

Perspectives on Environmental Education:

Curriculum, Instructor Guide, and Materials

October 10, 2012 John Fraser & Rupu Gupta The following publication was produced in 2012 under the original corporation name of New Knowledge Organization Ltd. On September 1, 2019, NewKnowledge became Knology.



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Overview

This packet is designed as a starting point for educators to think about their role in the field of environmental educators (EE), and to appreciate the many views and perspectives on EE held by their colleagues. The results of a research study conducted as part of the EECapacity project revealed five ways of thinking about EE, and will be the basis for the class activity. The students will review these perspectives on EE to examine their own beliefs in relation to prevailing ones in the field. Instructors can choose to use the handout with the research results to have students situate themselves within the EE field or discuss the perspectives that the study highlighted.

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Perspectives on EE Card Sorting Exercise & Lesson Plan Instructor Guide

 Audience
 Professionals working in the field of environmental education (EE) attending classes for professional development

 Purpose
 To facilitate EE professionals' understanding of how they conceptualize and think about EE and to help them appreciate the various perspectives on EE. Through this classroom exercise, students will:

- 1. Critically review different perspectives on the field of EE
- 2. Compare the perspectives with their own
- 3. Acknowledge and value the multiple perspectives on EE

Activity Students will participate in a card sorting activity. Similar techniques have been used in social science research to examine people's opinions about topics on which there are multiple, competing perspectives. Specifically, it is possible to identify commonalities and themes in the ways people think about a topic, for example beliefs about dolphins (Sickler, Fraser, Webler, Reiss, Boyle, Lyn, Lemcke, & Gruber, 2004). Similarly, considering the range of environmental educators' background experiences and work settings, environmental education can have strikingly different connotations. The card sorting activity can thus be a powerful tool to identify overlapping views on EE, a field with many, often disparate perspectives.

An additional value of the card sorting exercise is that it allows the sorter to examine in depth, his/her beliefs on the topic. As a class activity, environmental educators will get the opportunity to rethink, reevaluate, and clarify their thinking about the field of EE. They will read a set of 35 statements (each on a separate card) about EE and compare it with their own beliefs. These statements were obtained through an intensive process of reviewing the literature on three distinct perspectives prevalent in EE – traditional, contemporary urban, and community focused. Students will critically examine the statements and identify those that are <u>most</u> like how they think of EE, those that are <u>least</u> like how they think of EE, and those about which they are <u>neutral</u>.

To facilitate students' learning through this activity, it is recommended that the instructor do the card sorting activity before introducing it to students.

Outcomes By completing the activity, students will be able to:

- 1. Articulate their insight on EE in written form (essays)
- 2. Discuss diverse perspectives on EE in class (after completing the card sorting activity)

Class Deliverables Students will hand in the following:

- 1. Summary sheet (recording their views on EE)
- 2. Two essays elaborating and discussing:
 - i. The statements they think <u>most</u> like
 - ii. The statements they think <u>least</u> like

(Continued)

Grading	 Students will be graded on the following basis: Essays
Materials	 Students will need the following: Instructions – Detailed step-by-step guide to the card sorting activity. Statements – 3 pages with 35 statements about environmental education. Summary sheet – Containing a table for students to record how they sorted their statements. Reflection – Students will write two essays (each 500 words maximum) to share with their teacher and other students.
Research scope	This class activity is designed as a starting point for environmental educators to think about their role in the field of EE, and to appreciate the many views and perspectives on EE held by their colleagues in the field. The results of a research study conducted as part of the EECapacity project revealed five ways of thinking about EE, and will be the basis for the class activity. The students will review these perspectives on EE to examine their own beliefs in relation to other prevailing ones in the field. Instructors can choose to use the handout with the research



the study highlighted.



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results to have students situate themselves within the EE field or discuss the perspectives that



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Perspectives on Environmental Education

The EPA-funded EECapacity project housed at Cornell University has conducted a research study to examine the multiple perspectives in environmental education (EE). A group of 41 environmental educators from the states of Florida, New Jersey, New York, North Carolina, and Wisconsin, from urban, suburban, and rural areas in settings and scales as diverse as universities, non-profits, state, and community organizations participated in the study.

A research method called "Q methodology" was used in this study because it is particularly helpful in examining people's subjective viewpoints on complex topics like EE. This method begins with the collection of a small number of distinctly different individual perspectives or statements about the topic being studied. Individual respondents are then asked to react to the statements by sorting them according to personal relevance. The statements are the "ingredients" that the researcher believes respondents need to fully portray the complexity of their perspective, in this case their "stew" of thoughts and feelings about EE. People are asked to assign relative ranks to each statement, according to how important each statement is to how they think. This is called the "Q sort." The researcher then analyzes the Q sorts to discover patterns across the individuals' responses. In uncovering these patterns, the researcher is able to compose the social perspectives embodied in people's thinking on topics like EE.

Q methodology is different from surveys in that it looks at the respondents' reactions to the statements as the variables, while the statements are constant. The key to the success of Q methodology lies in the careful selection of an appropriate sample of Q statements, and then the equally careful selection of an appropriate group of people to sort the statements according to their personal views and perspectives.

For this study of the multiple perspectives surrounding EE, a set of approximately 110 statements were obtained from various EE sources. A team of researchers examined these statements in great detail and consolidated them into 35 statements. The group of 41 environmental educators described above then sorted a set of 35 cards each, to reflect and rank each individual's personal beliefs on EE.

Analysis of the card sorts by the 41 participants revealed five overlapping ways of thinking about EE. While each perspective highlights distinct priorities and values, similarities across them are also apparent. Each of the five perspectives is described below. The first perspective, "Sustainable living for all nature," is presented before the others because it is the most general, reflecting a perspective that encompasses most others in the EE field. The subsequent four are more specific, and presented in the order in which they added to the more general perspective. All four have some representation in prior literature about the purpose of EE.

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Perspective #1: Fundamental Coexistence

For those identifying with this perspective, the aim of EE is encouragement of sustainable lifestyles through pro-environmental behaviors that positively impact human and non-human nature. This perspective acknowledges that people across socio-economic boundaries share responsibility for achieving this goal, aligning it with the visionary principles articulated in the Earth Charter (2001) in its broadest terms. This perspective accords respect for life in all its forms and diversities and strives for the protection of all life. A stark emphasis on protecting the environment for the greater good rather than for human-centric goals alone is evident, yet places lower emphasis on environmental justice despite accepting socio-economic survival as a priority. A distinguishing feature of this perspective relative to others is that it underscores sustainable human lifestyles, while downplaying one that believes EE serves an instrumental purpose, such as in teaching about the scientific process or in creating scientifically literate citizens. It is similar in scope to the Earth Charter, providing what Gruenewald (1994) refers to as a "symbolic standard" against which environmental actions can be promoted. This perspective suggests a basic acknowledgement that sustainability of planetary systems is the underlying goal of EE. This perspective is generally accepted as the basis on which the other perspectives build but each places priority on another unique focus that they believe helps to achieve this broad goal.

Perspective #2: Spiritual Instrumentalism

The second perspective appears to place emphasis on EE as a way to facilitate a greater sense of spiritual connection among fellow living beings and appreciation of all Creation. Aligned with the way Cohen (1990) conceptualizes humans' relationship to nature, a sensualist approach is emphasized here, whereby humans' connections with nature transpire by engaging all of the human senses to understand the symbolic relationship between nature and human beings; thus a greater understanding of being intrinsically connected to nature is manifest. The three highest ranked statements suggest that "belongingness" within nature is embedded within a broader conceptualization of connections with the natural world as a way of experiencing God's creations. Unlike the other perspectives with a primary focus on humans' metaphysical relationship with nature, this perspective also emphasizes the importance of nurturing and developing critical thinking and life skills. Despite the unusual dual goal emphasizing the metaphysical and the importance of youth education embedded in this perspective, an overlap between the proponents of the phenomenological and the practical is advocated as essential to EE. Thus, an emotional connection with nature is considered a prerequisite to nurturing environmental concern and action. Unlike the other perspectives, the emphasis is placed on a spiritual, emotional connection with nature that facilitates valuing God's Creation, whether in human or non-human form. However, the perceived instrumental objective of EE is geared more towards developing the next generation's environmental stewardship and critical thinking skills, and not as a tool for human empowerment. The distinction is noteworthy, since the instrumental and emancipatory approaches are each associated with different goals (behavior change and critical thinking skills that lead to and community action.

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Perspective #3: Moral Stewardship

This perspective emerged as the closest approximation of the historical view of EE as "outdoor learning." It emphasizes the human capacity for a profound sense of connection with different aspects of nature that support human ethical and moral responsibility to tackle environmental problems. The results appear to be well aligned with Iozzi's (1987) conceptualization of EE, where deep, personal norms to act in morally appropriate ways are related to universal values (emphasizing human and environmental welfare), beliefs about humans' relationship with nature, and environmental actions (such as consumer behavior, willingness to sacrifice, environmental citizenship, and participation in public demonstrations). This perspective aligns with the value basis of environmentalism described by Stern, Dietz, Kalof and colleagues in a variety of their publications. It also shares attributes of EE highlighted in Cohen's (1990) approach where humans are "sentient beings" for whom self-recognition as part of nature is a necessary prerequisite for taking action to protect it. This perspective emphasizes the humanist, ethical aspect of environmental stewardship and connection with nature, whereby all forms of nature are considered equal.

Perspective #4: Fostering Skilled Community Actors

This perspective places emphasis on emancipating the politically active, with EE considered a means to empower communities to actively participate in addressing local needs. This perspective appears to blend Bullard's (2005) community empowerment as a means of advancing ecojustice for those directly impacted by environmental degradation, and Jensen's (2004) action competence frame that emancipates students through skill development to empower selfefficacy as social actors. This perspective highlights EE as a tool for fostering critical thinking skills that motivate citizen action to address locally relevant environmental problems. Unlike a focus on skill development serving an instrumental purpose for the learner, the cognitive skills emphasized in this perspective are considered instrumental for spurring concerted action toward achieving community well-being. A longer-term focus on the community goals is evident, as current actions are also intended to foster environmental stewardship in children. This perspective appears to be the most closely aligned with the environmental justice movement and the ways that it addresses the impact of socio-cultural hierarchies on widely contrasting experiences of living, one that Cole (2007) claims is excluded from mainstream EE discourses. However, unlike Cole's contention that the environmental justice movement widens the cultural lens through which 'environment' is perceived, this perspective does not explicitly acknowledge widening beyond community. In keeping with the first overarching perspective denoting a focus on sustainability, the active citizenry in this perspective is inclusive, not confined to a disenfranchised community, and more focused on collective actions of any potential group.

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Perspective #5: Social-Ecological Ethicists

The fifth perspective depicts connections with nature that strongly acknowledge that nature in every form has the same rights as are accorded to humans. As such, a meta-physical understanding of the commonalities across nature is emphasized, downplaying an action-oriented stance to solve environmental problems. The commonalities across diverse forms of nature, and across different contexts seem to be emphasized, and are manifest in different ways. It acknowledges a fundamental bond between all forms of life, envisioning non-human nature as integral to justice, and expanding ethical concepts of fairness to the environment as well (Clayton, 2000). Moreover, human-centric connections focus on cognitive processes that are valued for facilitating understanding of natural systems, collectivist approaches upholding unity among people working towards shared goals, and commonalities across demographic boundaries. It should be noted that unlike the fourth perspective (Fostering Skilled Community Actors) this perspective seeks to foster a psychological bond across disparate groups of people, to fortify tenuous affiliations. This perspective seems most closely akin to E. O. Wilson's (1984) theory of biophilia, an effort to recapture the sense of biological continuity between humans and other living beings as the basis for a new form of moral reasoning that assumes a basic striving to care for and protect all types of life.

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Perspectives on EE Card Sorting Exercise Instructions

One person working alone in one session should complete the first part of this activity. The goal is to explore your personal views on environmental education (EE), and to accurately capture how you think about working in the field. Students should allow 15 minutes to do the sorting activity, and then enough time to write two short personal essays after they have completed the sorting task. After completing the sorting activity and the essays, students will be invited to share their results and engage in a discussion about what they learned.

Materials Needed

• Statements sheet

- Pre-printed summary table
- Reflection sheet
- A spacious flat surface, like a tabletop

At the end of the sorting activity, you will have organized all the statements in a pyramid format to match the summary table diagram.

Instructions

- 1. Print out the statements sheet (one-sided) and the summary. You may wish to print out the pre-formatted reflection sheets, or keep them on a computer.
- **2.** Cut each statement out of the paper following the lines so each numbered statement is on a separate card. The card number is below the statement.
- **3.** Put all the statements into a pile and hold them like a deck of cards.
- **4.** Sort the cards into two piles:
 - The first, with statements that are more like how you think about EE
 - The second, with statements that are less like how you think about EE
- **5.** Place the first pile on the table as if they are on the rightmost column of the sorting table (MOST LIKE HOW I THINK), and the second as if they are on the leftmost column (LEAST LIKE HOW I THINK).
- **6.** Starting with the right pile, sort the cards into more piles, so that the 2 statements that are <u>most</u> like how you think are on the <u>rightmost</u> column and the rest are arranged in descending columns reflecting the degree to which they are slightly less appropriate to how you think about EE.

(Continued)

Instructions (cont.) 7. Do the same with the left pile, so that the 2 statements that are <u>least</u> like how you think are on the <u>leftmost</u> column and the rest arrange toward the right in degrees that are more like how you think, until they meet up with the other set of cards in the pyramid.

- **8.** You can now rearrange the cards in the columns so they reflect whether they are more or less how you think about EE until you are happy with the arrangement.
- 9. The cards in the center column should be the ones you feel are most neutral.
- **10.** *Be sure that each rectangle in the table has only one card representing it. The order of the cards in each column does not matter.*
- **11.** When you have one card representing each space in the summary table, examine your order carefully and consider what this organization might mean. Think about the statements and ask yourself how accurately the placed cards reflect your views on environmental education?
- **12.** If you feel your opinion hasn't been captured properly, please go ahead and rearrange the cards until you are satisfied that they reflect your views accurately.
- **13.** Once finalized, write the number of each card into the table on the summary sheet to share with others.
- **14.** Once you have completed transcribing the numbers into the table, take a few minutes to respond to the essay questions in the reflection sheet.
- 15. You can now share your summary and reflections with your instructor.

Following completion of this task, students will be asked to read one another's essays. We will have a discussion about how students' views may be different and how we understand what Environmental Education can be.





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Cut cards into individual statements along the thick lines so each card has both a statement and a number (below the statement). Then refer to sorting instructions.	You can only learn about nature by seeing it change over time in your neighborhood 5	Outdoor learning helps build healthy families	It's using nature to reconnect people to their spiritual center 7
Nature learning teaches basic life skills	Helps people with little or no access to nature become free thinkers	Learning about nature creates more positive, nurturing, emotionally healthy communities	Promotes the understanding that everything is connected to everything in nature
34	19	16	9
Nature helps bring all of society together to solve the problems we share	Putting students into challenging environments like the woods or mountains helps them develop good problem solving skills	Getting our children to be the next environmental stewards	Promotes active citizenry, motivating people to solve complex environmental problems
17	35	28	21

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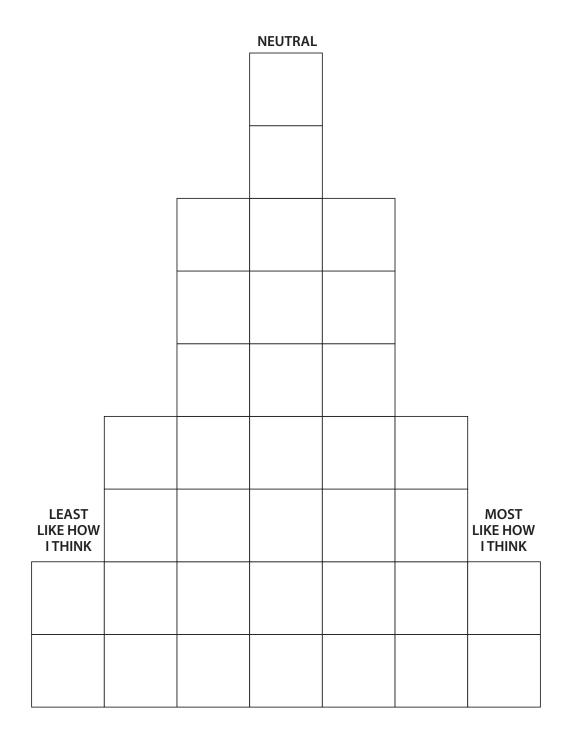
Perspectives on EE – Statements (page 2 of 3)

Nature teaches us to love and respect one another like a good family	Primarily to teach people how to live sustainably	Learning to protect the parts of the environment that nurture us as people	Once you know how the natural world works, you understand systems better
18	1	25	11
It's the best way to teach about how the scientific process works	It's getting kids outside to discover nature at their doorstep	Motivating people to take local actions to solve global problems	Nature education is the path to help us appreciate God through his work
13	6	30	10
We can use nature experiences to help people from cities tackle their environmental problems	Nature teaches that we're all in it together, geographically, socially, and financially	It's teaching good clean, healthy recreation	Teaching that nature has the same rights as people
29	20	24	8

Restoring nature is the best way to bring communities together 15	Exposing students to the outdoors so they don't fear nature 23	Nature learning is the best way to teach about protection of wild things, even if they aren't cute 31	It's the only way we're going to fix the problems created by people 27
It's more important to save endangered wildlife than to worry about a few more people	Primarily to teach people they must protect ecosystems	The best way to produce a scientifically-literate society	lt's about helping develop good thinking skills
3	2	12	14
Nature is the best way to teach leadership	Motivating people to fight for their rights to clean and healthy places to live	Making school curriculum relevant by connecting to where youth live	Fostering the commitment to solve environmental problems
33	22	4	32

Summary Table

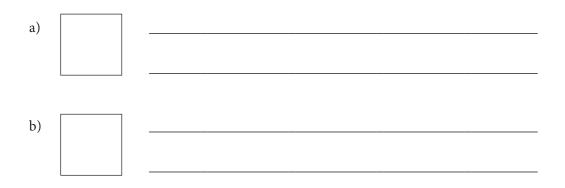
Fill out the table below with one number in each square corresponding to how you sorted the cards.



When you have completed this table, move on to completing your reflections on how you think about the cards on both sides of the table.

Reflection Sheet 1 MOST LIKE HOW I THINK

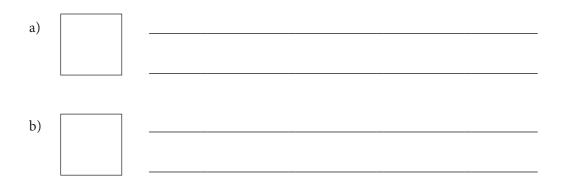
1) Please write out the number and full statement of the two statements that are MOST LIKE how you think:



2) Write an essay in the space below (500 words max) on the two statements that are MOST LIKE how you think about EE. Elaborate and explain the reasons you chose these statements.

Reflection Sheet 2 LEAST LIKE HOW I THINK

1) Please write out the number and full statement of the two statements that are LEAST LIKE how you think:



2) Write an essay in the space below (500 words max) on the two statements that are LEAST LIKE how you think about EE. Elaborate and explain the reasons you chose these statements.





Behaviors

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