contextually responsive and authentic reform.	Moderately addresses one key change requirement or guideline that promises contextually responsive and authentic reform.	Vaguely addresses one key change requirement or guideline. Connection to context and/or authenticity unclear.	Presentation is missing or inappropriate.
Timing	Complete presentation made within 10 minutes time allotted.	Presentation slightly outside of time limits OR is obviously cut short to meet time limit.	Presentation significantly outside of time limits.	Presentation is incomplete or rambles.

Migration and Climate Change

INVESTIGATE	4	3	2	1
	Demonstrates the ability to construct a clear and insightful problem statement with evidence of all relevant contextual factors.	Demonstrates the ability to construct a problem statement with evidence of most relevant contextual factors, and problem statement is adequately detailed.	Begins to demonstrate the ability to construct a problem statement with evidence of most relevant contextual factors, but problem statement is superficial.	Demonstrates a limited ability in identifying a problem statement or related contextual factors.
PLAN	4	3	2	1
	Proposes one or more change strategies that indicate a deep comprehension of the problem. Strategies are sensitive to contextual factors.	Proposes one or more change strategies that indicate comprehension of the problem. Strategies are sensitive to contextual factors.	Proposes a change that is, "off the shelf" rather than relevant to the specific contextual factors of the problem.	Proposes a change strategy that is difficult to evaluate because it is vague or only indirectly addresses the problem statement.
ACT	4	3	2	1
	Proposes change solutions consistent with the change strategy that addresses thoroughly and deeply multiple contextual factors of the problem.	Proposes change solutions consistent with the change strategy that addresses multiple contextual factors of the problem.	Proposes change solutions consistent with the change strategy that addresses some contextual factors of the problem.	Does not propose change solutions consistent with the change strategy and/or contextual factors.

REFLECT	4	3	2	1
	Shows initiative in team leadership of complex activities accompanied by reflective insights or analysis about the aims and implications of one's actions.	Shows initiative in leadership of complex activities accompanied by insights or analysis about the aims and possible implications of one's actions.	Shows leadership of activities accompanied by insights or analysis about the aims of one's actions.	Does not engage in effective reflection.

CASE SCENARIO 3

School-Based Health Centers in a Learning Continuity Plan

Background of the Case

The school as a health resources center:

While the connection between health and mental health services and schools is not a new one, the pandemic and additional climate disasters of the past few years have increased the urgency to examine how health systems and school systems can partner to best serve students and families. In addition to the public health side of the pandemic, educational experts and mental health experts are also pointing to the social, emotional, and mental health effects of the COVID19 global pandemic on students, teachers, and families.

Organizations such as *California School-Based Health Alliance* have outlined “key steps in planning a school-based health center” (2013). School districts in California are also establishing Family Resource Centers in an effort to assist students and families (Long Beach Unified School District, n.d.). The Center for Disease Control and Prevention also has guidelines on how to prepare for natural disasters while in school as well as how to handle influenza outbreaks (CDC, n.d.). Additionally, the Center for Disease Control dedicates a section on its website to *Children’s Emergency Preparedness* and

describes why and how children, in particular, are most vulnerable during a crisis whether it be a natural disaster or an infectious disease outbreak. In preparing for public health crises, the needs of children are different. Children require different sized medical equipment and medicinal doses than adults. Young children are also less likely to be able to articulate how they are feeling or describe their symptoms. Specific school and community-based plans dedicated to the school-age population are crucial for educational leaders to plan for natural disasters as well as infectious disease outbreaks.

Recently during the pandemic, County Offices of Health have partnered with school districts to plan for sanitizing student areas, provide COVID19 testing and even vaccinations for teachers and staff. Many county health officials held standing weekly meetings with local and county schools and districts during the pandemic. In contrast to partnerships and collaborations strengthened between schools and local health officials, the pre-pandemic role of schools in the area of student health was much more limited. School district nurses have typically held the role of providing annual training for teachers and staff on Bloodborne disease prevention, head lice prevention, and what to do if a student has an allergic reaction. The case can be made for educational organizations to establish a more rigorous, systematic approach to preparedness, prevention, and outreach in terms of student physical and mental well-being, especially in light of the current pandemic and recent local climate disasters.

Literature Review

History of the School Nurse

The idea of schools as a resource and provider for the health and mental wellness is not a new one. In fact, current-day models of school-based health centers (SBHC) can trace their origins to the early 1900s in New York City when high student absenteeism rates were due to the fast spread of communicable diseases like scarlet fever, measles, whooping cough, and tuberculosis (Keeton et al., 2012). In an effort to curb and contain contagious illnesses, symptomatic students were sent home from school without any treatment or plan for treatment, per the Board of Health in New York City. Even though children were sent home from school, many continued to play and interact with other healthy children, and without treatment, the diseases spread. In an effort to keep students in school and healthy, Lina Rogers, known historically as the *first school nurse*, was placed on New York City's payroll in 1902 to address the health issues keeping students out of school and to develop protocols for schools and families to adopt to prevent the spread of contagious diseases. Lina Rogers began conducting home visits where she informed families about basic hygiene such as handwashing to prevent the

spread of disease (Schumacher, 2002). Within one year, the rates of absenteeism in New York City decreased by around 90%. The city hired more nurses who also partnered with local physicians to treat children and educate families about the containment of infectious diseases. Lina Rogers and her team of nurses also documented the difficulties, many related to access to health services, low income and immigrant families faced in New York City beginning early social justice campaigns to assist families and children. The connection between health services and access to public education became clear in 1902.

Fast forward to the 1970s when the state of Colorado established a school-nurse practitioner certification program in response to “public dissatisfaction with the limited role of the school nurse and the recognized need for school health” (Keeton et al., 2012, p.135). Around the same decade, additional states such as Massachusetts, Texas, and Minnesota established community health centers, some on school sites, where Pediatric Nurse Practitioners (PNP) worked closely with teachers to recognize and remedy learning difficulties related to health. By the 1980s, national and local foundations began to play a major role in funding and support of SBHCs (Keeton et al., 2012). The 1990s experienced tremendous growth in the number of SBHCs and in 1994, the Robert Wood Johnson Foundation introduced “Making the Grade: State and Local Partnerships to Establish School-Based Health Centers” which was a multi-year \$23.2 million initiative to promote state-level policy to advance SBHC models strive for long-term sustainability (Keeton et al., 2012). Since the 1990s, SBHCs have been key to providing access to services such as vision, dental, asthma, and hearing screenings as well as information on where to receive immunizations for K-12 students. The adolescent population, with different needs than younger children, has also benefited from mental health services provided by SBHCs.

Challenges to Providing Health and Mental Wellness Services

Several challenges posed during the review of the literature were a need for capacity building, the expansion of mental health services (Mental Health Services Oversight and Accountability Commission, 2020), educator support, access to health services, and most notable for this assessment - the lack of school plans around health services (Rappaport, 2018).

The 21st Century and Continued Need for School-Based Health Centers

In light of the current pandemic which now spans more than 18 months and has affected people, students in particular, in ways we have yet to measure and even comprehend, the rationale for School-Based Health Centers and a comprehensive educational approach to providing information, access to health and mental services is crystal clear. The similarities between the efforts of Lina Rogers in New York almost 120 years ago and our current school year under the pandemic are apparent: education, information, a systematic approach to contain the spread of disease, and stakeholder

buy-in are a few ways to enable kids to stay in school and for their education to continue. Additional similarities between 1902 and the current year are access to accurate information and health services are inhibited by socio-economic class and education levels (Abedi et al., 2020). The pandemic has resurfaced the connection between health, uninterrupted learning, and mental well-being. During the past 18 plus months, community leaders from county health officials to superintendents to parents to business owners have had no other option but to collaborate around how to contain the spread of disease to keep school doors open, parents employed and learning happening. School leaders have been at the center of conversations with community members and families about how to maintain the health and safety of students, teachers, and staff to avoid learning disruptions. Teachers continue to care for and monitor student health and well-being while relying on a strong partnership with school nurses and health officials. While policy and laws have been implemented to promote student health and wellness since the 1900s, not much has changed in the area of the significance of building relationships and partnerships across the community which focus on student health, education, and well-being.

Case Scenario

Imagine you are the new principal of an elementary school. You have been tasked to update the coordinated school health plan. You wonder what a coordinated school health plan is. Additionally, the superintendent is asking each principal and school nurse to collaborate on a district-level team to develop a district-wide physical and mental health plan for students and teachers.

In making your recommendations to address the creation of a School-Based Health Services Plan for your school and district, consider utilizing the five requirements of adaptive governance (Dietz et al., 2003):

1. What physical, technical, and institutional infrastructure is needed?
2. What information is necessary to make informed change?
3. How will you encourage adaptation and change with your stakeholders?
4. How will you deal with conflict?
5. How will you induce compliance with new rules?

Using the IPAR model, describe how you will approach the task as well as create a final *School-Based Health Services Plan* for your school and district.

Next Steps to Take...	
Investigate	Investigate your district or school through the lens of a coordinated school health plan. What role does the district or school nurse play in planning for care, implementing screenings, and delivering health care? Are other district personnel, community, or county health officials included in creating a school health plan? Use the connection between health and mental services as you investigate. Consider conducting interviews and examining documents. What are the school's current strengths, opportunities, and limitations to support a <i>School-Based Health Services Plan</i>? Compile your findings in a one-page (250 words) document.
Plan	Identify key elements of the coordinated school health plan discovered in the Investigate section. Using the background in the case scenario, which elements and logistical planning would you add to the district or school you investigated? • Develop an action plan in a one-page (250 words) document to address the case scenario. • Then, share the plan with a site or district administrator to receive input and feedback on the plan. • Finally, make any adjustments to the plan based on feedback received.
Act	As a school or district leader, describe the steps to take to act on the plan. Plan backward using the document created in the Plan assignment to describe how you and colleagues will Act to carry out the action plan. Predict any challenges within the educational organization as well as outside to act on a revised coordinated school health plan. Create a 10-minute presentation (PowerPoint, Google slides, etc.) to present your findings, plan, and action steps to enact your <i>School-Based Health Services Plan</i>.
Reflect	The reflection written piece (250 words) could be considered a 'note to yourself' on how to adjust the previous three sections the next time you are faced with a simulation or in the moment experience. <i>Research suggests we remember the ideas, concepts, or practices that motivate us and/or are tied to our personal goals (Miller, 2014).</i> Consider writing about the concept, item, or idea you found most valuable in this assessment.

	Write a 150-word Reflection on your key learnings and takeaways from this assessment. What will you carry with you?
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<https://doi.org/10.1177/10598405020180050101>

RUBRIC

School-Based Health Centers in a Learning Continuity Plan

	Exceeds Expectations	Meets Expectations	Approaches Expectations	Needs Improvement
Visuals	Creative and clear visuals support the presentation.	Clear visuals are the presentation.	Visual's relationship to the presentation is vague or otherwise hard to understand.	Visuals are missing or inappropriate.
Presentation (Optional)	Insightfully addresses one key change requirement or guideline that promises contextually responsive and authentic reform.	Moderately addresses one key change requirement or guideline that promises contextually responsive and authentic reform.	Vaguely addresses one key change requirement or guideline. Connection to context and/or authenticity unclear.	Presentation is missing or inappropriate.
Timing	Complete presentation made within 10 minutes time allotted.	Presentation slightly outside of time limits OR is obviously cut short to meet time limit.	Presentation significantly outside of time limits.	Presentation is incomplete or rambles.

School-Based Health Centers in a Learning Continuity Plan

INVESTIGATE	4	3	2	1
	Demonstrates the ability to construct a clear and insightful problem statement with evidence of all relevant contextual factors.	Demonstrates the ability to construct a problem statement with evidence of most relevant contextual factors, and problem statement is adequately detailed.	Begins to demonstrate the ability to construct a problem statement with evidence of most relevant contextual factors, but problem statement is superficial.	Demonstrates a limited ability in identifying a problem statement or related contextual factors.
PLAN	4	3	2	1
	Proposes one or more change strategies that indicate a deep comprehension of the problem. Strategies are sensitive to contextual factors.	Proposes one or more change strategies that indicate comprehension of the problem. Strategies are sensitive to contextual factors.	Proposes a change that is, "off the shelf" rather than relevant to the specific contextual factors of the problem.	Proposes a change strategy that is difficult to evaluate because it is vague or only indirectly addresses the problem statement.
ACT	4	3	2	1
	Proposes change solutions consistent with the change strategy that addresses thoroughly and deeply multiple contextual factors of the problem.	Proposes change solutions consistent with the change strategy that addresses multiple contextual factors of the problem.	Proposes change solutions consistent with the change strategy that addresses some contextual factors of the problem.	Does not propose change solutions consistent with the change strategy and/or contextual factors.

REFLECT	4	3	2	1
	Shows initiative in team leadership of complex activities accompanied by reflective insights or analysis about the aims and implications of one's actions.	Shows initiative in leadership of complex activities accompanied by insights or analysis about the aims and possible implications of one's actions.	Shows leadership of activities accompanied by insights or analysis about the aims of one's actions.	Does not engage in effective reflection.

Investigate Section Rubric Adapted from:

https://www.uh.edu/tech/instructional-design/learn-with-cot-id/best-practices/blackboard-rubric-tool/problem_solving_rubric_word.docx

CASE SCENARIO 4

School-Based Community Gardens as a Sustainable Resource

Background of the Case

As outlined in the introduction, schools often function as hubs of the community helping to deliver a range of services, particularly in struggling neighborhoods. This assistance to families better prepares students to learn (Horn, Freeland, & Butler, 2015). One way to support community nutritional health in socio-economically challenged communities is through the implementation of school gardens (Stewart, Purner, & Guzman, 2013).

Historical background: School gardens were used as early as 1811, providing a place where children could learn natural sciences (including agriculture). Gardens were used as an educational tool in the Kindergarten movement, incorporating “hands, heart, and head,” words and ideas that eventually were the basis for the founding of the 4-H Youth Development program. Louise Miller’s *Children’s Gardens for School and Home, A Manual of Cooperative Gardening* (Miller, 1904) enjoyed immense popularity as the school garden movement progressed across the United States (UC Food Observer,

2021). Rahm's (2002) work indicated that school gardens teach "how a plant goes from seed to plate (p. 175)."

Educational Programs: By the 1990s, school gardens had proliferated across the country (Duncan, et al, 2016). LifeLab© was one of the first educational curriculum programs, begun in 1979 as a garden-based learning movement to engage young children in gardens and on farms, promoting experiential learning through learning about plants and expanding healthy eating practices. Rahm's (2002) work indicated that school gardens teach "how a plant goes from seed to plate (p. 175)." More recently, Michelle Obama planted the White House Kitchen Garden in 2009, in coordination to initiate a national conversation about the health and well-being of our citizenry, particularly that of young children (Obama Whitehouse Archives, 2021).

While much research indicated positive outcomes of science achievement and food behavior (Blair, 2010), only a few studies showed a positive shift in students' attitudes towards the environment (Fisher-Maltese & Zimmerman, 2015). The work Duncan, et al (2015) found that the children in their study greatly enjoyed cultivation as well as culinary aspects of gardening programs. The work of Huys, et al (2017) and Diaz, et al (2018) found that participants were positive about having access to a school garden; however, there were barriers to implementation, such as institutional obstacles, maintenance, and curriculum integration. Ozer (2006) developed a conceptual framework to guide future inquiry as to how participating in a school garden project can enhance student learning and ensure the sustainability of a gardening project.

Daily Nutritional Support: The most recent statistics for the National School Lunch Program (2019) indicate that nearly 100,000 schools and residential child facilities serve more than 29.4 million children daily lunch. (USDA Economic Research, <https://www.ers.usda.gov/topics/food-nutrition-assistance/child-nutrition-programs/national-school-lunch-program>). In California alone, 9,285 public and private schools offer school lunch and serve over 487 million lunches per year. (Nourish CA.org, <https://nourishca.org/ChildNutrition/NSLP/CFPAPublications/NSLP-FactSheet-2008.pdf>). According to the California Department of Education, over 3.5 million (59% of eligible students) participate in the free or reduced-price meal program (DataQuest, <https://dq.cde.ca.gov/dataquest/Cbeds1.asp?FreeLunch=on&cChoice=StatProf1&cYear=2020-21&cLevel=State&cTopic=FRPM&myTimeFrame=S&submit1=Submit>).

Case Scenario

Imagine you are the new principal of a mid-sized elementary school in a socially-economic disadvantaged area of a large urban city. In your school community, there are several immigrant populations who have recently been relocated to the neighborhood. These immigrants have come from socio-economically challenged agricultural farming areas and are now living in apartment housing.

You have been tasked by your assistant superintendent to engage the community in some project that focuses on the school, particularly in the area of student development and learning. Because of the background experiences of the immigrants in your community, you are interested in developing a community garden that will be used to supplement your school meals program as well as become a food resource for the larger community. Using the IPAR model, describe how you will approach the task as well as a workable plan for development and implementation. In making recommendations to address this project, consider utilizing the five requirements of adaptive governance (Dietz et al, 2003):

- What physical, technical, and institutional infrastructure is needed?
- What information is necessary to make informed change?
- How will you encourage adaptation and change with your stakeholders?
- How will you deal with conflict?
- Who will you induce compliance with new rules?

In addition to the above questions, how would you reframe the current narrative to ensure the school recognizes the connections between social-environmental, sustainability, and equity by a) support well-being for all; b) sustain ecological and cultural systems, and 3) provide equitable access (Santone, 2018)?

Next Steps to Take...	
Investigate	What physical, technical, community, and institutional support is needed to begin a school garden? Which internal and external partners do you need to work with and why?

Plan	Identify key elements of your investigation from the first step in IPAR. Develop a literature review to use as a rationale for the garden and describe the necessary curricular changes for your faculty as well as how you will encourage adaptation and change for not only your staff but for the community in general.
Act	As a school leader, describe the steps to take to act on the plan. Predict any challenges within the educational organization as well as from external constituencies, including how you will deal with community education, teacher training, conflicting resources, and the development of policy and procedures in establishing a community garden.
Reflect	The reflection piece could be considered a 'note to yourself' on how to adjust the previous three sections the next time you are faced with a simulation or in the moment experience.

Resources

Action for Healthy Kids: School Gardens: Here We Grow

https://www.actionforhealthykids.org/school-gardens-here-we-grow/?gclid=CjwKCAjwndCKBhAkEiwAgSDKQW845tJpWNqJdOzsEt8NBCTcXeyLIIVA9wPv9KM4pAYSQ5GSyTvyHhoCaboQAvD_BwE

KIDSGARDENING.ORG

<https://kidsgardening.org/create-sustain-a-program-starting-a-community-garden-on-school-grounds/>

Denver Urban Gardens

<https://dug.org/starting-a-school-garden/>

Pasadena Educational Foundation

<https://pasedfoundation.org/our-work/health-wellbeing/school-community-gardens/>

Collective School Garden Network

<https://www.csgn.org/why-school-gardens>

The Urban Garden Initiative Corporation

https://www.theurbangardeninitiative.org/?gclid=CjwKCAjwndCKBhAkEiwAgSDKQQ3PdH7zYah3dIzf9ojjH0OhLG7VFjBcD19JcVdgdw3CS712dRIrCVRoC5mAAQAvD_BwE

Let's Move - School Garden

<https://letsmove.obamawhitehouse.archives.gov/school-garden-checklist>

Community Food Initiatives

<https://communityfoodinitiatives.org/what-we-do/school-gardens.html>

MORELAND SCHOOL DISTRICT COMMUNITY GARDENING PROGRAM
RULES AND REGULATIONS

https://www.moreland.org/apps/pages/index.jsp?uREC_ID=427309&type=d&pREC_ID=932427

Resource Conservation District of Greater San Diego County

<https://rcdsandiego.org/education/school-garden-support/>

School Gardening & Community Garden Youth Programs in Canada

<https://seewhatgrows.org/our-causes/community-gardens-seed-preservation/>

Garden School Foundation

<http://gardenschoolfoundation.org/our-programs/>

Grown NYC

<https://www.grownyc.org/school-gardens>

Garden-Based Education Resources Available from the California Department of Education

https://nourishca.org/ChildNutrition/ChildNutrition_ExternalPublications/SchoolGardenEducationResources-CDE.pdf

Cal Recycle

<https://www.calrecycle.ca.gov/education/gardens>

Conditional Approval of a School Garden Food Source for San Diego Unified District Form

[https://p18cdn4static.sharpschool.com/UserFiles/Servers/Server_27732394/File/Departments/Food%20and%20Nutrition%20Services/Programs/Garden%20to%20Caf%C3%A9/\(2017-18%20Version\)%20G2C%20SDUSD%20Approval%20Procedure%20Updated%203.4.15.pdf](https://p18cdn4static.sharpschool.com/UserFiles/Servers/Server_27732394/File/Departments/Food%20and%20Nutrition%20Services/Programs/Garden%20to%20Caf%C3%A9/(2017-18%20Version)%20G2C%20SDUSD%20Approval%20Procedure%20Updated%203.4.15.pdf)

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RUBRIC

INVESTIGATE	4	3	2	1
Identification of Problem	Demonstrates the ability to construct a clear and insightful problem statement with evidence of all relevant contextual factors.	Demonstrates the ability to construct a problem statement with evidence of most relevant contextual factors, and problem statement is adequately detailed.	Begins to demonstrate the ability to construct a problem statement with evidence of most relevant contextual factors, but problem statement is superficial.	Demonstrates a limited ability in identifying a problem statement or related contextual factors.
Identification of Strategies	Identifies multiple approaches for solving the problem that apply within a specific context.	Identifies multiple approaches for solving the problem only some of which apply within a specific context.	Identifies only a single approach for solving the problem that does apply within a specific context.	Identifies one or more approaches for solving the problem that do not apply within a specific context.
PLAN	4	3	2	1
Propose Solutions/Hypotheses	Proposes one or more solutions/hypotheses that indicates a deep comprehension of the program. Solution/hypotheses are sensitive to contextual factors as well as all of the following: ethical, logical, and cultural dimensions of the problem.	Proposes one or more solutions/hypotheses that indicates comprehension of the program. Solution/hypotheses are sensitive to contextual factors as well as all of the following: ethical, logical, and cultural dimensions of the problem.	Proposes one solutions/hypothesis that "off the shelf: rather than individually designed to address the specific contextual factors of the problem.	Proposes a solution/hypothesis that is difficult to evaluate because it is vague or only indirectly addresses the problem statement.
Evaluate Potential Solutions	Evaluation of solutions is deep and elegant (for example, contains thorough and insightful explanation) and includes, deeply and thoroughly, all of the following: considers history of problem, reviews logic/reasoning, examines feasibility of solution, and weighs impacts of solution.	Evaluation of solutions is adequate (for example, contains thorough explanation) and includes the following: considers history of problem, reviews logic/reasoning, examines feasibility of solution, and weighs impacts of solution.	Evaluation of solutions is brief (for example, lacks depth) and includes, the following: considers history of problem, reviews logic/reasoning, examines feasibility of solution, and weighs impacts of solution.	Evaluation of solutions is superficial (for example, contains cursory, surface level explanation) and includes, the following: considers history of problem, reviews logic/reasoning, examines feasibility of solution, and weighs impacts of solution.
ACT	4	3	2	1
Implement Solution	Implements the solution in a manner that addresses thoroughly and deeply multiple contextual factors of the problem.	Implements the solution in a manner that addresses multiple contextual factors of the problem.	Implements the solution in a manner that addresses the problem statement but ignores relevant contextual factors.	Implements the solution in a manner that does not directly address the problem statement.
Evaluate Outcomes	Reviews results relative to the problem defined with thorough, specific considerations of need for further work.	Reviews results relative to the problem defined with some consideration of need for further work.	Reviews results in terms of the problem defined with little, if any, consideration of need for further work.	Reviews results in terms of the problem defined with no consideration of need for further work.
REFLECT	4	3	2	1
Civic Identity and Commitment	Provides evidence of experience in civic engagement activities and describes what she/he has learned about her or himself as it relates to a reinforced and clarified sense of civic identity and continued commitment to public action	Provides evidence of experience in civic engagement activities and describes what she/he has learned about her or himself as it relates to a growing sense of civic identity and commitment.	Evidence suggests involvement in civic engagement activities is generated from expectations or course requirements rather than from a sense of civic identity.	Provides little evidence of her/his experience in civic engagement activities and does not connect experiences to civic identity.
Civic Action and Reflection	Demonstrates independent experience and shows initiative in team leadership of complex or multiple civic engagement activities, accompanied by reflective insights or analysis about the aims and accomplishments of one's actions.	Demonstrates independent experience and team leadership of civic action, with reflective insights or analysis about the aims and accomplishments of one's actions.	Has clearly participated in civically focused actions and begins to reflect or describe how these actions may benefit individual(s) or communities.	Has experimented with some civic activities but shows little internalized understanding of their aims or effects and little commitment to future action.
Civic Contexts/Structures	Demonstrates ability and commitment to collaboratively work across and within community contexts and structures to achieve a civic aim.	Demonstrates ability and commitment to work actively within community contexts and structures to achieve a civic aim.	Demonstrates experience identifying intentional ways to participate in civic contexts and structures.	Experiments with civic contexts and structures, tries out a few to see what fits.

Adapted from Association of American Colleges and Universities (2009). *VALUE rubrics*. Retrieved from <https://www.aacu.org/value/rubrics/>

Notes: