

**Environmental Education Resource Review
Self-Review Worksheet**



Submitter Name: T. Trial

Resource Name(s): Colorado Outdoor Odyssey: A Tool Kit for Environmental Work & Learning;

Name of Organization: Resource Review Trial

Did you develop this resource? No Who is the intended audience? Adult;

Background Information (It may be useful to complete the rest of the self-review and then return to this section.):

General Comments (This space should be used to include general information about your resource that may be useful to reviewers, but is not specifically addressed by the review criteria):

* We will use the acronym COO – for Colorado Outdoor Odyssey! - This Colorado-specific curriculum was adapted from outstanding, existing curricula & where there were identified gaps, some new activities were developed by Dr. Lyn Fleming! The new activities were developed using existing protocol for other curricula (e.g., PWILD, PLT, WET, FLP), which are also from where at least 85% of this curriculum was adapted.

Planning and Development Considerations (Describe your efforts to provide for the following key planning considerations):

Needs Assessment (e.g. identifying/assessing/analyzing particular audience or community need or environmental issue; internal/external inventory of existing or similar EE resources, etc.):

- This curriculum was developed based on a demonstrated need for youth corps working on public lands in Colorado. Specifically, when these corps work on Colorado State Parks and Division of Wildlife projects, they are required by contract to spend at least 10% of this paid time doing environmental education. Therefore, this curriculum was designed as the main tool to be used for EE time. Using mainly one curriculum also allows for better evaluation... are the youth learning what we want them to learn.

Planning and Development (e.g. analyzing the scope and structure of the EE resource as an organizational priority; promotion and marketing considerations; developing partnerships and collaboration; addressing staff training needs, etc.):

- There were numerous planning mtgs. Involving lots of partners & experts to determine the content of this curriculum. Unfortunately, that is not written up anywhere. It is alluded to, however, on pg. iv and v under the heading "Laying the groundwork" (visionary mtg). We also relied heavily on NAAEE's Guidelines for Excellence (1) Material Guidelines and (2) K-12 Learner Guidelines in its development and the development of the attached "2003 EE Learning Objectives & Required Learning Activities for Four-Week Programs" and "Eight-Week Programs."

Quality Assurance and Appropriateness (e.g., pilot testing; built-in and/or objective evaluations for effectiveness; cost/benefit analysis; applying evaluative information to improve the EE resource; evidence that environmental literacy has been enhanced; etc.):

General Instructions:

Indicate whether or not there is evidence of each Guideline, then based upon those results decide whether or not the Key Characteristic is an attribute of the EE resource. Provide supporting evidence (e.g. page numbers, references to specific activities or sections, etc.) of the guideline, or simply indicate "not present" if no evidence can be presented. If the guideline was consciously avoided or irrelevant to the EE resource, indicate "Not an objective of the resource design" and provide the justification for that decision.

Note: It is NOT expected that your resource will incorporate every key characteristic, guideline, and indicator listed on the following pages. The section "What to look for" includes indicators that are examples to consider as possible ideas for your supporting evidence. You are not expected to provide evidence for each indicator listed.

KEY CHARACTERISTIC #1 FAIRNESS AND ACCURACY

Environmental education resources should be fair and accurate in describing environmental problems, issues, and conditions, and in reflecting the diversity of perspectives on them.

Guideline 1.1 Factual Accuracy Environmental education resources should reflect sound theories and well-documented facts about subjects and issues.

What to look for:

- Sources of factual information are clearly referenced.
- Data are drawn from current and identified sources of information. (Knowing the source of information can aid in judging its trustworthiness or identifying possible bias.)
- Factual information is presented in language appropriate for education rather than for propagandizing.
- Information comes from primary sources-which provide context, documentation, and explanation - rather than from reviews or newspaper articles that simply provide bits and pieces of arguments or evidence.
- A range of experts in the appropriate fields reviewed the resources or participated in their development in another way. The resources provide a list of the people involved in development and review, and their areas of expertise.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

Many activities in COO, 85% or more, are adapted to be Colorado specific from the Projects: WILD, FLP, PLT, and WET, which were reviewed by technical reviewers. New activities were reviewed by Colo. State Parks & Division of Wildlife (DOW).

Guideline 1.2 Balanced presentation of differing viewpoints and theories Where there are differences of opinion or competing scientific explanations, the range of perspectives should be presented in a balanced way.

What to look for:

- Proponents of differing viewpoints reviewed the resources or helped develop them in another way. The resources list the people involved in development and review, and their organizational affiliation.
- Opinions or policies of an agency or organization are clearly identified.
- Scientifically and socially credible positions and explanations are covered thoroughly, while other positions are also mentioned. (Balanced presentation does not mean giving equal time and space to every opinion or perspective, but treating major positions fairly.)
- Resources communicate areas of consensus among scientists or other experts.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

Logos of involved people on front page.

Guideline 1.3 Openness to inquiry Resources should encourage learners to explore different perspectives and form their own opinions.

What to look for:

- Educators are given tools to use in helping learners to form and express opinions about competing theories.
- Exercises are suggested for helping learners explore personal and societal values and conflicting points of view within the context of the issue.
- Resources encourage an atmosphere of respect for different opinions and an openness to new ideas.
- There are exercises that encourage learners to understand the opinions of their peers.
- Resources suggest projects that encourage learners to collect and analyze their own data and to compare those data to similar data from other places.
- Activities encourage learners to become discerning readers and observers of media coverage of environmental matters.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

Whole sections designed for this purpose – Journal & Discussion Sections pgs. 11-28 Include long-term projects & Group Investigations.

Guideline 1.4 Reflection of diversity Different cultures, races, genders, social groups, ages, etc., are included with respect and equity.

What to look for:

- Resources contain descriptions and illustrations that depict people of various races, ethnic groups, genders, and social groups in a respectful and equitable manner.
- Where such variety is appropriate, the content and illustrations depict rural, suburban, and urban settings.
- If the resource is designed for nationwide use, the content and illustrations reflect geographic differences appropriately.
- Experts in multicultural education and members of historically under-represented groups, such as women and people of color, have been involved in the development and review process.
- Readings and additional resources that present concepts and perspectives from different cultures are offered.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

Handled through style and presentation of activities, not through illustrations – not part of materials. On pg 300 lists 5 activities that deal with cultures.

Indicate whether or not Key Characteristic #1 is an attribute of the EE resource, based upon the Guidelines above.

KEY CHARACTERISTIC #1 FAIRNESS AND ACCURACY

Environmental education resources should be fair and accurate in describing environmental problems, issues, and conditions, and in reflecting the diversity of perspectives on them.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

General Comment for Key Characteristic #1:

This resource is fair and accurate.

END KEY CHARACTERISTIC #1

KEY CHARACTERISTIC #2 DEPTH

Environmental education resources should foster awareness of the natural and built environment, an understanding of environmental concepts, conditions, and issues, and an awareness of the feelings, values, attitudes, and perceptions at the heart of environmental issues, as appropriate for different developmental levels.

Guideline 2.1 Awareness Resources should acknowledge that feelings, experiences, and attitudes shape environmental perceptions and issues.

What to look for:

- As appropriate for the developmental level, opportunities are provided for learners to explore the world around them.
- Activities provide opportunities for experiences that increase learners' awareness of the natural and built environments.
- Resources help learners understand the interdependence of all life forms and the dependence of human life on the resources of the planet and on a healthful environment.
- Exercises and activities encourage students to identify and express their own positions regarding environmental issues.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

See Journal, Discussion, and Brainstorming... pgs 11-28 sections. Each activity has a Debriefing & Reflection Options. Especially see "Natural Resources" ... p. 199.

Guideline 2.2 Focus on concepts Rather than presenting a series of facts, resources should use unifying themes and important concepts.

What to look for:

- Concepts from environmental sciences fields such as ecology, earth science, chemistry, conservation biology, etc., are presented, as appropriate for the intended developmental level.
- Concepts from social sciences fields such as economics, anthropology, sociology, and political science are presented, as appropriate for the intended developmental level.
- Facts are presented--and vocabulary words introduced and defined--in context and support of the important concepts.
- Ideas are presented logically and are connected throughout the resources, emphasizing a depth of understanding rather than encyclopedic breadth.
- Resources include a clearly articulated conceptual framework that states the concepts to be learned and relates them to each other.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

See pgs. 1 – Unifying theme is youth corps members understanding more about Colorado's extraordinary environment. See pgs 299 – on.

Guideline 2.3 Concepts in context Environmental concepts should be set in a context that includes social and economic as well as ecological aspects.

What to look for:

- Environmental issues are explained in terms of specific concepts.
- Historical, ethical, cultural, geographic, economic, and sociopolitical relationships are addressed, as appropriate.
- Learners are offered opportunities to examine multiple perspectives on the issue and to gain an understanding of the complexity of issues, as appropriate for their developmental level.
- Further investigations help learners probe more deeply into the ecological, social, and economic aspects of issues, and their interrelationships.
- Concepts are introduced through experiences relevant to learners' lives.
- Resources help learners to make connections among the concepts.
- Learning is based on students constructing knowledge through research, discussion, and application to gain conceptual understanding.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

All this is considered in most activities & in design of whole curriculum. See pg 1 for heierarchy of activities.

Guideline 2.4 Attention to different scales Environmental issues should be explored using a variety of scales as appropriate, such as short to long time spans, localized to global effects, and local to international community levels.

What to look for:

- Resources consider communities of different scales. These scales include the local, regional, national, and global levels.
- Linkages are clear among communities of all levels.
- Local, regional, continental, and global geographic scales are used to help learners understand that issues can be important, widespread, and complex.
- Resources examine issues over a variety of temporal scales so that short-term and long-term problems, actions, and impacts are clear.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

Same as above.

Indicate whether or not Key Characteristic #2 is an attribute of the EE resource, based upon the Guidelines above.

KEY CHARACTERISTIC #2 DEPTH

Environmental education resources should foster awareness of the natural and built environment, an understanding of environmental concepts, conditions, and issues, and an awareness of the feelings, values, attitudes, and perceptions at the heart of environmental issues, as appropriate for different developmental levels.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

General Comment for Key Characteristic #2:

END KEY CHARACTERISTIC #2

KEY CHARACTERISTIC #3 EMPHASIS ON SKILLS BUILDING

Environmental education resources should build lifelong skills that enable learners to address environmental issues.

Guideline 3.1 Critical and creative thinking Learners should be challenged to use and improve their critical thinking and creative skills.

What to look for:

- Resources offer learners opportunities to practice critical thinking processes such as problem definition, forming hypotheses, collecting and organizing information, analyzing information, synthesizing, drawing conclusions, formulating possible solutions, and identifying opportunities for action.
- Resources encourage learners to practice creative thinking processes such as modeling, using metaphors and analogies, and formulating questions.
- Learners are challenged to use higher level thinking processes such as identifying bias, inferring, relating, applying, and reflecting.
- Resources provide guidance for judging the validity of various sources of information, and learners are encouraged to apply these guidelines.
- Learners are given opportunities to practice these skills individually and in groups.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

See - pgs 11-28 - pg. 191 – Natural Gifts – creative thinking, contrasting life in past to now. - pgs 155 – 400 Acre woods – create own management plan.

Guideline 3.2 Applying skills to issues Students should learn to arrive at their own conclusions about what needs to be done based on thorough research and study, rather than being taught that a certain course of action is best.

What to look for:

- Resources help students learn to identify, define, and evaluate issues on the basis of evidence and different perspectives. Ethical and value considerations are included.
- Resources provide a list of organizations and other resources that learners can use to explore the issue on their own, as appropriate for their developmental level. This list should include groups and resources with various perspectives.
- There are opportunities to use different methods of evaluating environmental issues and their potential solutions, as appropriate for the intended age level. These methods may include risk analysis, cost/benefit analysis, ethical analysis, environmental impact analysis, analysis of cumulative effects, different kinds of economic analyses, social impact analysis, etc. Resources help learners understand the strengths, weaknesses, and biases of these different means of evaluating an issue.
- Learners are encouraged to develop their own solutions to issues.
- Environmental issues are presented with a range of possible solutions as well as information about how the problems are currently being addressed. Resources compel learners to consider the implications of different approaches.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

All activities designed in this fashion. P. 239 Loving It Too Much includes all indicators. See indexes in back, start p. 297.

Guideline 3.3 Action skills Learners should gain basic skills needed to participate in resolving environmental issues.

What to look for:

- Resources give learners an opportunity to learn basic skills for addressing environmental issues, as appropriate for the intended age level. These skills may include defining an issue, determining if action is warranted, identifying others involved in the issue, selecting appropriate action strategies and understanding their likely consequences, creating an action plan, evaluating an action plan, implementing an action plan, and evaluating results.
- Learners are challenged to hone their ability to forecast and to plan for the long term.
- Learners are encouraged to practice interpersonal and communication skills, including oral and written communication, group cooperation, leadership, conflict resolution, and others.
- Learners are provided with opportunities to develop a variety of citizenship skills, including participation in the political or regulatory process, consumer action, using the media, and community service.
- Resources help students sharpen basic laboratory and field skills such as experimental design, observation, data collection, and data analysis.
- Resources encourage students to learn basic skills of applied science, including environmental monitoring, evaluating others' research, and setting up an independent research proposal.
- Learners are instructed in the use of various forms of technology that help them develop and apply their skills. These technologies might include computers and electronic communication networks, data gathering equipment, video equipment, etc.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

p. 249 – most wanted Weeds – identify & collect & develop materials to educate others. P. 293 Long-term Projects.

Indicate whether or not Key Characteristic #3 is an attribute of the EE resource, based upon the Guidelines above.

KEY CHARACTERISTIC #3 EMPHASIS ON SKILLS BUILDING

Environmental education resources should build lifelong skills that enable learners to address environmental issues.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

General Comment for Key Characteristic #3:

See all comments above.

END KEY CHARACTERISTIC #3

KEY CHARACTERISTIC #4 ACTION ORIENTATION

Environmental education resources should promote civic responsibility, encouraging learners to use their knowledge, personal skills, and assessments of environmental issues as a basis for environmental problem solving and action.

Guideline 4.1 Sense of personal stake and responsibility Resources should encourage learners to examine the possible consequences of their behaviors on the environment and evaluate choices they can make which may help resolve environmental issues.

What to look for:

- Resources promote intergenerational and global responsibility, linking historical and current actions with future and distant consequences.
- Learners are provided with opportunities to reflect on the effects of their actions and to sort out their opinions about what, if anything, they should do differently.
- Resources contain examples of people of different ages, races, genders, cultures, and education and income levels who have made a difference by taking responsible action.
- Resources convey the idea that many individual actions have cumulative effects, both in creating and addressing environmental issues.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

All the activities were designed to do this! Topic index starting on p. 299 has numerous topics addressing this key char. including Action, Responsible human, Conservation, Environ. Issues, human Resp., Lifestyles, NR Mgmt, Stewardship.

Guideline 4.2 Self-efficacy Resources should aim to strengthen learners' perception of their ability to influence the outcome of a situation.

What to look for:

- Resources challenge learners to apply their thinking and act on their conclusions.
- Resources include a variety of individual and community strategies for citizen involvement and provide learners with opportunities to practice these strategies through projects they generate individually in their school or in the larger community.
- There are examples of successful individual and collective actions. Learners are encouraged to examine what made these actions successful. (Where actions were not successful, students are encouraged to examine the reasons for failure.)
- Learners are encouraged to share the results of their actions with peers and other interested people

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

Same as above, as well as Work Projects. Index starting p. 317 – these youth corps members are completing these kinds of projects where they do have the ability to influence a situation. Many activities support this outcome.

Indicate whether or not Key Characteristic #4 is an attribute of the EE resource, based upon the Guidelines above.

KEY CHARACTERISTIC #4 ACTION ORIENTATION

Environmental education resources should promote civic responsibility, encouraging learners to use their knowledge, personal skills, and assessments of environmental issues as a basis for environmental problem solving and action.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

General Comment for Key Characteristic #4:

KEY CHARACTERISTIC #5 INSTRUCTIONAL SOUNDNESS

Environmental education resources should rely on instructional techniques that create an effective and safe learning environment.

Guideline 5.1 Learner-centered instruction When appropriate, learning should be based on learner interest and on the learner's ability to construct knowledge to gain conceptual understanding.

What to look for:

- Activities allow learners to build from previous knowledge and lead toward further learning.
- Learners gain understanding through research, discussion, application, and practical experiences.
- Instruction encourages learners to undertake their own inquiry.
- Where appropriate, activities and projects use learner questions and concerns as a starting point.
- Resources encourage learner participation in planning and assessing learning. Resources encourage learner reflection on the process and content of learning.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

See pgs 2-7 & Journals/Discussion

Guideline 5.2 Different ways of learning Resources should offer opportunities for different modes of teaching and learning.

What to look for:

- Resources encourage educators to experiment with a range of instructional methods to reach learners with a variety of learning styles. These techniques may include research, experimentation, observation, lecture, discussion, creative expression, field studies, role playing, independent work, cooperative learning, cross-age teaching, etc.
- Important concepts are conveyed in several ways (visual, auditory, tactile, etc.) so that all students can understand them.
- Materials and activities are developmentally appropriate for the designated grade, age, experience, and education background of the target audience, yet sensitive to individual differences in educational experience and learning mode.
- Opportunities are provided for students to learn from expression and experience--for example, using music, art, poetry, and drama, or involving parents, families, and the community in learning activities.
- Diverse sensory involvement is a criterion for selecting learning activities.
- Learners are challenged to learn different skills that reflect their multiple intelligences.
- Learning is accessible to students with limited English proficiency.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

See pgs 9-10 and 309-310. Every activity has discussion, activity, reflection, and some have presentations. They range in format, see pgs i-iii.

Guideline 5.3 Connection to learners' everyday lives Resources should present information and ideas in a way that is relevant to learners.

What to look for:

- Concepts to be taught are related directly to students' experiences.
- Case studies and examples are relevant to the learner. If the resource is designed for use in a specific area of the country, the content and illustrations are appropriate for that area.
- Instructional materials are easy for students to use and understand.
- The content and associated activities are presented in a way that encourages students to have enjoyable learning experiences.
- Resources provide for continuing involvement throughout the year by the learner, both at home and at school. Means for involving learners' families or care givers are suggested.
- The design of structure and delivery mechanisms considers how the resource fits with a larger scope and sequence for environmental education and learner readiness for the concepts and skills presented.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

All activities were included and/or designed to support youth corps members' work & interests. This is a learner-centered curriculum.

Guideline 5.4 Expanded learning environment Students should learn in environments that extend beyond the boundaries of the classroom.

What to look for:

- Students learn in a diverse environment which includes the school yard, laboratory, field settings, community, and other settings beyond the classroom
- Learners are encouraged to share their knowledge and their work with others
- Resources use examples that reflect real-world experiences.
- Resources suggest partnerships with local civic organizations, businesses, religious communities, or governments to explore a local issue.
- Partnerships with local universities, colleges, or technical schools are encouraged to allow learners to participate in research, environmental monitoring, creative projects, etc.
- Resources suggest experiential learning activities in which students immerse themselves in an activity outside the classroom--tracking a wild animal, for example, or interviewing different sides in a community controversy
- Resources suggest linkages to informal, experiential, and service learning opportunities in the community.
- Lists of written materials and other resources for further study are included.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

Most activities are outdoors & real life. See pgs 314-315, 311-313.] Every activity has a Variations section.

Guideline 5.5 Interdisciplinary Resources should recognize the interdisciplinary nature of environmental education.

What to look for:

- Resources clearly list the subject disciplines integrated into each lesson or lessons, suggest tie-ins with other subject areas, such as the science disciplines, social studies, math, geography, English, arts, physical education, occupational education, etc.
- The resource helps develop skills useful in other subject areas, such as reading comprehension, math, writing, and map reading and analysis.
- Where appropriate, resources are keyed to national, state or local standards for multiple disciplines.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

Did not include subject areas as this is not a school curriculum, however all the Project lessons have that in their original form. Look at Topic Index to see interdisciplinary nature.

Guideline 5.6 Goals and Objectives for the Resource Goals and objectives for the resources should be clearly spelled out.

What to look for:

- Goals and objectives for learner outcomes are clearly stated or relate specifically to the needs and interests of the identified audience(s).
- The content, scope, duration and "medium" (e.g. workshop, field day, course, guest speaker, material) is appropriate for achieving the objectives, and steps for accomplishing the goals and objectives are identified.
- Instructional methods are appropriate to the resource's goals.
- Objectives should be in keeping with goals and objectives of general education.
- Environmental issues, topics to be included, major concepts, and key questions to be considered by the resource are clearly articulated in the goals and objectives.
- The goals and objectives consider relevant aspects of state planning documents and, for school-focused youth programs, are consistent with applicable state and local educational goals and objectives.
- The program or material clearly establishes how it contributes to the larger goals of environmental literacy and responsible action.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

See attachment "2003 EE Learning Objectives & Required Learning Activities for Four-week Programs and Eight-week Programs."

Guideline 5.7 Appropriateness for specific learning settings Claims about the resource's appropriateness for the targeted grade level(s) and the implementation of the activity are valid.

What to look for:

- The content is appropriate (age and language) for the target audience and include life-long learning strategies. The examples, terminology, and comparisons used are within the probable vocabulary and experience of students.
- Lesson-related activities can be accomplished in the time specified, with resources available.
- Experiments and activities appear to be relevant, accurate, predictable, and suitable for the target grade levels. Resources include suggestions for appropriate variations and extensions.
- Activities are efficient. The amount of time required is consistent with the importance of what is to be learned.
- Environmental responsibility is modeled in the design, underlying philosophy, and suggested activities of the resources.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

See p. iv.

Guideline 5.8 Assessment A variety of means for assessing learner progress should be included in the resources.

What to look for:

- Resources state expected learner outcomes and provide examples of how to use specific performance-based assessments such as portfolios, open-ended questions, group or independent research, or other appropriate projects to indicate mastery.
- Learner outcomes are tied to the goals and objectives.
- Means of assessing learners' baseline understandings, skills, and concepts at the beginning of each lesson are included.
- Resources use current educational assessment techniques.
- Suggested assessment techniques are practical and efficient.
- Assessment is on-going and tied to student learning.
- Expectations are made clear to students at the onset of an activity.
- Students are encouraged to assess their own and other students' work.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

Each lesson includes Evaluation section with two options individual & group.

Indicate whether or not Key Characteristic #5 is an attribute of the EE resource, based upon the Guidelines above.

KEY CHARACTERISTIC #5 INSTRUCTIONAL SOUNDNESS

Environmental education resources should rely on instructional techniques that create an effective and safe learning environment.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

General Comment for Key Characteristic #5:

— END OF KEY CHARACTERISTIC #5 —

KEY CHARACTERISTIC #6 USABILITY

Environmental education resources should be well designed and easy to use.

Guideline 6.1 Clarity and logic The overall structure (purpose, direction, and logic of presentation) should be clear to educators and learners.

What to look for:

- Materials are clearly and engagingly written. Main concepts are well articulated. Examples in the text are appropriate to the content and easily understood.
- Instructions for educators are clear and concise.
- The following information is included in a straight forward manner:
 - Intended audience/grade level;
 - Instructional setting and optimal number of learners;
 - Disciplines and concepts covered;
 - Intended learner outcomes;
 - Process skills addressed (i.e., observing, communicating, comparing, ordering, categorizing, relating, inferring, applying)
 - Equipment needed;
 - Safety precautions if appropriate;
 - Time needed for activity;
 - Brief overview of the activity;
 - Instructions for conducting the activity;
 - Suggestions for assessing the activity; and
 - Pre- and post-activities, such as suggestions for enrichment activities, if appropriate.
- Background information for the educator is adequate and accurate, and there is a listing of additional resources.
- Resources are organized sequentially and in an easy-to-use fashion.
- Lab and field work, and other activities, are clearly linked to related content material.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

See pgs 1-4. Based on tried & true methods/design employed by all four Projects!

Guideline 6.2 Easy to use Resources should be inviting and easy to use.

What to look for:

- The layout of materials is interesting and appealing for educators and learners.
- Illustrations, photographs, maps, graphs, and charts are useful, clear, and easy to read.
- The resource is easy for educators to access, keep and use (8.5x 11", 3-hole punched, able to lie flat on desk).
- Masters for student handouts and overhead transparencies are easily duplicated.
- Copyright is spelled out or permission to copy is granted.
- Where appropriate, materials are available in electronic form such as computer file, CDROM, or over the Internet.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

Sections in each activity clearly marked, pull boxes included, even put Procedures before Background section because in the pilot phase they told us to do that!

Guideline 6.3 Long-lived Resources should have a life span that extends beyond one use.

What to look for:

- Resources include information on where replacements, updates, equipment, and special supplies can be obtained.
- Equipment and materials are listed, reasonably accessible, inexpensive, and simple to use.
- Student materials are sufficiently supplied. Consumable instructional materials are of good quality and sufficient quantity to support the objectives.
- Nonconsumable materials can be reused by another educator.
- A long-term funding strategy for the resource has been developed that details how the resource will be continued after initial funding is exhausted. Alternatives such as fees for services and charging for resources are incorporated as appropriate.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

3-ring notebook, which is easy to update, each lesson starts on right side so could even delete or exchange whole activity.

Guideline 6.4 Adaptable Resources should be adaptable to a range of learning situations.

What to look for:

- Suggestions are provided for adapting lessons and activities for learners from particular ethnic or cultural backgrounds.
- Resources are available in more than one language, if appropriate.
- Where appropriate, the resources suggest easy adaptations for different environments, such as indoor and outdoor environments, formal and informal settings, large and small classes, mixed-level classes, or rural, suburban, and urban settings.
- There are suggestions for finding low-cost or no-cost alternatives for the equipment and materials needed.
- Resources provide suggestions for adaptations for students with special learning needs, language needs, and physical needs.
- Resources offer ideas for adapting to different grade levels.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

- Every activity has a variations section - Many of these activities were adapted to be Colorado specific demonstrating their adaptability.

Guideline 6.5 Accompanied by instruction and support Additional support and instruction should be provided to meet educators' needs.

What to look for:

- Professional development programs are accessible to educators in your area.
- Continuing technical support for educators is provided (for example, a toll-free telephone number or a list of local or regional points of contact for questions about the resources).
- Instructional programs provide follow-up activities or evaluations and help develop a network of practitioners.
- Resources include lists of essential resource and supporting materials, such as agency contacts, references to videos, information on computer databases, etc.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

See pgs 297-298.

Guideline 6.6 Make substantiated claims Resources should accomplish what they claim to accomplish.

What to look for:

- Claims of learning outcomes are substantiated by systematic evaluation rather than merely by letters of endorsement and anecdotal comments from users.
- The resources were field tested under conditions similar to their intended use and evaluated in terms of stated goals and objectives prior to wide scale implementation (see example 6.6)
- Evaluation results and feedback strategies are implemented and updated as needed to help determine: areas of strength and potential gaps; how work has impacted the community; what to do to function more effectively.
- Educators who work in the settings in which the resource is intended to be used participated on the development team or reviewed drafts of materials.
- Experts in learning theory, evaluation, and other appropriate educational disciplines were involved on the development team or reviewed drafts of resources.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

Guideline 6.7 Fit with national, state, or local requirements Environmental education resources should fit within national, state, or local standards or curricula. (Also see guideline #5.5 for other ideas about fitting with local curricula.)

What to look for:

- Where appropriate, resources are correlated to Colorado's Model Content Standards or local requirements or learning objectives.
- Resources can be readily integrated into relevant curricula.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

Supporting Evidence/Justification:

All the adapted activities from the Projects are correlated to Colorado Standards.

Indicate whether or not Key Characteristic #6 is an attribute of the EE resource, based upon the Guidelines above.

KEY CHARACTERISTIC #6 USABILITY

Environmental education resources should be well designed and easy to use.

Present **Not Present** **Not an objective of the resource design (provide justification below)**

General Comment for Key Characteristic #6:

This is a very easy to use resource

I certify that the information provided in this Review Worksheet, together with all attached documents, is complete and true to the best of my knowledge.

Name: _____

Date: _____

Self Reviews and Reviews must be submitted online. This paper version is provided solely as a tool to help you work on reviews offline, however finished reviews must be submitted online at <http://www.cae.org/database.html>