Urban Environmental Education: Preliminary Literature Review

Alex Kudryavtsev, Marianne E. Krasny
Cornell University Civic Ecology Lab, Ithaca, NY
July 12, 2012

Students from Satellite Academy exploring the High Line park, New York City. Photo: Alex Kudryavtsev

INTRODUCTION

This preliminary report is part of the future manuscript "Urban Environmental Education Framework" to be submitted to an education journal. The report was developed through EECapacity, the EPA-funded national environmental education training program housed at the Cornell University Civic Ecology Lab and conducted in partnership with the North American Association for Environmental Education and many other organizations across the US, Mexico, and Canada. The report includes an overview of the literature on urban environmental education, and definitions of urban environmental education offered by educators. We have focused on the academic literature and have attempted to capture the very beginnings of a rich and growing urban environmental education tradition. Thus, we are aware that we have missed some more recent and older writing and programs; this will be addressed in future versions of this report. Note any omissions are not intentional and we look forward to learning more about your urban environmental education programs. We invite you to send us information about what you do, and to share your comments and reflections on this report including other literature that we may have missed. Please also email your own definitions of urban environmental education. Before December 2012, all responses should be emailed to: civicecologylab@gmail.com (subject: "UEE literature").

Urban environmental education is a recognized yet not well-defined term. Educators often use it to describe their programs in schools, community-based organizations, governmental agencies, and museums. However, recent literature has rarely defined urban environmental education, and has overlooked relevant past publications that could advance current environmental education research and practice in cities. To address this issue, first, we reviewed journal articles and book chapters that turned up in a search of the term "urban environmental education" as well as related publications with which we were already familiar. Second, we included definitions of urban environmental education provided by 22 educators from around the U.S. who participated in an EECapacity online professional development course "Environmental Education in Urban Communities" in fall 2011. We hope this information will help you come up with your own understanding and definition of urban environmental education.

In general, this report suggests that urban environmental education builds on diverse approaches, including natural history and science education, youth and community development, environmental justice and activism, human health and urban farming, environmental stewardship and civic ecology. However, the common goal of urban environmental education programs is improving individual, social, and ecological well-being in cities. In the future revisions of this manuscript, we will explore our hypothesis that urban environmental education does not merely focus on environmental knowledge or skills, but also contributes to social transformation and new ways of viewing and managing the urban environment.

Suggested reference: Kudryavtsev A., Krasny M.E. (2012). *Urban environmental education: preliminary literature review.* Cornell University Civic Ecology Lab, Ithaca, NY.

OVERVIEW OF URBAN ENVIRONMENTAL EDUCATION LITERATURE

What is urban environmental education? Researchers rarely define this term, yet many educators use it to describe their programs. Urban environmental education emerged after educators realized that environmental education should include urban settings, and reached out to city residents (e.g., Blaustein, 1968; Glasser, Stapp, & Swan, 1972; Reid, 1970; Schneider, 1968; Shomon, 1969). Although urban environmental education inherited some ideas from nature study and science education, it also adopted and developed new educational approaches and assumptions about the urban environment. For example, it has been influenced by such frameworks as social-ecological systems, community development, sense of place, citizen science, ecosystem services, and environmental justice. This diversity of ideas motivates us to find common principles guiding different urban environmental education programs. In the overview of urban environmental education below, we present themes that emerged from our review of the literature.

City as a Classroom. Long before the term "urban environmental education" was introduced, cities were viewed as a classroom for learning about nature and science, which was assumed to foster care about urban nature. For example, Robinson (1901) suggested that labeling urban trees may contribute to residents' knowledge and a sense of ownership of trees, and to civic arboriculture in cities. Bailey (1911) noted that vegetable gardens and wildlife in urban parks may nurture interest in wildlife and bring children outdoors. In the 1950s, public schools in the Bronx used nature trails through urban forests and housing districts to teach children from kindergarten to upper grades about nature science (Polley, Loretan, & Blitzer, 1953). Around the same time, New York City's Board of Education developed a curriculum "Operation New York" to involve school students in the exploration and observation of the

natural environment around urban schools, including soils, plants and animals, to develop students' appreciation for the natural environment (Board of Education, 1960). Other programs educated students about the environment in cities. For example, Blaustein (1968) referred to Staten Island in New York City where students spent vacation days to observe birds; the Bronx Zoo, the American Museum of Natural History, and New York Aquarium teaching about the local and overseas nature; urban parks in Lower East Side where students developed appreciation for trees; and a summer education program "Youth and the Sea Around Us" involving inner-city children in the Bronx in the exploration of beaches and sailing on a schooner around New York City. Similarly, Hill and White (1969) mentioned High Rock, an outdoor education center on Staten Island in New York City, where inner-city students could watch different animals; and Rillo (1971) proposed that schools can use cities for environmental inquiry, such as evaluating air pollution by counting the number of airplanes taking off, or ecological studies of vacant lots and abandoned buildings.

In the first instance we found of someone actually using the term "urban environmental education," Shomon (1969) described outdoor programs in nature centers that expose urban residents to natural areas in cities to foster environmental awareness or conservation conscience. Along the same lines, Tanner (1974) considered urban nature centers, such as the Wave Hill Center in the Bronx with its nature trails and cultivated gardens, as a mean to provide positive experiences for urban students and help them understand the dependence of cities on other habitats. The same author also mentioned the Audubon programs using the urban environment in urban schools to investigate birds, plants, and insects. Blackwelder (Blackwelder, 1976) referred to urban environmental education in high schools to describe students' independent studies, such as planning hiking trails or evaluating water pollution, which would lead to academic credit for math, photography, or geography.

More recent publications show that learning about ecosystems, biodiversity, or science remains a goal of many education programs in cities. For example, these topics are the focus of outdoor and museum-based education programs associated with Chicago Wilderness, with citizen science programs such as UrbanWatch (Fialkowski, 2003), and with other inquiry-based science activities (Barnett et al., 2006). Researchers also noted that urban soil systems offer direct experience with nature, and can be used to teach about science and inquiry skills (Johnson & Catley, 2009). In addition to improving students' understanding of urban ecosystems, urban environmental education programs engage students in citizen science and urban tree inventories that use and teach about geospatial, bioacoustics, and other technologies (Barnett, Houle Vaughn, Strauss, & Cotter, 2011). At the same time, education programs in cities – such as in public schools or community-based organizations along the Bronx River in New York City – may use urban rivers as classrooms to teach not only about ecology and the urban environment, but also about applied science and history of local communities (de Kadt, 2006, 2011). Interviews with teachers and parents in the Bronx showed that they view after-school programs – in which students build bird nests, core trees, press flowers and test water quality in the city – as a way to connect students to nature in the city, develop respect for nature, link immigrant students to Dominican heritage, and engage them in science (Bruyere, Wesson, & Teel, 2012).

Relevance to Everyday Experiences. Starting in the late 1960s, the idea of relevance to everyday experiences entered urban environmental education. For example, Schneider (1968) emphasized that education about environmental restoration might be more relevant for urban residents than nature study, and that teaching about conservation in terms of wildlife and forest distant from cities may not always be effective with urban children. He questioned the effectiveness of environmental education centers in the country for urban youth, and called for integrating into education issues that impact the everyday life of urban youth such as pollution, city planning, respiratory diseases due to air pollution,

and lack of recreation area. To address these issues, Schneider recommended the following education activities: action projects such as shrub planting on vacant lots or building birdhouses, neighborhood exploration by taking photographs of attractive and negative aspects of inner cities, and monitoring noise pollution in different parts of neighborhoods by tape recording. Further, Reid (1970) advocated for urban environmental education that builds on topics related to children's most common experiences, such as neighborhood planning, waste disposal, water supply, or experiences of growing up in cities. She pointed out that "it is often assumed that taking the city child out of the city and into nature will suffice," but that ecological knowledge per se may seem irrelevant to urban students who deal with the issues of air pollution, open space, and aesthetics of the man-made environment. Supporting these ideas, the Environmental Protection Agency (EPA) Task Force on Environmental Education conducted a survey of urban minority residents and found that "attempts to reach inner city children through traditional conservation education generally fail for lack of interest and relevance," unless such education integrates different cultural manifestations and involves community organizations such as churches, neighborhood councils, and community centers (EPA, 1972). The theme of relevance and environmental justice was articulated by Clark (1972) who pointed out that ethnic minorities in inner cities may be overwhelmingly exposed to environmental hazards, and also that certain racial and class barriers and preoccupation with other burning problems may diminish their interest in environmental issues.

In a more recent example of the same trend, an EPA research report (Verrett, Gaboriau, Roesing, & Small, 1990) again suggested that environmental education should be relevant to citizens of every cultural, ethnic, and socio-economic level, and juxtaposed "traditional methods of education" with "more innovative techniques" that meet specific needs of communities. Echoing earlier writing about urban environmental education, this report emphasized that urban residents might be concerned more with issues of poverty, environmental justice, financial insecurity and violence than environmental issues, and did not view issues such as lead poisoning and asbestos as environmental problems. The authors mentioned that grassroots initiatives, housing agencies, faith-based, justice groups, and other community-based organizations can be providers of education about the urban environment, while simultaneously addressing economic, race, and health issues. Using this information, EPA defined urban environmental education in terms of educating urban minority audiences about environmental risks in their communities, connecting local and global environmental issues, and formulating specific actions that local residents could take to improve their communities. Further, Frank and Zamm (1994) suggested that environmental education topics should be relevant to lives of students who may be concerned about skateboard areas, crime, or child abuse. More recently, the National Project for Excellence in Environmental Education discussed the development of "Guidelines for Urban Environmental Education" (Fialkowski & Williams, 1998), which would prioritize human needs, social issues, and community involvement. Authors argued that the ultimate goal of urban environmental education is to make the urban environment a livable and sustainable system; they also emphasized that this education should build on a community's assets such as knowledge and culture, and contribute to community building. Finally, these researchers argued that connecting urban students to their environment and developing their interest in science requires culturally relevant teaching.

Cities as Integrated Social and Ecological Systems. Whereas the previous theme focused mostly on social issues in urban environmental education, the social-ecological view of cities emphasizes that the urban environment includes both social and ecological factors that are inseparable. For example, Glasser et al. (1972) proposed that one of the assumptions of urban environmental education programs is that the environment itself includes not only biological or ecological factors such as pollution, but also social factors such as poverty, housing, racism, drugs, youth unemployment, recreation and open space.

Interestingly, their model of environmental education combines creating environmental awareness through field trips, meetings with professionals, youth development and community building through students, artwork, school plays, and development of student skills and competencies. Several years later, Howard (1980) proposed that urban environmental education deals with three kinds of environment: natural, built, and social/political/economic. She also noted that many urban environmental educators with a background in biology tend to focus mainly on the ecological aspects of the environment while overlooking built and social aspects. Howard suggested that environmental education about the built environment might benefit from such fields as architecture, landscape architecture, historic preservation, urban planning and psychology. She also expanded the idea of the environment to include social, political, and economic environments that are not observed directly, but deal with such issues as public participation in planning and gentrification. Similarly, UNESCO (1983) proposed that urban environmental education should pay attention to social, cultural and economic factors. Authors mentioned that this education builds awareness, attitudes and skills, but fails to suggest how these factors result in environmental improvements or address other social factors such as poverty. At the same time, UNESCO promoted active learning through street tree mapping, investigating signs in the city, and exploring land use.

In addition to addressing both social and environmental problems, urban environmental education promoted the social-ecological view of the urban environment itself. Relevant publications tend to blur the distinction between natural and human-dominated ecosystems. An example is Dowd's (1978) urban environmental education curriculum guide for sixth-grade teachers in New Jersey. Teachers were supposed to use the urban environment to "help students understand their physical, social and cultural interaction with their environment." The curriculum included such topics as family, natural resources, urban wild nature, air pollution, health, nutrition, and town history; emphasized architecture, parks, and designed gardens; and encouraged a positive outlook on the urban environment. Suggested teaching approaches included discussions, environmental actions, invited speakers, films, and field trips such as to Port Authority, Newark Airport, Bronx Zoo, Metropolitan Museum of Art, and Seven-Up Bottling Company where students would learn about different environmental aspects of the soda bottling industry. Further, in a handbook for environmental educators, Carter (1979) defined urban environmental education as "detailed study of the city from all points of view." In Carter's view, this education in schools focuses on teaching about biophysical and social factors such as urban microclimate, energy conservation, ecology, built environment, sense of location, organizations, and the role of individuals in communities. This type of education combines in-class teaching, formal presentations, learning through art, field-based traffic surveys, participation in cleanups, environmental restoration, and creating school gardens.

More recently, researchers again emphasized that "urban environmental education builds an understanding of cities as complex systems that blend nature and culture, and ecology and society" (Williams & Agyeman, 1999). The idea of viewing social and ecological phenomena as intertwined components of urban social-ecological systems is further expanded by Krasny and Tidball (2009a; 2010) who view urban environmental education as part of urban social-ecological systems and as a factor fostering resilience of these systems. The systems view of cities is also pronounced among several educators in urban environmental education programs in New York City interviewed by Lauber et al. (2012). In sum, one theme in urban environmental education is teaching about cities as whole, not as separate natural and human-related phenomena.

Cities as Nature. Another emerging trend in urban environmental education is blurring the distinction between the natural and urban environment, and viewing cities as ecological places where the natural

environment is worthy of protecting. Researchers claimed that the urban environment has been relatively ignored by environmental education (Butterworth & Fisher, 2000; Saveland, 1974), that cities are often viewed as existing outside nature (Spirn, 2003), and that presenting the "natural environments as models of how reality should be arranged" devalues the urban environment (McClaren, 2009). However, using interviews, Wals (1994a, 1994b) found that inner-city adolescents in Detroit can connect to and appreciate urban nature although opportunities to experience nature in their communities are limited. Further, Beatley (2011) suggested that environmental education and recreation programs in New York and other cities can provide nature-based recreation and learning activities in cities, which are valuable on their own and might also inspire environmental stewardship. In addition, describing "education for urban conservation," researchers proposed that recognizing nature as part of urban life may positively influence how people manage these landscapes (Rohde & Kendle, 1997). In fact, urban environmental education programs can indeed develop such ecological place meaning among youth, i.e., help them see cities as ecologically valuable places (Kudryavtsev, Krasny, & Stedman, 2012; Kudryavtsev, Stedman, & Krasny, 2012).

Fostering Environmental Stewardship. In addition to learning about social and ecological phenomena, urban environmental education has long been viewed as a tool fostering environmental stewardship in cities. For example, Gill and Bonnett (1977) proposed that education plays a role in preserving urban wildlife by making wildlife more accessible to the public through involving residents in the management of natural areas, and establishing interpretive centers in less developed sites. Later, EPA suggested that the goal of urban environmental education is responsible environmental stewardship (Verrett et al., 1990). A number of publications even described restoration-based education in cities. For example, educators in the Bronx view restoration-based education in the inner-city as a tool to access natural sites in the city, communicate the value of urban natural areas to the community, and plant native plants that provide habitat for urban wildlife (M. J. Tanner, Hernandez, Hernandez, & Mankiewicz, 1992). These educators also assumed that hands-on restoration-based education stimulates urban students' academic achievement, and indirectly involves parents in recycling and composting. Youth in community development organizations – e.g., Rocking the Boat, and Youth Ministries for Peace and Justice located in the Bronx – may become participants of hands-on stewardship such as restoration of Bronx River habitats, cleanup of brownfield sites, as well as advocacy programs, which, in collaboration with other organizations and community members, turn large post-industrial blighted areas into green spaces (Parrilla, 2006).

Along the same lines, Frank and Zamm (1994) proposed that urban environmental education should stimulate citizen involvement by engaging students in physical improvement of natural areas in the city, beautification projects, tending community gardens, community actions such as distributing flyers and raising money for environmental projects, as well as inquiry projects such as monitoring subway and helicopter noise, deficient fire hydrants, and water quality in urban rivers. Further, urban ecological restoration itself can be viewed not only as the goal of education, but also as a tool for education about urban biodiversity (Ingram, 2008). Similarly, Platt (2006) views urban environmental education programs as one of means and goals of ecological cities or green urbanism. Finally, Tidball and Krasny (2010) advanced the environmental stewardship agenda of urban environmental education by proposing that environmental educational programs in cities and elsewhere can be nested in civic ecology practices such as community forestry or community gardening, thereby contributing to ecosystem services in cities. In sum, since the 1970s urban environmental education has been viewed as an integral part of urban environmental stewardship and restoration.

Youth and Community Development. The literature also suggests that urban environmental education may help young people to enhance their skills and abilities to successfully navigate life. Perhaps this goal grew out of after-school and summer programs, which often focus more on youth and community development than on environmental goals per se. EPA considered that one task of urban environmental education is educating youth-at-risk, increasing their self-esteem, creating positive attitudes towards learning, and reducing dropout rates (Verrett et al., 1990). Further, Frank and Zamm (1994) called for using positive characteristics such as resilience of urban learners as not only a goal of environmental education, but also an asset to build on: "Despite adverse conditions, many urban children grow into healthy, responsible, productive adults. These 'resilient' children display characteristics of social competence, autonomy, problem solving, and a sense of the future."

In a related thread of research, scholars proposed that children could positively contribute to urban design, decision-making, and community development. In particular, the international program "Growing Up in Cities" involves urban youth in participatory evaluation of their environment, and influencing environmental, social, and equity-related decisions affecting their lives (Chawla, 2001; Driskell, Bannerjee, & Chawla, 2001; Lynch, 1977). In addition, engaging people in shaping their future by collaborative, life-long learning of workplace and communication skills is a characteristic of urban ecosystem education (Hollweg, Pea, & Berkowitz, 2003). Similarly, some researchers proposed that urban environmental education enables city residents to articulate their environmental preferences, and participate in decision-making, collective advocacy, or planning related to the urban environment (Butterworth & Fisher, 2000). Finally, community-based organizations such as the abovementioned Youth Ministries for Peace and Justice (YMPJ), focus on community organizing and youth development along with remediation of urban rivers and brownsites (Kelley, 2005). For example, students in YMPJ after-school programs are mapping community environmental assets and needs, cleaning up the Bronx River, and also working on community health, social justice, art, and community organizing projects.

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We assume that most urban environmental education programs and related curricula incorporate more than one abovementioned trend. For example, Garden Mosaics learning activities in community gardens combine science learning through inquiry activities, youth development through intergenerational learning, and fostering environmental stewardship through urban agriculture (Krasny & Tidball, 2009b). We also acknowledge that other researchers could organize the urban environmental education literature differently. Also, some themes – such as integrating the cultural diversity that exists in cities with environmental learning; programs and curricula such as What's Good in My Hood, Project Learning Tree, Wet in the City, Celebrate Urban Birds, the Audubon Society's Together Green, and The Nature Conservancy's LEAF program; and relevant social media sites such as the Urban Environmental Education Collective, Outdoor Afro, and the NYC Latino & African-American Enviro-Educators – will be reviewed in future drafts of this paper.

Despite these limitations, by identifying and discussing trends in urban environmental education, we hope to help educators understand their own assumptions about the urban environment, and reflect on the goals of their programs. We also hope to stimulate a broader discussion of trends in urban environmental education. We invite you to be part of the process of building our knowledge base by sending your thoughts, program descriptions, and suggestion before December 2012 to: civicecologylab@gmail.com (subject: "UEE literature"). You can also share your ideas about urban environmental education through the Urban EE Collective page on Facebook (http://www.facebook.com/groups/urbaneecollective).

DEFINITIONS

Below are definitions of urban environmental education, which were provided by educators in fall 2011. In the future revisions of this report, we will analyze these definitions along with several video interviews of educators from different types of urban environmental education programs. The definitions are original, not edited.

1.	Urban Environmental Education (EE) is building community relationships to environmental, social, and educational resources. The foundation of EE is in non-formal learning environments that position community assets as the essence of the program. These community assets create entry points for cross-curricular integrations, community organizing, and inter-generational learning to root programs in ecologically and socially just practices.
2.	Urban environmental education is a place-based, action-oriented approach to learning about urban natural and built environments, how humans affect its systems and processes, and how communities are in turn affected by the environment. Urban environmental education includes non-traditional settings such as parks, vacant lots, and brown fields; acknowledges and utilizes multiple and diverse social, cultural and economic perspectives; and focuses on civic ecology through citizens' involvement in individual and group action-oriented stewardship projects.
3.	Teaching an audience about the built and natural environment of an urban setting, how they can interact with the various elements of the environment, and what they can do to make a higher quality of living (health, learning, etc.) for the environment's inhabitants.
4.	Urban environmental education is a dynamic instructional process designed for diverse, high density populations that imparts basic knowledge and skills related to ecosystems, social justice and civic engagement for the purpose of sustaining safe, healthy, equitable and vibrant city communities.
5.	Urban environmental education is a process of learning about and experiencing the built and natural environment through hands-on and participatory education. Urban environmental education considers environmental topics through the lens of environmental justice, economics, religion, politics, social issues, and cultural diversity, among others.
6.	Urban environmental education is the process of learning how humans and the man-made and natural elements of the urban ecosystem affect each other. It is also understanding how these relationships, whether positive or negative, can be influenced for the betterment of the community.
7.	Urban environmental education is the process of teaching and learning in and for the urban environment. Urban environmental education takes into account the aspects of human and natural systems that are unique to urban settings; density, diversity, wealth, poverty, innovation, injustice, large public school systems, institutes of higher learner, distance from agricultural areas, closeness to urban parks and gardens, waste water processing, drinking water contamination, and many many people. These aspects combine to create environments specific to urban areas; areas rich with opportunities for environmental education.
8.	Urban environmental education is a process that helps people to understand the interconnectedness between nature and community in the urban environment. It invites the participant to rethink their places and spaces by redefining them as ecosystems. It is a dynamic, multicultural and integrated learning process that grows people's knowledge of how the natural world works to sustain life on Earth, promotes awareness of human impact in natural and social systems, and encourages the learner to become an active participant in their environment for the purpose of sustaining healthy, equitable communities relevant to the natural and man-made

resources of a place.
9. A process by which participants develop an understanding of the diverse urban matrix of biological and human-built environments, and the interconnectedness between people, cultures, and nature. Through a multicultural, experiential, and place-based approach, urban environmental education encourages learners to think critically and to become actively engaged in exploring issues and making informed decisions related to the environment.
10. Urban environmental education is the process of educating people about the complex eco-social systems that comprise urban areas. This includes both natural and built environments, accounting for the ecology, culture, politics, and socioeconomic drivers of urban areas, in an effort to help build a sense of place, multicultural and ecological literacy, and foster civic action and pro-environmental behavior.
11. Urban Environmental Education is a life-long interdisciplinary process that develops attitudes and value systems necessary to understand and appreciate the interconnectedness among people, culture, and their natural and built environments and should occur through community-based partnerships which empower all people to promote environmental, economic and social well-being.
12. Urban EE seeks to empower historically marginalized communities around issues of local sustainability. It examines ecological principles within urban contexts in order to address some of today's most pressing concerns around water, land, and energy use. As a pedagogical tool, Urban EE serves to inspire students in engaging and meaningful educational experiences that connect directly with their daily realities.
13. Urban environmental education celebrates urban communities and urban environments. Its foundation is built from the assets of urban communities and the special opportunities that urban environments offer. It integrates natural, physical, and human communities, and focuses on empowerment.
14. Urban Environmental Education is a process through which people living in urban environments can connect with each other; learn about the natural environment; and gain resources and inspiration to care for and improve their neighborhoods.
15. Urban Environmental Education teaches environmental concepts and principles within an urban setting. The ultimate goal is to teach environmental responsibility and stewardship within ones own community and all over the world.
16. Urban Environmental Education (UEE) is placed-based education that helps people explore, learn about, protect, connect to, and advocate for the built and natural environment in which they live. Good UEE lessons should include social and political issues of equality, equity, and diversity as well as traditional lessons of conservation, nature exploration, science and ecology. Learning should be experiential, combining concept and theory with technical skills to help participants address the unique environmental issues in their community.
17. Urban Environmental Education discusses the interconnectedness of environmental, economic, and social issues. It is place based; allows for cultural and age diversity and sensitivity; connects students to local, accessible outdoor natural experiences; includes intergenerational education; recognizes the wealth of natural experience possibilities in the urban locations; includes historical and current environmental inequities; and seeks to engender stewardship while empowering students to recognize the importance of “green” in urban settings.
18. Urban environmental education serves to enlighten a citizenry of people to the role they play in the community in which they are inevitably a part of. Awareness of self as part of the ecology of said community is the foundation for understanding of that role and the effect that one's individual acts/decisions will have on the success or failure of the community as a whole.

19. I believe that urban environmental education encompasses the resources that exist within the landscape of the urban environment. To diligently provide a foundation for environmental education we must utilize the peoples that live and work in a space to incorporate the resources that they feel are important in the education of the masses within that environment.
20. Urban environmental education is culturally and developmentally appropriate environmental education in context of a complex urban eco-social system.
21. The practice or study of interaction/s, impact/s or relationship/s between man-made built systems, humans and the natural world in urban areas. Secondly, to encourage social, cultural and economic behaviors to engage in civic accountability and promote earth stewardship.
22. Urban EE explains the presence and importance of ecological principals and systems that are unique to built environments, exploring their relationship and relevance to the diverse populations that live in urban areas.

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