Community problem investigation manual: a teacher's guide for integrating instruction with community action projects

Nicky Phear
The University of Montana
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THE COMMUNITY PROBLEM INVESTIGATION MANUAL:
A TEACHER'S GUIDE
FOR INTEGRATING INSTRUCTION
WITH COMMUNITY ACTION PROJECTS.

by
Nicky Phear
B.A. The University of Pennsylvania, 1990
presented in partial fulfillment of the requirements
for the degree of
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Approved by:

Chairperson

Dean, Graduate School

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Date

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CHAPTER I: INTRODUCTION

The Community Problem Investigation (CPI) manual provides a curriculum package that helps 6th-12th grade teachers integrate community-centered projects with classroom learning. Increasingly, educators stress the need to promote learning outside the classroom and apply concept learning to "real-world" issues. Reports from the Department of Education and the National Science Board stress that in addition to ensuring student mastery of basic content," it is critically important that schools help students deal with complex issues and make informed choices not just in the classroom or laboratory but in the socio-political arena as well" (Bull, 1994). National and state curriculum standards now include not just the mastery of specific subject-matter knowledge, but the development of responsible citizenship and skills necessary to critically analyze and solve community problems (Trowbridge and Bybee, 1996).

Many educators express both an interest and a responsibility to engage students in community action projects, but either don't know how, or feel burdened by existing curriculum standards. If teachers create time for community learning, these projects usually encumber an already crowded curriculum. The goal of this manual is to help teachers integrate community projects with classroom learning so that students learn concepts as they apply to real world issues. Through CPI projects, teachers combine what they are required to teach, whether it be the energy cycle, local history, or statistics, with the study of local current events. The CPI instructional method enables community projects to be a central part of learning, rather than an addition to standard lecture classes. Engagement in community projects also provides an opportunity for students to become involved with, and help solve, real-world problems.

In order to accomplish these goals, the manual describes a series of activities that develop student skill in identifying, evaluating and then
finding solutions to a community problem. The sequence involves five phases which bring students through team building, community exploration, issue investigation, issue analysis and finally, taking action. The success of a CPI project depends on the teacher's ability to engage students in each of these five phases. Engagement results when students are excited about their issue and empowered with the skills to make it better. Teachers should therefore allow students to choose an issue of concern to them, and provide them with enough information, skill and resources to successfully complete a CPI project. The teacher acts not as the disseminator of knowledge, but rather as a guide who sets academic and procedural goals and facilitates the process. This manual provides the tools and framework for teachers to fulfill this role.

CPI'S DEVELOPMENT

The Community Problem Investigation teaching method was developed at the University of Montana by a multidisciplinary group of professors and graduate students from the departments of Education and Biological Sciences. Concerned by the lack of educational programs that encourage students to actively engage in local issues and problem-solving, they wanted to design a curriculum that involved students in local issues while at the same time achieved in-depth and meaningful learning. Consequently, they designed a teaching process that could be applied to any discipline, or combination of disciplines, where academic concepts were learned through the scope of a community issue. In the design of CPI, an emphasis was placed on student-driven learning, action-taking, and the fusion of concept understanding.

A number of existing programs contributed to the design of CPI -- two in particular from the field of environmental education. The first, William Stapp's Action Research and Community Problem Solving (ARCPS) offered a model for an open-ended program in which students investigate and take action on an issue of their choice. The second, Hungerford and other's manual, Investigating and Evaluating Environmental Issues and Actions: Skill Development Program. This manual teaches students research skills and action-taking strategies. It also employs the "Issue Analysis Technique" as a means to break down an issue in order to examine the players, their associated

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values, and possible solutions. CPI incorporates the ARCPs procedure, Hungerford's skill development and issue analysis activities, as well as a number of other alternative teaching strategies and theories such as Johnson and Johnson's (1989) research on cooperative learning, Disinger's (1990) model of critical thinking, and Rath's (1966) discussion of values. The manual contains summaries or excerpts from each of these sources.

While the preceding list highlights an array of programs that guide teaching beyond lecture and toward less directed educational processes (such as action learning, community service, and cooperative work), few of these programs provide adequate structure for teachers to fuse specific "content learning". CPI addresses this challenge with the design of "content focus questions". For each student project, teachers design questions that guide the student's investigation to insure that they learn specific concepts associated with the issue under investigation. For example, if a history teacher is required to teach about the government system, he may ask his students to: "Describe the route a water quality bill takes through the legislature as it is proposed". Or, a biology teacher may have her students learn about the function of a riparian ecosystem by researching the question: "What impacts has local development had the riparian ecosystem?". Teachers who use CPI design content focus questions that address their specific curriculum needs. Sample questions and more details regarding these types of questions begin on page 15.

CPI's method of integrating concept learning with community action projects has been employed in a number of classroom settings. Over the past six years CPI has been used in a range of classrooms from grades 4-12, at the University of Montana, and at various tribal colleges around the state of Montana. The CPI model has taught a wide range of subjects including environmental science, English, history, civics, earth science, and math. At Cut Bank High School, Ray Maier's students learned about government and history by identifying community needs and writing laws that tried to solve local problems. At Newmann Elementary school in Billings, Angel Greenley's students learned about Montana history through their investigation of local bison management and mining issues. At the University of Montana in Missoula, students studied major environmental themes in an Environmental
Science class by researching and participating in a local mining issue. In each of these schools, students learned new concepts through their involvement in community-based issues. These projects moved students beyond the acquisition of knowledge and into actions such as the presentation a bill to Cut Bank city council members and making comments at a public scoping meeting in Missoula.

WHAT IS IN THE MANUAL

To help educators implement a Community Problem Investigation project the manual provides three chapters. The planning chapter details how to begin a CPI project by reviewing goals, generating necessary support, and, if needed, restructuring class procedures. The planning chapter also helps teachers develop content focus questions to address their specific curriculum requirements. The implementation chapter outlines the five CPI phases described above. Each phase provides background information, suggested goals and objectives, and numerous activities that will help students meet these goals. The Assessment and Resources chapter completes the manual and provides an assessment sheet for both students and teachers to evaluate the effectiveness of the CPI project. This chapter also provides a list of resources for additional information regarding student action projects.

KEYS TO A SUCCESSFUL CPI PROJECT

To achieve a successful CPI project, teachers should implement all five phases of the model. By going through each phase students progress beyond an awareness and understanding of issues and toward active involvement. Without issue analysis and action taking, students will merely learn about an issue without finding and acting on solutions. These final CPI phases provide a crucial opportunity for students to learn basic citizenry skills and apply critical thinking not only to understanding a problem, but to finding appropriate solutions. In carrying out a successful action plan and making positive change in their community, students can develop feelings of empowerment.
Through extended projects even young students can take action and make a difference in their community. Barbara A. Lewis's sixth grade class helped get a hazardous waste site cleaned up in Salt Lake City. Bill Hammond's students at Lee County High School managed to preserve a 1,000-acre cypress swamp and pass a bald eagle protection law. Other student groups have built bike paths, cleaned up their playground, started recycling programs, and reduced cafeteria food waste. Given the opportunity, skill and support, students have completed tremendously successful action projects. See page 77 for more details on some of these action projects.

Students benefit most from action projects when they are directly involved, making decisions, and involved with projects of personal interest. The teacher's role is to help students perform their own issue investigation. Teachers direct what concepts are explored, and then place the responsibility on students to access this information. In order to ensure success, teachers will need to develop their student's skills in working cooperatively as a group, identifying pertinent issues, gathering information through interviews and surveys, and evaluating different possible action strategies. Teachers should involve students in decision-making at every opportunity during the process: in choosing an issue, in determining how to divvy up research needs, in developing an action plan, in deciding when and where to present the project to the community. Involving students in these decisions gets them involved, interested and motivated to carry through on their project.

**GETTING STARTED**

**Since the manual is written specifically for teachers who want to implement a CPI project, the voice now changes now to speak directly to "you", the educators.**

To begin a CPI project, first read through the entire manual. This will give you an idea about what a CPI project involves in terms of time, resources, class restructuring, and an idea for the sequence of the five phases. The manual also provides reflective questions that ask you to consider how to implement the ideas and activities described in the manual. These "teacher
focus questions" begin in the planning chapter and continue through each phase of the implementation chapter. After working through the manual your answers to these question should provide an outline for the organization a CPI project in your particular teaching setting.

If, after studying the manual and answering the teacher focus questions, you still need more assistance consider attending a two-week CPI workshop training. During this workshop, teams of teachers from the same school or educational community experience the process and collaboratively plan for future implementation. Teachers engage in all activities, as their students would, in order to develop skills and experience with the model. The process empowers educators with skills to investigate community issues and solve local problems. The workshop also provides time for teachers to build local alliances, network with community members, and plan for classroom implementation. The workshop explores ways to overcome some of the barriers presented in making educational change and creates support among teachers and administrators. For more information, please contact Nicky Phear in Missoula at (406) 543-7448 or Ronnie Monroe at the Western Montana College in Dillon, Montana at (406) 683-7016.
CHAPTER II: PLANNING

ORGANIZING A CPI PROJECT

This chapter outlines a number of steps to help you plan for a Community Problem Investigation project with your students. CPI projects require considerable planning and preparation, setting new goals, and using alternative teaching processes. You are expected to help students move through the five phases: team building, community exploration, issue investigation, issue analysis, and taking action. This chapter will help you integrate these phases into your classroom setting. It will also help you fuse "content" (a general term to describe the specific concepts you are required to teach within your discipline) with community-based projects. Sample content focus questions are provided, as are tips for how to develop good inquiry questions.

In order to enhance the planning and implementation phase, and to familiarize yourself with the inquiry process, we also ask that you answer the following "teacher focus questions". These questions will help you evaluate the appropriateness and feasibility of conducting a community-based project, and will provide a framework for how to specifically implement a CPI project. Teacher Focus Questions begin on the following page and continue through this chapter and the implementation chapter (located at the end of each phase). These questions are boxed and shaded for easy reference. Please begin by answering the following questions:
Focus Questions For Teacher Planning

** Compared to your current teaching practices, explain what you hope your students will gain from completing a CPI project.

** CPI projects require teachers let students direct their own projects by choosing their own issue to investigate, determining what actions to take, etc. Describe how this teaching style compares to your current teaching practices.

Reviewing Goals:

Five major goals have been established for students who conduct a CPI project; one goal for each of the five phases. The goals stated here are process oriented; that is, they engage students in collaborative work and seek to develop specific problem-solving and action-taking skills. The goals relate to the general CPI process and should therefore remain consistent for all CPI projects. Specific content goals will vary from teacher to teacher depending on class grade and discipline. Teachers will develop specific content related goals later in this chapter, page 17. The general, process oriented goals, include the following:
• Phase 1: Team Building. Students will build an alliance that works cooperatively and effectively as a group.

• Phase 2: Community Exploration. Students will identify pertinent community issues and choose one issue to investigate in-depth.

• Phase 3: Issue Investigation. Students will develop the knowledge and skills necessary to organize and execute an issue investigation.

• Phase 4: Issue Analysis. Students will identify different positions related to an issue and clarify their own personal position.

• Phase 5: Taking Action. Students will help solve a local problem by taking action that is consistent with their values.

To help students reach these goals, each phase presents a series of activities. These activities help meet additional objectives which are also listed for each phase. These activities provide options for use with students, but by no means offer the only approach to achieving the stated goals. Encourage students to choose among the activities, or to develop alternative activities. For example, can they find other ways to identify community issues, to gather information, or to take action? Again, providing opportunities for students to make choices and to direct their own project will increase their motivation and ownership for a CPI project.

To help assess if students achieve the stated goals, a series of "Student Focus Questions" extend throughout the five phases in this manual. The questions ask students do such things as define the skill they bring to the group, or to defend the position they take on the issue under investigation. These process oriented questions enhance all student projects regardless of class discipline. They follow the same format as the "teacher focus question" (though not shaded), and are strategically placed to be asked either before activities begin, or at the end of an activity as a means for students to synthesize and reflect on their experience. Again, additional "content focus questions" for students will be developed later in this chapter.
Focus Question For Teacher Planning

** Which of these CPI goals match your personal goals in education? List any other goals you may have, and describe how these goals can be incorporated into a CPI project.

Restructure Class Processes:

As may be evident, achieving CPI goals will likely require an alternative class structure. Extended class periods of at least two hours allow time for students to conduct field trips, interviews, surveys and other community research activities. This type of block system is a natural part of elementary schools, however, high school teachers are often confined to short, 50 minute periods. Even with this time constraint, high school teachers have successfully organized community action projects. Ray Maier of Cut Bank High School, for example, conducted ten weeks of community research by giving his students a pass when they needed to leave school grounds for a scheduled interview with community members. The following day these students were required to submit a write-up of the interview.

Extended class time can be created through the collaboration of teachers from multiple disciplines. This team teaching method presents a highly desirable approach because it fosters integrated learning. For example, a team of teachers from the language arts, biology and history departments at Snohomish High School in Washington State taught an issue based-class
similar to CPI, called "The Will to Act". The large group of students broke into smaller action groups to explore specific local issues from historical and biological perspectives. Community projects provide a natural forum for integrated learning as most social and environmental issues are not just about science, economics or policy, but are a complex web of all disciplines. Understanding and finding solutions to these issues will therefore require application from many fields of study. If team teaching is not an option at your school, integration can be established through other means. Students conducting a CPI project for their history class, for example, have written essays about their experience in english class.

In all cases, CPI projects require setting up field trips and meetings with community representatives. Administrators can help access transportation, special field work equipment, telephones, and computers for these activities. If leaving school grounds is not possible, consider inviting community specialists to the school for individual interviews of a community forum (see page 34). Or, encourage students to make phone calls from school and, given parental permission, receive and return phone calls at their home. Research can continue through classtime through e-mail communication and on the internet accessing various web sites. Conducting community research will require flexibility and a lot of logistical work but the benefits to student learning offer substantial returns.

Focus Questions for Teacher Planning

** Describe how will you restructure your class in order to carry out a CPI project. Identify the teachers with whom you could collaborate in a team teaching situation.
** Identify your needs for a CPI project including materials, use of phones and computers, special field work equipment, budget and other resource needs. Explain how and when will you access these materials, resources and funds.

Generating Support:

Support from administrators, teachers, parents, community members and students will increase opportunities for a successful CPI project.

- **Administrators:** The principal and other key administrators should be involved early in the planning process. They can help access valuable resources such as transportation, telephones, and computer needs. Their support will also be needed if you want to create blocks of time for collaborative teaching, field trips, or other activities that require significant portions of time. Administrators may also anticipate and help alleviate other institutional barriers which would otherwise impede the project's progress.

- **Teachers:** To enhance the integration of multiple disciplines, teacher collaboration is highly recommended. Teachers who have different areas of expertise can also serve as resources for students during their investigation. In any case, keep teachers involved and updated with your project.

- **Parents:** Parental consent and support of the process will also be crucial. Projects deviate from normal teaching activities and often involve students
in politically sensitive issues. Parents should be notified and involved as much as possible.

- **Community members:** Students will also require support from community members. Contact several community representatives before the project begins to ensure contacts for students.

- **Students:** And finally, support from the students themselves will be essential. Students must understand from the onset that the project represents a different approach; that your role as a teacher will be less a conveyor of information and more a facilitator to help them access information sources outside class. Students need to understand that they will be expected to take more responsibility for their own learning.

**Focus Questions For Teacher Planning**

** Do you expect your administrator, other teachers, and the rest of the school community to support your efforts to conduct a CPI project? If not, describe how you will cultivate the needed support.

** Develop a time-line for implementation below. Include when you will establish community contacts, schedule field trips, a community walk, forum, symposium, etc. (Complete this after you have read through the implementation section.)
FUSING CONTENT LEARNING

After having reviewed the general procedure for conducting a CPI project, this section offers suggestions for how to incorporate specific content goals. Example content focus questions from both an environmental science and history class are provided below. These questions synthesize curriculum standards into a community issue investigation and offer a guide for the development of other inquiry questions. Inquiry is a method of questioning that helps students organize their thoughts and synthesize information. These questions provide guidance and direction for students to successfully discover concepts and principles. Carefully composed questions will require students to investigate issues in-depth and make important connections across disciplines. Suggestions for how to design these questions are provided at the end of this chapter.

Questions may be designed for one discipline, or for a combination of disciplines when a team of teachers collaborate. For example, an individual biology teacher using the CPI model may require students to understand the cycling of energy. She could write a focus question, "How does energy cycle through the ecosystem that is affected by the issue under investigation?". If her students chose to study the local transportation problem, they would have to address it in terms of where energy comes in and where it goes. In situations where teachers collaborate from multiple disciplines, they must work together in the development of content focus questions. For example, a team of history and earth science teachers may pose the question, "What is the history of geologic development in this area and how has it affected human culture today."

Sample Content Focus Questions:

Below are two sample sets of content questions. The first set was designed by Ray Maier, a history teacher at Cut Bank High School, for use during a ten week unit. His questions were framed to fit a wide range of student chosen topics that included health care, wolf reintroduction, and local mining proposals. Students researched the significance of these issues from a number of perspectives. For their action, each group wrote legislation that
would help solve the problem. One group presented a bill to their city council requesting the construction of an overpass over a local railroad. This, and other student projects were presented to the public in a final symposium consisting of a wide range of visual displays and brochures. Content was integrated into this project through the following questions:

**Sample Content Focus Questions from an American Civilization class**

** List several issues that involve the citizens of Cut Bank, Montana.**

** Describe an issue that you would like to explore and why you think this issue is important.**

** Summarize what you know about the issue and present the facts that support this knowledge.**

** Identify where you might find the answers to:**
- The background to the issue?
- The economics of the issue?
- The politics of the issue?
- The social implications of the issue?
- The legal implications of the issue?
- Gender differences on the issue?
- Ethnic differences on the issue?
- City/local agencies positions on the issue?
- State agencies positions on the issue?

** Brainstorm what you will need to know to help solve the issue.**

** Identify who might have ideas about the issue.**

** Identify and explain the different points of view on this issue.**

** Describe your proposed solution to this issue through the creation of law or regulation.**

The second set of sample questions, designed for a University environmental science class, could be applied to a high school environmental studies class. The categories: ecosystem degradation and restoration, resources, and environmental decision making were taken from a standard environmental studies text (Kaufman and Franz, 1996). The questions address the same content that teachers normally teach students, but through more
teacher-directed means such as lecture. Students were required to investigate these questions through research of a specific issue and synthesize the concepts in a meaningful and coherent essay. Putting all their information together to address these questions proved challenging and required students gain a thorough understanding of the issue.

Sample Content Focus Questions from an Environmental Science class *

**Ecosystem degradation and restoration:**
** Describe the structure and function of the ecosystem that has been affected by your issue.
** Describe the processes that have led to the degradation of this ecosystem (pollution, land disturbances, etc.).

**Resources:**
** Describe the natural resources that relate to your issue. Distinguish between biotic and abiotic resources, renewable and nonrenewable resources.
** Predict how these resources will be affected by your issue.

**Environmental decision space:**
Generally describe the context in which environmental decisions are made regarding your issue:
** Legal questions : Identify the state and federal laws that apply to this issue. Explain who enforces these laws, and illustrate the effective of the enforcement practices.
** Economic questions : Determine who benefits from the economic of this issues; who pays or suffers over the long-term.
** Political questions : Describe the influence various policy-makers display in this issue. Describe their positions on this issue. Explain how others participate in the political process (Individuals, lobbyists, etc.).
** Ethics questions : Describe who or what is being valued; what is being ignored, destroyed or neglected; and whose and what values take precedence.
** Historical questions : Identify when this issue arose. How did the issue arise, and has the issues surrounding the problem have changed in the past 100, 50, 20, 5 years?
** Social questions : Describe the demographics of your issue's locale and how the problem affects the various social groups. Determine how different social groups feel about this issue.
** Science questions : Describe the role that science plays in the management decisions that relate to your issue.

Make connection between the various "areas of influence"; explain how they affect, and how are they affected by, each other. For example, how do economics and ethics interact? How do policy and ecology interact?
**Action Planning:**

**Formulate an action plan that will promote ecosystem protection and restoration. What are the limits to your solution?**

**Predict how the ecosystem be affected both in the short and long term if this issue is not addressed.**

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**Developing Focus Questions:**

The investigation of community problems provides an effective forum for the use of critical thinking skills and higher order thinking. Most community issues or problems are complex and integrate a wealth of knowledge and varying opinions. Consequently, students may find conflicting facts and information. Critical thinking and investigation is required to understand the issue, sort through various perspectives and develop a personal opinion. Designing good inquiry questions can help encourage critical, creative and integrative thinking and will help students understand, evaluate and find solutions to their issue.

*Consider forming questions that:* *

- make connections across disciplines: ecology, social science, history, economics, etc.;
- ask about relationships between two variables and the extent to which one variable affect another;
- ask about the beliefs and values behind different viewpoints (see section on valuing in phase 4);
- identify the root problem and not just symptoms of the issue;
- identify a means to affect this issue;
- avoid a simple "yes" or "no" response; and,
- use the verbs such as identify, predict, evaluate, relate, and contrast.

**Design questions that incorporate the following terms:**

The following terms foster depth and breadth to a student's issue investigation. The suggested terms are divided into three categories: cognitive (which deal with knowledge and understanding), affective (which deal with feelings and attitudes), and psychomotor (which deal with physical skills). The terms lower on the list require more critical and creative thinking and indicate a better understanding of the issue (Trowbridge and Bybee, 1996). Incorporate the use of these terms as much as possible with your students.

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<th>Cognitive</th>
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Below, create questions that relate to your discipline and that could be addressed through the scope of a community investigation.

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Infusing Content Focus Questions:

These questions will need to be infused among the other process oriented questions (listed in the implementation chapter). It is up to you to determine if these questions will be targeted at individual students, or divided up among cooperative group members. You will also need to decide how the questions will be distributed and evaluated. You can provide them to students before each phase begins and collect them at the end of that phase. Or, the questions can be combined into a booklet that serves more as a journal.
Students then answer the questions as they proceed through the project, periodically turning in the booklet for evaluation. Consider the following when planning for infusion of content focus questions:

- **Distribution**: Provide students with content focus questions at the onset of their project to help shape their research questions and issue investigation. Rather than having students complete the answers at the end of the unit, consider a means for students to update their progress (such as through journalling) as the project proceeds. Students can assign different questions to each teammate in order to distribute the research requirements, though each student should share their information and account for learning all the concepts you outlined above.

- **Evaluation**: One option for evaluating content focus questions is for students to create a portfolio where they include written answers to each question. You, or your students, may also decide on other alternative means to account for their learning such as through a play, debate, or public presentation. In any case, it is suggested that you establish some method for student to account for their learning as the project proceeds.

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**Focus Question for Teacher Planning**

** Explain how you will infuse your content focus questions into the CPI project. Describe how they will be distributed and evaluated.**
CHAPTER III: IMPLEMENTATION

This chapter describes the five main CPI phases which include team building, community investigation, issue investigation, issue analysis, and taking action. Each phase includes background information, suggested goals and objectives, and activities aimed to help reach these goals. Focus questions for students to reflect on this process are provided as are the continuation of "teacher focus questions" at the end of each phase. Answering these questions will help you create an implementation plan for each of these phases. Again, it is highly recommend that all phases be completed in order to provide students with skills and the opportunity to help solve the problem they are investigating.
Phase 1: Team Building

"The highest and best form of efficiency is the spontaneous cooperation of free people."

-Woodrow Wilson

CPI projects require students work in small groups to investigate and take action on a community issue. The benefits of cooperative learning are well documented and described on page 24. However, to develop a strong, functional group may involve creative efforts. Cooperative group work is often a new experience for students, which may cause initial resistance. CPI projects should therefore begin with activities that explicitly develop student skill in working together. This first phase helps students to get to know each other, to share their interests and concerns, and to explore effective methods of interaction that will help them complete their action project.

This chapter offers a sequence of activities that range from "light and fun games" to activities requiring greater sharing and communication. The first games will help break the ice with students unfamiliar with each other. The "deeper sharing and bonding" activities will enable students to share their interests and concerns. Finally, the clarifying questions exercise offers a means for students to develop questioning and interviewing skills (for use during the issue investigation).

For student groups to work effectively, a continual focus on group function will be required. Throughout this and the following phases it is recommended that you provide opportunities for open communication among students, encourage them to share ideas, and create a safe environment for them to offer and accept feedback. Students can evaluate themselves and others in their group by using the group and self-evaluation forms provided on pages 83 and 84. These forms should be photocopied and distributed for use throughout the project. Your frequent, but timely, feedback to individuals and to the group as a whole will also be essential.
Goal:
• Students will build an alliance that will work cooperatively and effectively as a group.

Suggested Objectives:
• Students will engage in cooperative activities that promote group cohesion and open communication.
• Students will share individual interests and concerns.
• Students will develop communication skills by asking and answering clarifying questions related to their specific social and environmental concerns.

Suggested Activities:
• Light and fun games
• Sharing and bonding activities
• Clarifying questions

Student Focus Questions
(Use before, during, or after activities.)

** Describe the types of group interaction that will work best to accomplish the CPI goals.

** Identify the knowledge and skills you bring to this group.

** Create a system that will help you evaluate and improve your group's cooperative work.
Benefits to Cooperative Learning

Reasons to Encourage Cooperative Group Work
Include the Following: *

- cooperative learning can decrease students' dependence on the teacher and increase students' responsibility for their own learning;
- cooperative learning empowers students, making them responsible for seeking information and achieving a particular task; and
- cooperative learning can be an effective technique for involving and motivating students who may not otherwise excel or be interested in learning.


Research On Student-Student Interdependence Indicates That Students Will: *

- achieve at a higher level;
- use higher level reasoning strategies more frequently;
- have higher levels of achievement motivation;
- be more intrinsically motivated;
- develop more positive interpersonal relationships with each other;
- value subject area being studied more;
- have higher self-esteem; and
- be more skilled interpersonally.

Light and Fun Games

**Extension Cord Confusion:** This exercise can be done by a single group or by several groups at the same time. First, knot a long cord or rope several times. Second, ask each person to place one hand on a section of the cord. Finally, without anyone letting loose of the cord, untangle the knots in the cord.

**Line-Up:** This activity requires students use alternative forms of communication to problem-solve. Without talking, have students line up according to your instructions. Suggest they line up according to their height (with the tallest person at one end and the shortest at the other), or birthday (with January 1st at one end continuing in order to December 31st at the other end) or name in alphabetical order (Amy at one end, then Bruce, Greg and Sydney). In addition, try more creative and challenging ideas such as having them line up in the alphabetical order of their favorite food, animal, plant or color. Ask students to contribute their suggestions.

**Mirroring:** Ask students to pair up with no designated leader. With partners facing each other, have them move together slowly, using simple actions, just trying to do the same thing. Afterwards, ask who they thought the leader was.
# Sharing and Bonding

## The Shield:

One way for individuals to share who they are is through a shield. Provide each student with a large piece of paper and divide it into six even sections. Along the top write the following: "Who am I", "What I need", and "What I offer" (see diagram below). These headings can be varied according to student age and group needs. Next, have students draw three pictures in response to each question. Students present their drawings to the group while their classmates try to decipher what the pictures represent.

<table>
<thead>
<tr>
<th>Who am I</th>
<th>What I need</th>
<th>What I offer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Web of Interconnectedness:

This activity is designed to help students share their interests and concerns and to identify any commonalities, or interconnections. It is recommended that at least four areas be included as themes. For example, begin by asking students to describe their hobbies, their favorite place to spend time, and their home community. Later, include more probing questions that ask students to share their primary social and environmental concerns. Present students with these questions, allowing ample time for reflection before sharing with the larger group. Answers should then be
written on a large writing surface in order to make links between students with common answers.

Students' names, including the teacher's, can be placed on a chalk board in a circular arrangement leaving as much room as possible between names.

Student A

Student B

Student C

Teacher

The teacher begins the exercise by listing a hobby next to his or her name, for example hiking. Each student's hobby is written by his or her name. When finished, lines are drawn between similar hobbies. The same procedure occurs for the next questions. Continue connecting names until categories are complete for everyone in the group. The web usually shows strong and complex interconnections between group members. Social and environmental concerns that overlap significantly should be noted for possible issues to investigate.


**Extension:** This activity can be extended in the clarifying questions/responses activity on the following page.
Clarifying Questions

Clarifying questions are meant to deepen reflection and clarify the actions or comments of an individual. By asking clarifying questions, students ask individuals to consider why they behave or remark as they do. By answering clarifying questions, students can practice clarifying their own thoughts and actions. The skill of asking and answering clarifying questions will become an integral part of the issue investigation, phase three. By interviewing community members and asking them to clarify why they take one position or another, students can begin to understand how individual differences related to community issues.

Review the following guidelines with students in order to help them create effective clarifying questions:

Clarifying Questions: *
- work best when there are no right or wrong answers;
- are not mechanical responses which follow a formula;
- help individuals clarify their ideas and puts the responsibility on them to look at their behavior;
- provide stimulation and permissiveness, not insistence;
- avoid moralizing, criticizing, giving value or evaluative; and,
- should not extend discussion.


Activity: After reading the above guidelines, have students practice asking clarifying questions. Combine this exercise with the questions addressed in the Web of Interconnection's activity: what concerns students most socially and about the environment. Following time for reflection, ask each student to take a turn in the "lime-light" as they write their concerns on the board and briefly describe them. Teammates should then ask clarifying questions that follow the above guidelines (see below for sample clarifying questions). This is a challenging exercise as it is easy to engage teammates in dialog and to try to sway each other's opinions. Remind students that the goal is not to change or influence how a person feels, but rather to clarify why someone thinks or acts as they do. The skill of asking good clarifying questions will be applied later in other community investigation activities such as interviewing.
Sample Clarification Questions: *

The following list includes sample clarification questions that may be helpful in this exercise and during student issue investigation. These questions should be used in conjunction with the criteria of an effective clarification questions. Remind students that if the person is offended or responds defensively, the response has been used inappropriately. If the person appears reflective of his or her actions or statements, the questioning was effective. The questions in all cases should be open-ended.

- What did you mean by ______: can you define that word?
- Are you saying that . . . (repeat what the person said)?
- Did you say that . . . (repeat in some distorted way)?
- Can you give me some examples of that idea?
- Have you felt this way for a long time? If not, what led to the change?
- Is what you express consistent with . . . (note something else the person said or did that may point to an inconsistency)?
- Why is that important to you?
- What have you done about that problem?
- How did you feel when that happened?
- How did you come to that decision?
- What other alternatives did you consider?
- Would you really do that; what would be its consequences?

Focus Questions for Teacher Implementation of Phase 1: Team Building

** Identify the collaborative skills (i.e. communication and leadership) your students have, which skills they need to develop, and describe how these skills will be developed.

** Describe the activities you will use with your students to create an effective cooperative group.

** Describe what else you can do as a teacher to encourage cooperative group work.
Phase 2 - Community Exploration

This phase provides activities that will introduce students to their community. The following activities will accomplish this by helping students to define their community, identify existing community issues, and select an issue of particular concern to study in greater depth. Expect the scope of the students' "community" to vary depending on students' age. In middle school, students may prefer to focus on a local school issue such as the clean-up of their school grounds. Junior and high school students may find interest in city or regional issues such as creating bike paths, or promoting the clean up of a hazardous waste site. This phase is devoted to community exploration. The suggested activities will help you introduce students to the variety of issues and resources that exist in your community. Phases, later in this manual, provide activities for in-depth investigating and problem-solving.

Goal:
• Students will identify pertinent social and environmental community issues and to choose one issue to investigate in-depth.

Suggested Objectives:
• Students will identify local community environmental and/or social issues;
• Students will question a variety of community members including government representatives, local activists, and industry people, about specific local issues; and,
• Students will work as a group to select an issue that, through its investigation, can address the class curriculum content requirements.

Suggested Activities:
• Community awareness exercise
• Activities to help identify local issues
• Selecting an issue

** List the pertinent social and environmental issues in your community.
Community Awareness Exercise *

Because the CPI process focuses strongly on community, students should develop an understanding of what constitutes a community and how they are connected to it. This community awareness exercise can help students define the community to which they feel connected -- whether it be the school grounds or the larger city. Begin by asking students to describe what community means to them. Provide a large sheet of paper and ask students to draw a picture of how they see themselves in relation to their community. This activity demonstrates what students include in within the boundaries of their community. Encourage students to share their drawings with their classmates. Further discussion and activities such as a community walk and forum meeting (described on the following pages) can help students enlarge their community vision. Consider the following discussion question:

Student Focus Questions

** Describe the human and non-human components of your community.

** Explain how you affect and are affected by these pieces of your community.

** Identify the parts of this community you like and the parts you would like to change. Propose several actions you could take to make this change happen.

Identifying Issues

The selection of activities below will help students discover issues that exist both inside and outside their school. Students can do all of these activities, or a select few. If time is limited, a two hour community forum provides an excellent opportunity for students to learn about a range of issues and make important personal connections to community members.

Community Walk:

A community walk can help raise awareness of the natural and social environment of the students' community. William Stapp proposed this as the first step to his Action Research and Community Problem-Solving program (1996); a model that closely follows the CPI process. During the walk, suggest students write down their concerns in individual notebooks. In order to avoid focusing only on negative aspects of the community environment, encourage students to write down the things and places they like in their community. Supplement the neighborhood walk with a tour of the school, where issues of student concern can also be noted. Students can then share these issues back in the classroom and try to identify big picture issues or problems.

Scan Newspapers, Local Newsletters and Magazines For Local Issues:

Create a bulletin board in the classroom where students post current issues. Begin this process on the first day of the CPI unit so that students have sufficient time to find out about issues outside of classtime.

Question People:

Students can survey community members, neighbors, and school officials to generate information about local issues.

Gather Information From Local Sources:

Encourage students to visit local agencies, businesses, civic, and environmental groups to gather newsletters and information packets. Many organizations and government offices have pamphlets for public education.
Community Forum:

A community forum provides a quick and effective means to expose students to a range of issues. These community forums often build important bridges between schools and their community. Agency, activist and industry representatives are often willing and eager to share their time to educate student action groups. Students and teachers alike benefit by learning about pertinent issue and making connections with key players.

To organize a forum, invite two to four local representatives who offer a wide range of perspectives on a variety of issues. These individuals should be well versed in a number of issues, and willing to avoid major confrontations. Try to select speakers who offer different perspectives on the "hot" issues around town. For example, if focusing on an environmental issue consider inviting a person from the Forest Service or the Department of Fish and Wildlife, an environmental activist, and an industrial or business member. If focusing on a social issue, consider inviting the city mayor or other legislature, a social worker, and a civic rights activist.

Students should prepare for the forum by reading about the issues the forum members will present and by devising appropriate questions. Questions should focus not only on learning about issues, but also work toward identifying one issue that can be investigated in the given time frame for the CPI project. Suggest students ask what types of action would be possible, how to get more involved, and who else they could contact about specific issues. Encourage students to generate a list of other contacts so that future questioning can be diffused among a range of community representatives.

During the forum, request community members give a brief introduction of "their" issues to the whole group. Next, break students out into small groups of three to five to ask specific questions. These small groups allow a non-threatening setting for students to ask questions and make contacts for future interactions. Consider holding the forum in the library or another setting more comfortable than the classroom and serve refreshments to welcome your guests. Finally, follow up with a thank you letter and invitation to our students' final presentation.
The Following Procedure is Recommended:

1. Briefly introduce community members to the larger group of students.
2. Explain the process and time element to forum participants (five minutes maximum to introduce themselves).
3. Have students disperse into breakout groups.
4. Allow time for students to ask pertinent questions and interact with community members (fifteen to twenty minutes).
5. Rotate student groups.
6. Thank participants for their time and input.
7. Debrief forum with students either that day or the next class period (see possible debrief questions below).

Possible Local Resource People to Invite:

- State Legislatures
- City Mayor and City Council
- City Zoning Commission
- Local Health Department
- Corporate or Industrial Personnel
- Water Plant Superintendent
- Waste Water Engineer
- Environmental Organization Members
- Wildlife or Fisheries Biologist
- Forester
- Geologist
- Community Activist Group Members
- Newspaper Editors and Reporters
- Real Estate Developer
- School Teachers or University Professors
- Physician

Student Focus Questions
(Ask these questions after the forum)

** What new issues did you learn about at the forum?

** Summarize what you learned through the forum regarding science, economics, history, math, social science.

** Identify the different opinions addressed in the forum, and evaluate what the basis was for such different opinions.
Selecting an Issue

Students should now be aware of and interested in a wide range of local issues. The next challenge involves having students break up into small groups and choose one issue to pursue in greater depth. To begin, allow students to brainstorm a list of all the community problems and issues they identified. Then ask students to identify a method for isolating a problem they wish to investigate in greater depth. Suggest they develop specific criteria and a method for project selection (see below). For your first time using CPI it may be easier to have the whole class work on one issue with smaller "task groups" (three to five students each) focusing on particular aspects of the larger issue. However, students groups will develop a stronger sense of motivation and ownership if they choose their own specific issue.

Potential Criteria For Issue Selection:

- all students find the issue interesting and important;
- there is sufficient information available to address the content focus questions;
- the issue is a real problem in the community;
- students can take action on this issue; and,
- the project can be completed give available time and resources.

Student Focus Questions

** Create a list of criteria for selecting an issue.

** State the issue you have identified in 1-2 sentences generated by the group.
Focus Questions For Teacher Implementation of Phase 2: Community Exploration

** Identify the issues you feel would be appropriate for your students to investigate given their age, maturity and interests.

** List three or four people in your community who may be willing to serve on a forum. List others who could serve as resources for a CPI project. Detail how and when you will pursue these connections.
Phases 3 - Issue Investigation

Research will need to begin once students have selected a topic. Conducting community-based research will most likely be a new experience for your students and will therefore require you to provide adequate structure, support and information for how they can access resources and information. This phase provides activities to assist your students through their investigation. The section begins by helping students plan for an investigation by setting goals, divvying up tasks, developing research questions, devising a time-line, and identifying avenues for accessing information. Then, to help facilitate the actual research, suggestions are provided for how to conduct interviews and surveys. The final section of this manual discusses concepts maps as a means to synthesize the information gathered during the investigation.

You will also need to provide opportunities for students to meet with community members by either inviting them to the school, or finding a way for students to leave campus. It will be helpful to arrange for phone access on school grounds, and to provide transportation and other logistical support when necessary. Provide ample opportunity during class time for students to share and critique the information they gather. Suggest that students create a concept map of their issue that they fill in and develop as they gather information (see the end of this phase, page 50).

Keep in mind that the process of conducting an issue investigation may be as important for students as the information they gather. Students will acquire valuable skills in accessing information, questioning people, and organizing the information they receive. Depending on the depth of their research, students will likely have to sort out diverse and opposing opinions, address potential conflicting "facts", and reflect on the values embedded in the information they gather. Even when projects do not go as planned students can still learn a great deal from the process.
Your facilitation during issue investigation will be very important. You will need to provide encouragement and constructive feedback throughout the process. If students have trouble with group interactions, you will need to help process the conflict and get the group back on track. It will help to provide time and procedures for students to analyze their group's functioning. The assessment forms on pages 83 and 84 can help in this process. Above all, address problems as they arise.

**Goal:**
- Students will develop the knowledge and skills necessary to organize and execute an issue investigation.

**Suggested Objectives:**
- Students will establish goals for their project, develop a time-line and divvy up tasks for issue investigation.
- Students will learn and apply various techniques for gathering information such as interviewing and surveying.
- Students will develop a concept map of the issue that synthesizes information, players and relationships.

**Suggested Activities:**
- Planning the Investigation
- Interviewing
- Note-Taking
- Surveying
- Concept Mapping

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Student Focus Question
(Ask before investigation activities begin.)

** Describe the various methods you can employ to learn about your issue. Identify the skills you, and others in your group, have that will facilitate with this issue investigation.**
Planning the Investigation

Consider structuring the following activities to help students plan and organize their issue investigation. Advise students to set realistic and attainable goals. It is better for them to start with small goals and expand later rather than to attempt a grandiose plan which is too difficult to accomplish.

**What Do We Need to Research?**

Students should focus their research by referring both to their issue statement on page 36 and to the content focus questions generated by the teacher. Next, have students answer the following questions: what they already know about the issue, what information they still need to find out, and how they will find this information. From there, students can decide how they want to organize their research.

- What we already know . . .
- What we need to find out . . .
- How we'll find it . . .

**Prepare Research Questions:**

For each of the information needs listed above, ask students to describe the questions they will need to ask and the differing viewpoints which must be taken into account. For example, to understand the social impacts of wolf reintroduction it may be necessary to question a range of people who offer different viewpoints such as a wolf biologist, ranchers and home owners living near a wolf pack, a local politician, and a representative from a wildlife conservation group. Refer to the section on interviewing, page 42, and back to the section on clarifying questions, page 28, when devising questions.

**Develop an Expected Timeline:** Dates should be determined for the following events:

- Information gathering (interviews, research, surveys).
- Completion of content focus questions.
- Action plan.
- Action implementation.
- Final presentation or symposium.
Create a Task Checklist For the Investigation:

Specify who will gather specific information or meet with specific people. Students will work together more efficiently if each one has a task that contributes to the project. Make sure the group feels comfortable with how these tasks are assigned. You will need to constantly monitor each student's achievement and help them reassign tasks as needed. Expect to revise plans as the project evolves. Suggest the following structure:

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Task</th>
<th>Due Date</th>
</tr>
</thead>
</table>

Student Focus Questions

** Identify your group's needs in order to complete a successful issue investigation.

** Explain how will you address the content focus questions devised by your teacher.

** Describe your group's initial proposals for taking action.

** Describe your group's initial ideas for a final presentation or symposium.
Interviewing

Interviews provide an excellent source for accessing information. People directly involved with an issue often provide valuable information than can't be accessed through the library or other secondary resources. Below, you will find recommendations for how to set up an interview, suggestions for conducting the interview, sample interview questions, and a form for students to use while interviewing. Remind students to interview a range of people who offer different viewpoints. Interviews offer one source gathering information. Additional information can be solicited through computer searches, letters to groups and agencies requesting information, legal or government documents, and newsletters or information brochures. Surveys (described on page 47) also provide a useful method for accessing local information and opinions.

Setting up an Interview *
What to say to set up an interview via Telephone or electronic-mail:

- **Initial call:**
  Hello, my name is ______________. I am a student at ______________ and I am studying _________________ as part of a community research project. I am hoping you can help me with information regarding this subject, or can provide the names of other people or organizations who might have knowledge on this topic.
  Would you be willing to give me a few minutes of your time for an interview?
  Is this a good time or can we arrange another time?
  There are a few other people who would also like to talk with you.
  Would this be possible? When? __________
  Thank You

- **Voice or e-mail message:**
  Hello, my name is ______________. I am a student at ______________ and I am studying ______________ as part of a community research project. I am hoping you can help me with information regarding this subject, or can provide the names of other people or organizations who might have knowledge on this topic.
  Would you be willing to give me a few minutes of your time for an interview?
  I can be reached at this number (give your home or school phone or e-mail) ___________ between these times: (make sure you will be available then) _______________
  I can also try calling you back tomorrow at this same time.
  Thank you.

* Written by Tamara Nelson of Snohomish High School, 1996.
Suggestions For Conducting the Interview *

Discuss these suggestions with students and have them practice interviewing each other before they meet with community representatives.

- Have your school number and address on hand (or parental permission to leave your home phone number and address).

- Prepare questions ahead of time, but only four or five in order to allow room in the interview for spontaneous questions and answers.

- If your contact isn't there, ask when he/she will be there. Write down the time. Call back at that time or leave your name, grade, school, a phone number, a time you can be reached, and a brief message about why you are calling. Most officials will return calls. Call back if your call isn't returned. Be persistent.

- When you get the person, thank them in advance and when you finish for the time spent taken with you.

- Write down exactly what the person tells you. You might have to ask him or her to repeat what they have said. Most people talk faster than you can write (see below on note taking). If there is silence while you catch up on your notes, say to the person, "Just a second, I'm finishing getting this down".

- Ask questions from your focus content question sheets, but don't let it stop you from getting tangential information. If the person you are interviewing wants to talk about something besides the answers to your questions, let him or her. You might get your most interesting information that way. Then return to your questions.

- Ask questions of the "other side". Get them to help you understand.

- Try to obtain documentation for facts, but ask for the documentation in such a way that the person does not feel like you're expecting a term paper out of them. For instance, "Do you know where I might find documentation for that?" or, "Is there a place I could find this information written out?"

- While you have the person on the phone, get his or her correct name, title, address and phone extension. Ask for the name, phone number and/or address for any other resources the person mentions. Ask if you can use their name when phoning the person (as in, "Dori Gilels suggested that I phone you regarding a particular question"), because it may help insure that you get a return call or answer from a person who knows your source.

- Generally, keep yourself out of the issue and just ask questions. However, if the person seems interested in what you are doing, feel free to share your experience.
• Try not to ask the person to do work for you (e.g., copying materials, looking anything up). Always assess what you can do to get information they mention. However, if it seems that a particular piece of information (e.g., an unpublished paper) may be hard to locate, ask the person how you might obtain it and be grateful if they offer to copy or send you anything. Even a simple request may take a half-hour of someone's time. Remember to send a thank you note for information they send.

• Thank the person when finished. If the person is a valuable resource you may want to invite them to come to your school for a face-to-face interview with your group, or go to their place of business for the interview. If a person gives you more than a few minutes of time, be sure to write a thank you note as a follow up and invite them to your final presentation. Provide the time, place and date.


Sample Interview Questions:
The following questions do not address specific content areas, but suggest how students can determine different positions and viewpoints.

- May I quote you?
- Would you object if I used a tape recorder/video recorder?
- When and how did you get involved with this issue?
- How has your opinion changed since your involvement with this issue?
- Why do others feel differently?
- Can you recommend others involved in this issue that we could talk to? Do you know their phone number or address?
- What other sources can you recommend?
- What might you expect to see happen in the future regarding this issue?
- What would you like to see happen?
- May I call you again if needed?
- Is this the correct spelling of your name?
- Thank you very much for your time. Please come to our final presentation on ______ at ________.

Student Focus Question

** Identify who you will interview and define the questions you will ask.
Sample Interview Write-up

Date of Interview ____________ In person _____, by phone _____, or by letter ____

Name of person interviewed: _______________________ Address: _______________________

Title: __________________________________________ Address: _______________________

Organization/Affiliation: ________________________ Address: _______________________

Phone number: ________________________

Questions/Answers

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

For student use- please copy and distribute.
Note-Taking *

These suggestions may help students record information from their interview. Again, provide opportunity for students to discuss and practice these note-taking suggestions in the classroom.

- Always take notes for your project.
- Put a heading on top of the paper with the name of the person, date and phone number.
- If possible, go through the notes immediately after you're done and fill in where you have written something cryptically. Full sentences are not necessary; just enough to preserve all the important information and phrases for a later time.
- While taking notes, write additional questions in the margin. If the person is talking fast, just quickly put a question mark out in the margin. When you get a chance in the conversation, ask the person those additional questions.
- Keep taking notes, even if you get tired.
- File notes in a place you'll be able to retrieve them. Or keep them chronologically in a notebook, and make a 'Table of Contents' about what is in that notebook.
- Always carry a notebook with you so that you don't have to put your notes down on scraps of paper.

Surveys

Surveys provide a useful method for students to collect either information or opinions from people in their community. *Information* surveys provide a format for gathering specific information, they are not used to interview people. Information surveys may be used to find out, "How many leaky faucets are in a building", "How much food is thrown away in the school cafeteria", or, "How many city cars fail the emissions tests".

*Opinion* surveys collect a particular group's opinions. They are used to question people about the extent to which they agree or disagree with a particular statement such as, "To what extent do the school administrators believe that the cafeteria should compost all organic waste", or, "To what extent do parents believe that their children should become politically active through school projects?". Opinion surveys can also be used to assess the degree of public support for a particular action project. They can help identify the people who agree with and support your students' proposal and those people in opposition. A sample opinion survey and a blank form are provided for student use.

**Sample Opinion Survey:** *

An opinion survey is used to determine a person's response to a range of related questions. This following example involves animals in medical research, though students should design questions that relate to their specific issue under investigation. Suggest that students include at least 25 different people in their survey. Responses, categorized between SA-strongly agree, A-agree, D-disagree, SD-strongly disagree, and UD-undecided, should be written on the shorter lines to the left of the question numbers. For one particular person, the survey form may be filled out as follows:

_ D_ 1. Animals should never be used in medical experimentation.

_ UD _ 2. Pound seizure should be illegal.

_ SA _ 3. The number of animals used in experimentation should be limited.
4. Animals should only be used in medical research by state-approved research facilities.

5. Research facilities must use anesthesia in all experiments with animals.

Sample Tabulation of Results:

All responses should be tabulated in the following format. The chart below tabulates the responses of seventy different people. This is not supposed to be an exact scientific process, but rather gives students a general idea about public opinion and sends them out into their community interacting and asking questions.

<table>
<thead>
<tr>
<th></th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
<th>UD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td># 15</td>
<td>14</td>
<td>17</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>2.</td>
<td>14</td>
<td>17</td>
<td>14</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>3.</td>
<td>16</td>
<td>14</td>
<td>12</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>4.</td>
<td>17</td>
<td>10</td>
<td>0</td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td>5.</td>
<td>20</td>
<td>39</td>
<td>11</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

# the number of people who strongly agree with question #1.

*Adapted from Barbara A. Lewis, 1991, p.46.
Survey Results: For student use—please copy and distribute.

Survey questions:

1. 

2. 

3. 

4. 

5. 

Tabulation of Results:

<table>
<thead>
<tr>
<th>SA-weakly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>SD-weakly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
</tbody>
</table>

1. 

2. 

3. 

4. 

5.
Concept mapping *

A concept map offers a useful method for students to organize the information they gather during an issue investigation. The map requires students to identify the main components of an issue and the relationships between these components. General concepts (written inside circles, ellipses, or boxes) are written at the top or middle of the map, with more specific concepts arranged below or around these concepts. Lines connect related concepts and describe the nature of the relationship. Two examples follow:

Example Student Concept Map:

Phosphates
  - Sedimentation
  - Nitrates
  - Temperature
  - Turbidity
  - pH

measured by

Water Quality on the
Clark Fork River

affected by

Pollutants
  - which come from
    - Agriculture
    - Industry
    - Consumer Waste

affects

People
  - Plants
  - Animals

State agencies
Federal agencies
Local Agencies
regulated or monitored by
Focus Questions For Teacher Implementation of Phase 3: Issue Investigation

** Describe the skills that are necessary to investigate complex issues. Identify the skills that your students have and the skills will you need to help them develop.

** Illustrate how you will support issue investigation with your student (i.e. in terms of logistics, resources, timing, contacts, training, procedure, etc.).
Phases 4 - Issue Analysis

This phase requires students move beyond gathering information about their issue to analyzing why the problem exists and searching for solutions. Issues are difficult to understand because they commonly involve a range of people who have different perspectives both on the nature of the problem, and how to resolve it. Solutions are found only when these different perspectives are understood. This section describes a technique which helps students identify the different people involved within their issue and the differing beliefs about that issue.

This section also discusses the role values play in influencing how a person views a problem and the solutions they choose. The following activities present students with a means to help clarify their own values related to their chosen issue. Understanding their personal opinions and identifying range of possible solutions will help students develop an action strategy for the final, action-taking phase.

Goal:
- Students will identify different positions related to an issue and clarify their own personal position.

Suggested Objectives:
- Students will identify the players involved in the issue and evaluate their roles by examining different values and perspectives.
- Students will identify and clarify their own value positions related to the issue and to any proposed solutions.

Suggested Activities:
- Issue Analysis
- Values clarification

Student Focus Question
(Ask before the issue analysis)

** Explain why many community issues are complex and difficult to solve.
Issue Analysis

The Issue Analysis Technique (IAT), designed by Ramsey, Hungerford and Volk (1989), offers a framework for analyzing issues. The technique identifies the conflict (or issue), the main players, their position on the issue, associated beliefs and values, and proposed solutions. "Issues" arise when individuals or groups disagree about the nature of a problem and what should be done to solve the problem. The issue may pit economic interests against ecological interests or political interests against health and safety concerns. Many times, an array of differing beliefs and values are involved within any one issue. The issue analysis technique helps students identify community problems and issues, recognize the groups or players involved in the issue, the positions taken by those players, and the inferred values which appear to underlie those positions, or beliefs.

The Technique Involves Identifying the Following Components:

Problem: A condition in which the status of someone or something is at risk. (Example: forest fires in a national park.)

Issue: A problem or its solution about which differing beliefs and values exist. (Example: should the National Park Service continue its "let burn" policy when natural fires occur within park boundaries?)

Players: The individuals or organizations having a role in the issue. (Example: Park Service employees, tourists, home owners surrounding the park, the wildlife.)

Positions: The postures of the players concerning the issue. (Example: certain conservation biologists may be "for" the let burn policy, some owners may be "against" the policy.)

Beliefs: Those ideas concerning the issue, whether true or false, held by the players. (Example: home owners may fear that their property will burn under the policy.)

Values: A value is the worth a person, or a group, places on something. Values reflect the relative importance of beliefs in a given situation. (See the key on the following page to help identify value positions.)

Solutions: The various strategies available to resolve the issue.
Example Value Descriptor List: *

Aesthetic: The appreciation of form, composition, and color through the senses.

Ecological: Pertaining to natural biological systems and principles.

Economic: The use and exchange of money, materials, and/or services.

Educational: Concerning the accumulation, use, and communication of knowledge.

Egocentric: Pertaining to a focus on self-centered needs and fulfillment.

Environmental: Pertaining to human activities in terms of quality of natural resources, e.g., plant and animal species, air, water, soil, etc.

Ethical/Moral: Concerning present and future human responsibilities, rights and wrongs, and ethical standards.

Ethnocentric: Pertaining to a focus on the fulfillment of ethnic/cultural goals.

Health and Safety: The maintenance of positive human physical conditions.

Legal: Relating to national, state, or local laws; law enforcement; law suits.

Political: The activities, functions, and policies of governments and their agents.

Recreational: Pertaining to human leisure activities.

Scientific: Concerning the process of empirical research; knowledge gained by systematic study.

Social: Pertaining to shared human empathy, feelings, and status.

Technological: Concerning the use of technology for human or societal goals.

Suggestions For the Issue Analysis:

- Encourage students to practice the Issue Analysis Technique (IAT) using a sample issue before going on to their project issue. Begin with a simple sample issue that all students have some familiarity with. The worksheet on page 57 may be used to for both a sample issue and the students' project issue.

- Be careful to identify an “issue” and not just a "problem". For example, a problem might be the poor air quality of a local city. The issue is a matter about which two parties can't agree. The issue in this case may be: should industry of tax payers pay the cost of clean-up.

- Students should be cautioned against categorizing the position, beliefs, and values of people without sufficient information. Refer back to the clarifying section on page 28 for questions that help identify individual beliefs and opinions.

- Once students have practiced an issue analysis with a sample issue, have them try an IAT with their chosen issue. When students do this at the beginning of their investigation it helps to identify information holes and direct further investigation. Students can return to the issue analysis and complete it as more information comes available.

- Photocopy the worksheet and extension questions on pages 57-58 for student use.
Sample Issue Analysis Worksheet

<table>
<thead>
<tr>
<th>Players</th>
<th>Positions</th>
<th>Belief Statements</th>
<th>Values</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Student Focus Questions *

For your Issue Analysis:

** Identify what additional information is needed to completely understand this issue (e.g., missing data or players) and where this information can be found.

** To what extent did you categorize players' beliefs on evidence versus your personal opinion?

** Do you think any of the player's beliefs are biased? (A bias refers to preconceived judgments and are based on feelings, not facts.) Which beliefs are based on reason? (Reason refers to interpretations that can be clearly explained and justified.)

For your Issue Solution:

** Identify the decision-makers concerning the various solution to the issue.

** What are the trade-offs related to the various proposed solutions (i.e., positive and negative, and shot and long-term consequences)?

Values Clarification

A value is a standard that guides and determines personal behavior.

Persons with unclear values lack direction in their lives, lack criteria for choosing what to do with their time, their energy, their very being.

The goal of this section is to help students become aware of the various choices they face (related to their project and other issues) and to help them make decisions that are consistent with their personal value system. In schools today many values are imposed on students without providing opportunities for making choices. Even school behavior codes and curriculum activities have values embedded in their experiences. Requiring students to engage in certain activities without enabling them to accept or reject the experience imposes values. Even seemingly benign activities, like requiring students to recycle, imposes values such as "recycling is good" in this case.

An alternative is to make explicit the choices students face and to give them an opportunity to act in a conscious manner. In doing so you will not dictate values, but will help students become aware of, develop and communicate their own values. You can provide opportunities for students to act on their values in the context of real issues and problems (both with their project issue and other relevant issues). Raths (1966) offers the following overview of values and suggests a means to help encourage the valuing process:

Traditional Approaches to Values Include: *

- Setting an example
- Persuading and convincing
- Limiting choices
- Inspiring
- Rules and regulations
- Cultural and religious dogma
- Appeals to Conscience
These methods, listed above, seek to control behavior and even form beliefs and attitudes rather than to develop values that represent free and thoughtful choice.

**A Value Should Be:**

- Chosen freely
- Chosen from alternatives
- Acting upon choices
- Chosen after thoughtful considerations of the consequences of each alternative
- Affirmed
- Prized and cherished
- Repeated


**How to Encourage the Valuing Process With Issue Analysis:**

- Help students discover and examine available alternatives to solving the issue. (See phase five for a range of possible action strategies.)
- Help students give thoughtful consideration to the consequences of each alternative action.
- Encourage students to make choices, and to make them freely.
- Give students opportunities to take action and to make public affirmations of their choices.
- Encourage them to act, behave, and live in accordance with their choices.
- Help students examine repeated behaviors or patterns in their life that reflect their values.


**Values Clarification Activity:**

For this activity, have students choose an issue of controversy and identify two possible choices related to this issue. For example, with the issue, "Should students become actively involved in socio-political issues as a part of their education?" has two clear choices, yes and no. Next, draw a long,
horizontal line with "yes" on one end and "no" on the other end. Ask students to mark their name on the line according to their belief on this issue. A student strongly in favor of student action would put his name by the "yes", a student who thinks student action is only sometimes appropriate would put her name closer to the "no". Next, ask students to explain or clarify the beliefs that drive their stated position. Repeat this exercise for their CPI issue.

** Student Focus Questions **

** Who or what has influenced your stance on your CPI project issue? Describe how your beliefs have changed and how your actions might change. **

** During your issue investigation, describe any inconsistencies in the "facts" you received related to the issue. Explain how these inconsistencies may relate to differing beliefs or values.
Focus Questions For Teacher Implementation of Phase 4: Issue Analysis

** Describe how you will conduct an issue analysis activity with your students.

** Describe how you will conduct value clarification activities with your students.
Phase 5 - Taking Action

I know of no safe depository of the ultimate powers of the society but the people themselves; and if we think them not enlightened enough to exercise their control with a wholesome discretion, then the remedy is not to take it from them, but to inform their discretion.

-Thomas Jefferson (1820)

Thomas Jefferson speaks to the heart of our democratic society and urges us to inform citizens of the choices they have available for exerting control. Today's schools teem with children who feel overwhelmed by world problems and who believe they are helpless in being able to make a change. Media sound-bites expose them to problems, but schools rarely provide opportunities for in-depth understanding and problem-solving. According to surveys, 87% of American children think that it is "very to somewhat important" that they "take part in activities that help to make things better" where they live (Harris, 1993). Clearly, young people want to make a difference, but don't know how. Schools, therefore, have the responsibility to show students what choices they have for participation and give them the opportunity to affect change.

Increasingly, national education standards have encompassed this goal of developing student civic skills. The National Education Goals for the year 2000 call for the preparation for, and exercise of, responsible citizenship (National Education Goals, 1994). National standards for Civics and Government state, "by the year 2000, every adult will be literate and will possess the knowledge and skills necessary to exercise the rights and responsibilities of citizenship. All students will be involved in activities that promote and demonstrate good citizenship, community service, and personal responsibility." As educators, we have an obligation to engage students in community action.

But, how? To make informed choices and solve problems in the social, political, or environmental arena, students need not only the opportunity to participate but sufficient skills and support. Researchers point out that problem solving skills do not develop as a byproduct of merely knowing about
an issue, they have to be overtly taught in a structured fashion (Bull, 1994). Students must be exposed to various action strategies and taught how to use these techniques. They will feel empowered not merely from having the opportunity to participate, but through successful participation (Bandura, 1990).

This section describes a number of strategies for taking action, and provides suggestions for how to set goals, devise, implement, and then evaluate an action plan. Review the action strategies with your students and help them determine a list of alternative actions for solving their project issue. Some educators argue that it is best to take action only after an in-depth investigation and evaluation of an issue (Hungerford et al., 1996). Others promote taking action before all the information is known, then evaluating the consequences and making a new plan for action (Stapp, 1996). Find out what works best given your student's situation. In all cases, provide support and encouragement for action planning and be careful not to impose one type of action. Require students set specific, attainable goals for action and suggest they consider combining a number of strategies.

**Goal:**
- Students will help alleviate a local problem and affect appropriate change in their community that is consistent with their values.

**Suggested Objectives:**
- Students will set goals for taking action.
- Students will identify various action strategies that will help solve their project issue.
- Students will evaluate alternative solutions with regard to ecological, social, and economic implications.
- Students will take either individual or group action where appropriate for the purpose of solving or assisting in the solution of a particular issue.
- Students will evaluate their action with respect to its impact on the social and/or environmental community.

**Suggested Activities:**
- Setting goals
- A review of action strategies
- Critique alternatives
- Evaluate and recycle

**Student Focus Questions**

**Describe the ways that you can affect your issue. What forms of action are appropriate, which actions match your values?**
Setting Goals

In order to take action, students must first identify the type of change they feel is necessary and establish criteria for a successful action project. They can then develop a list actions that will meet these goals. Deciding on an action strategy requires reflection, thorough research into the root of the problem, critical thinking, and careful deliberation of one's intent. Your student's intent should have become clear during their issue investigation and analysis phase. Caution them against setting unrealistic goals in terms of time and resources. A group of students in two months can not solve the local transportation problem, but they can work on one contributing factor to the problem by encouraging classmates to ride their bikes to school. In most cases students will not resolve a problem, but will take effective action to alleviate it.

Once an action plan is established, remind students that it will likely need revision. People often don't know what type of consequence an action will have until they try it. It may be that parents find it too dangerous for young students to bike alone to school. If so, students may organize group biking, or carpooling. Taking action, evaluating consequences and then taking new action will show students that exerting influence often requires modifying their ideals. If student action fails, suggest they assess the reasons for failure and plan a more effective strategy. This is a critical process in problem solving, called "recycling", by Bill Hammond (1995). If action leads to repeated failure, frame it as a valuable learning experience.

When setting goals for action, have students consider the following student focus questions. To help inspire students consider reading Hungerford and other's "Principles of citizen action" (page 66) and Piercy's poem, "The Low Road"(page 67).

** Student Focus Questions **

** Explain what you hope to achieve through your action. 

** How will you define and evaluate a successful action?
Readings

**Principles of Citizen Action:**

- You have the right to be heard and to act on social and environmental issues.

- You have the responsibility to exercise that right and to be knowledgeable and skilled in such actions.

- Some actions are mandated by law (e.g., laws against littering), but most involve your own choice.

- You have the ability to investigate environmental and social issues and to obtain enough information on which to base a plan of action.

- Most of the actions you take in your life have some environmental or social consequence. You have the responsibility to consider whether an action will be positive or negative over the long run.

- You have the ability to become skilled in at least one of the action methods.


**A Quote By Newmann:**

To take action and work toward social change: "one must view oneself as an interdependent part of the physical and human environment, not standing above and apart from it as a totally independent agent. The vision of an isolated individual unilaterally influencing others has been persuasively refuted even as a political strategy by thinkers a "revolutionary" as Freire".

*Newmann, F. (1975) Education for Citizen Action McCutchan Publishing Corporation, Berkeley, CA. p.38*
The Low Road: *

...Alone, you can fight,
you can refuse, you can
take what revenge you can
but they roll over you.

But two people fighting
back to back can cut through
a mob, a snake-dancing file
can break a cordon, an army
can meet an army.

Two people can keep each other
sane, can give support, conviction,
love, massage, hope, sex.
Three people are a delegation,
a committee, a wedge. With six
you can rent a whole house,
eat pie for dinner with no
seconds and hold a fund raising party.
A dozen made a demonstration.
A hundred fill a hall.
A thousand have solidarity and your own newsletter;
ten thousand, power and your own paper;
a hundred thousand, your own media;
ten million, your own country.

It goes on one at a time,
it states when you care
to act, it starts when you do it again after they say no,
it starts when you say WE
and know who you mean, and each day you mean one more.

* Excerpted from The Moon Is Always Female
by Marge Piercy © 1980 by Marge Piercy.
Action Strategies

There are many ways to affect change in your school or community; yet, to have a choice in action requires competence in various action strategies. Outlined below are various action strategies and information that will help students develop action-based skills. Review with students the four categories in which action can be taken: persuasive, economic, ecomanagement and political (developed by Smith-Sebastion, 1995). Often change happens from an accumulation of many small actions. The grid developed by Martha Monroe (page 75) is provided to help combine action strategies.

**PERSUASIVE ACTION * **

Persuasion is used when a person or a group of people try to motivate others to behave in a manner that promotes a given outcome -- like trying to get your classmates to stop smoking. An effective advocate will appeals through both logical and emotional means (Newmann, 1975).

To make a logical arguments will require students thoroughly understand the nature of their problem. The logic must be accurate, backed by evidence and presented in a clear and convincing manner. Even given clear logic, people may not be persuaded because they have a firmly held belief that is inconsistent with your facts and logic. For example, in trying to persuade ranchers to support wolf reintroduction, a logical appeal has been made that less that a one percent chance exists that their livestock will be killed by wolves. Rancher, however, may not be persuaded by this argument because they believe that they will suffer a greater loss than this logic proposes. Logical appeals are difficult because it is virtually impossible to be objective and present all information that relates to an issue. Presenting only certain facts therefore displays certain values and judgments.

Emotional appeals can be used for an issue that is too complicated to describe in a short presentation. An appeal to the values and emotions of others may be more effective than a logical appeal. If students use emotional
appeals, they must be certain that the persuasion promotes actions that are consistent with their goals. Again, careful analysis of the facts, players beliefs and values, and action consequences must be considered before persuasion is used to advocate certain actions.

Once set on a particular action, persuasion works best when a logical case is made to appeal to the values and emotions of others. Consider actions that first make people aware of the action strategy, help them understand the need for such action, and finally, persuade them to value that action strategy. There are several methods students can use to accomplish this:

**Tools for Persuasive Action:** *

*Posters, newspaper ads, radio announcements:* These are usually brief, eye/ear catching media bites which serve best at the awareness level. They may also be used to appeal to the values of others. This strategy is good but limited in terms of the amount of information that can be presented.

*Verbal discussions, speeches, letter-writing (see below), debates, newspaper and magazine articles, pamphlets, lobbying:* These kinds of actions are useful at all three stages, especially in presenting the facts regarding an issue.

*Modeling behavior:* When one person takes action and others observe the action, it may serve to persuade them to do likewise. Picking up litter or using trash cans in the hallway would be an effective example of modeling behavior.

**Letter Writing to an Editor:** *

- Identify the rules printed in the magazine or newspaper you plan to write to (look at the end of the letters column or call the newspaper to ask for instructions).
- Write on school stationary, address the letter "To the Editor:"
- Type the letter if possible, or hand-write a double-spaced letter for easy reading.
- Include your return address and signature.
- Make sure that your letter is brief and clear. Don't repeat yourself. Proofread carefully.
- Make sure your information is accurate, never accuse anyone of anything without proof.
- If you're writing because you think something should be done, give a few short reasons why.
Letter to a Public Official:

- Begin your letter with a salutation such as, Dear Senator or Dear Governor.
- State your purpose in the first sentence. If you are writing to support or oppose a bill, identify it by number and name at the beginning. Briefly state your position and why and how you wish the legislature to vote on the issue.
- Limit each letter to one issue.
- Keep the letter as short as possible—only a few paragraphs at the most—while still getting your point across.
- Be polite and respectful. It may even help to begin with a compliment regarding the official's decision on an action you support. If you start out on a positive note, he or she may be more likely to listen to a complaint.
- Make sure your letter includes your full return address, so you legislator can respond.

Guidelines For Persuasive Action:

- Be sure the basic argument can be easily understood by those being persuaded.
- Be certain the case presented is accurate, and the facts are correct.
- Show how the desired action fits the values of others.
- Select a method of persuasion which is clear, interesting, and appropriate to the issue.


ECONOMIC ACTION *

Economic actions rely on the power of money. They are actions that exchange, or withhold the exchange of, money by an individual or group for the purpose of promoting one's values. It involves buying something that agrees with one's philosophies or not buying something that represents an action or an idea with which one disagrees.
Economic Actions Include:

Boycotts: To boycott is to avoid buying certain products for a specific reason; for example, because the producers treat their workers or the environment in ways that you do not support. If enough consumers avoid buying a product, the producers would be economically pressured to change their practices. You could directly boycott a specific product or all products made by a certain industry or business.

Consumer Conservation: In some cases, a product has a high environmental cost, but also a high public need. A total boycott would be infeasible. Consumer conservation consists of using less of a product rather than totally boycotting it. For example, our use of electrical energy; we could conserve energy and investigate ways to prevent waste through consumer conservation.

Economic support: You can also support certain practices through the purchase of specific products. Examples include:

- buying organic produce to support agricultural practices that do not rely on pesticides;
- buying products manufactured in this country to provide local employment;
- donating money to conservation and social justice organizations to support their efforts; and,
- purchasing recycled, chlorine free paper to encourage recycling and reduce the release of certain cancer causing chemicals into the environment.


Student Focus Question

** Identify the things you economically support or boycott through your purchases.
ECOMANAGEMENT ACTIONS *

Ecomanagement describes a physical action taken with respect to the environment with the intention of improving or maintaining some aspect of the environment.

Ecomanagement Examples Include:

- Picking up litter.
- Building a compost for the school and at home.
- Composting school cafeteria "waste".
- Creating native gardens on school grounds.
- Performing an environmental audit of the school to trace the origin and destination of campus resource flow.
- Repairing leaky faucets.
- Lowering the thermostat.
- Turning off lights when not in use.
- Erosion control projects.
- Hanging clothes to dry instead of using the electric dryer.

Ecomanagement Actions Taken By Middle School Students: *

- In the District of Columbia, energy audit patrols of students (wearing bright orange jackets and armed with clipboard) make notes of open windows and doors and lights left on in empty rooms. Ninety percent of the D.C. public elementary schools participate in the program with great savings reported by some of the participating schools. Energy patrol's are credited for reducing the 1990 energy bill of J.O. Wilson Elementary School by $43,000.

- In Newark, NJ students worked with local organizations to turn a vacant lot into a community park complete with raised flower beds, playground equipment and a grassy playing field.

- In Boise, ID, students planted 200 trees at a local soccer field to create natural wind blocks and to provide shade. On-going collaboration is planned with other community groups to plant 1,500 trees along the soccer field in 1994.

- Students at Brooklyn, New York's Middle School 51 stenciled signs on sewers along a one-mile strip in Brookline that said, "Don't Dump: Drains to Bay".

- An elementary school in Ocean County, New Jersey collected 600 batteries and got land donated to build a community garden.

*Source: The YMCA Earth Service Corps and The Natural Guard

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**Actions Taken On College Campuses:**

- Yale University switched to fluorescent lighting in its library and is expected to save $3.5 million over the next ten years.

- Connecticut College reduced its room temperatures by 1 degree Fahrenheit and has saved $8,000 a year.

- Brown University put energy efficient lights in 2,200 exit signs and expects to save $65,000.


**POLITICAL ACTIONS**

"Most politicians will not stick their necks out unless they sense grass-roots support... Neither you nor I should expect someone else to take our responsibility."

- Katherine Hepburn.

Political actions aim to influence government decisions. Political actions essentially involve applying the skills and tactics of persuasion to the decision-making parties. Therefore, it requires knowledge of how the political decision-making process works at the local, state and federal levels. To take effective political action will also require awareness as to what issues are currently being considered by government, who is in office and what their various positions are on these issues, and what informal channels of influence exist. While this information is beyond the scope of this manual, it can be obtained through the following sources.

**Resources for Learning About the Political System:**

- Invite a local official to come to the class to describe the government system, and to identify current legislatures and local issues.

- Access information on the World Wide Web where the progress of current legislation is updated.

- Order resources for young people such as: *State and Local Government* by Laurence Santrey (Troll Associates, 1985), or, *How A Law Is Made: The Story of a Bill Against Air Pollution* by Leonard A. Stevens (Crowell, 1970) which is a fictitious story of a bill that becomes a state law.
Once Educated, Some Political Tactics
Include the Following:

**Voting:** Vote and encourage others to vote for legislatures who represent your values. Work to remove officials from office whose decisions are detrimental to social and environmental justice. You can encourage a vote through letters in the newspaper, T.V. coverage, surveys or any number of persuasive actions.

**Lobbying:** Lobbying describes the action that is used to persuade politicians to vote for or against a particular issue. You can lobby a politician to pass a new law or to change or oppose an existing law. Contact your representatives by letter, e-mail, telephone, or in person to persuade them to vote for or against a proposed bill. Present your issue to an interim committee. Prepare and distribute flyers to legislative law-makers. Begin lobbying well before the state's legislative session begins.

**Combining Action Strategies:** *

This grid on the following page illustrates that problems are not solved by just one action or one party; but that solutions and change result from a series of much smaller actions. Shown down the vertical axis are four categories of problem-solvers -- those who we think of as resolving social and environmental problems. Since these entities do not often take action on their own, but are prompted into action by other forces, the top of the matrix lists the same parties as motivators. The sixteen boxes provide examples of actions taken by motivators and targeted to problem-solvers. For example, groups (as motivators) affect government agencies (as problem-solvers) through monitoring, lobbying, bringing lawsuits, supporting policies, speaking at hearings, etc. Governments affect groups through regulations, giving grants, tax status, etc.
Combining Action Strategies, cont.:  

### MOTIVATORS

<table>
<thead>
<tr>
<th>Individuals</th>
<th>Groups</th>
<th>Government</th>
<th>Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educate yourself</td>
<td>Provide info.</td>
<td>Regulate</td>
<td>Provide jobs</td>
</tr>
<tr>
<td>Change lifestyle</td>
<td>Persuade</td>
<td>Tax</td>
<td>Advertise</td>
</tr>
<tr>
<td>Letters to the newspaper</td>
<td>Advertise</td>
<td>Provide incentives</td>
<td>Make and limit options</td>
</tr>
<tr>
<td>Teach and tell others</td>
<td>Create</td>
<td>Provide info.</td>
<td>Create educ.. materials</td>
</tr>
<tr>
<td>Participate</td>
<td>educational materials</td>
<td>Create educ.. materials</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PRO</strong></td>
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</tr>
<tr>
<td><strong>BLEM</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>OLIVER</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FLEET</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LEADERS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Individuals**
  - Educate yourself
  - Change lifestyle
  - Letters to the newspaper
  - Teach and tell others
  - Participate

- **Groups**
  - Join
  - Write letters
  - Give money
  - Elect leaders
  - Influence their agenda
  - Build coalitions
  - Persuade
  - Inform people
  - Create networks

- **Government**
  - Vote
  - Write letters
  - Run for office
  - Raise funds
  - Speak at public hearings
  - Monitor
  - Lobby
  - Bring lawsuits
  - Support policies
  - Speak at hearings
  - Research
  - Make appts.
  - Give grants
  - Charge fees
  - Provide checks and balances
  - Implement regs.

- **Business & Industry**
  - Buy product
  - Boycott product
  - Write letters
  - Buy stock
  - Invest
  - Report violations
  - Draw media attn.
  - Collect data
  - Survey
  - File lawsuit
  - Lead boycott
  - Create incentives
  - Provide info.
  - Monitor
  - Create incentives
  - File lawsuit
  - Regulate
  - Fine
  - License
  - Contract
  - Zone
  - Compete with price/quality
  - File lawsuit
  - Advertise
  - Share tech.
  - Cooperate

* Source: Monroe, Martha "Converting "it's no use" into "hey, there's a lot I can do": a matrix for environmental taking." Clearing, Issue #67- Jan./Feb.
The following questions are designed to help students develop and evaluate their action plan:

**Critique Alternatives**

**Students Focus Questions**

**Detail the specific actions that would be most effective in resolving your issue. List a range of alternatives.**

**Which actions will be most effective in meeting your goals? Who will be the target for these actions?**

**For which actions do you possess the needed skills, time and resources? For which actions can you feasibly develop the skills and resources?**

**Describe the consequences of each action—legal, social, economic, ecological, political. Which actions have consequences that you support?**

**Evaluate and Recycle**

**Student Focus Questions**

**To what extent was your action completed?**

**To what extent was it effective?**

**What skills were applied? For you personally and within the group.**

**Describe the new skills that you learned.**

**Identify specifically who did what in the group to promote the action.**
Examples of Successful Action Projects

A number of teachers have successfully brought students beyond awareness and into action. Bill Hammond pioneered "action education" at Lee County High School in Florida. He worked on community problem solving with a group of students every Monday during the school year. The first several Monday's were spent exposing students to different issues; they went on field trips or talked with community representatives. On a following Monday, students choose what issue they would work on. Another Monday, students were bused to the city hall and given index cards with questions and told to wander around the building until they found the answer. When one student came to the teacher in frustration that the information could not be found in city hall, Hammond gave the student a dime for a phone call. After students developed investigation skills they applied their efforts to particular problems. Over the years, his students have managed to preserve a 1,000-acre cypress swamp and pass a bald eagle protection law (Weilbacher, 1991). Some of these projects took more than one year so students from one year had to lobby the next year's group to continue their project.

Barbara A. Lewis's sixth grade students helped get a hazardous waste site cleaned up in Salt Lake city. After a field trip to a toxic waste site three blocks from their school, the students were determined to find out if leaky barrels had contaminated the community's ground water. They searched for wells from which health officials could take water samples, informed residents about the dangers of hazardous wastes, read newspaper articles, telephoned and wrote letters to health department officials, the EPA, and the local power company which owned the land where the hazardous waste was located. Their efforts attracted attention from the Major and within a few weeks workers began to remove barrels from the site. Confirmation of groundwater pollution led to a recommendation that the site be listed on the EPA's National Priorities list. Students raised money to donate to hazardous waste clean up, wrote a resolution proposing a Utah State Superfund site, and then lobbied for the bill in the state legislature. The bill passed unanimously. Lewis has since published a book entitled, The Kids Guide to Social Action which provides specific information and techniques for student involvement in the political
A children's environmental group, called Concerns About Kid's Environment (or C.A.K.E), is an organization that empowers young people to take social and environmental action. It is run by young children (eight year olds) and facilitated by adult teachers and parents. These children choose an environmental issue of importance to them. One group of students were concerned about the abundant use and waste of polystyrene foam (known by the trade name Styrofoam) at fast food chains. They gathered information about that issue, met with science specialists, researched the effects of CFC production, use, and disposal. They organized a public hearing, and succeeded in having the town council vote to ban the sale of food and beverage containers made of polystyrene foam.

Teacher Bill Morgan took three hours every week away from the regular schedule to pursue action projects with his sixth grade students. One semester, a class was interested in local transportation problems and decided to try to develop a new bike path to the mall. The students analyzed maps, invited guest speakers to talk about transportation, contacted the city planning office, and mailed a report to the city council with recommendations. The project called for continual problem-solving as members figured out a way to display the information, improve their communication within the class, and find new routes to the mall. By the end of the summer, one portion of the bike path was complete and plans were in the works for other sections.
Focus Questions For Teacher Implementation of Phase 5: Action Strategies

** Describe your vision for responsible citizen behavior and the process through which you will teach this to your students.**

** Describe the ways students can affect change in their community; what do you feel are appropriate and effective forms of student action?**

** Describe how you will facilitate student action.**
CHAPTER IV: ASSESSMENT AND RESOURCES

STUDENT ASSESSMENT

A well-developed evaluation process will provide useful information about your effectiveness in bringing students through a CPI project and meeting the stated goals. The assessment devises on the following pages offer one method to account for your students' achievement in each of the five phases. The sample assessment form refers to the main goals of each phase (see page 9), and includes an assessment of the content focus questions and a final symposium, or presentation. The specifics for how you rate each student's achievement will depend on the activities your students engage in. For example, during a semester long project students will have time to create a concept map, conduct a survey, and complete an issue analysis. Students conducting a two week project will engage in fewer activities. The assessment form can be adapted to your situation. If the form is too general, consider allocating a specific number of points to each successful activity within the phases (e.g. five points for the identification of ten local issues, ten points for a summary of one interview, ten points for a completed issue analysis, five points for the identification of possible actions, ten points for a public presentation of their project using three different visual displays, etc.).

It is recommended that you use a variety of assessment methods including writings, oral presentations, concept mapping, journalling, and cooperative group work. This will help assess not just the factual content students master, but other process skills and applied learning which takes place in the CPI process. Students may find portfolios to be a useful way to present their work. If portfolios are used, it is important to assess student work as the project proceeds and not just on the final day of the project. Provide ongoing feedback as students work cooperatively dividing up tasks, interviewing, sharing information, and taking action. Encourage students to evaluate themselves and each other (using the group and self assessment forms on pages 83-84). Ongoing feedback is important to keep students motivated, and to help them make changes necessary to reach success.
Sample Assessment Form

Team Building: Student contributed to cooperative group effort to complete the project. Consider the following:

   a) responses from group and self evaluation forms
   b) engagement in activities that promoted group cohesion and open communication
   c) willingness to share interests and concerns
   d) demonstration of communication skill by asking and answering clarifying questions

Opts____________________________________________________________________20pts

Comments:

Issue Investigation: Students developed the knowledge and skills necessary to organize and execute an issue investigation. Consider the following:

   a) identification of pertinent local issues
   b) contact with diverse community representatives
   c) application of various techniques for gathering information
   d) synthesis of information and interrelationships through a concept map

Opts____________________________________________________________________10pts

Comments:

Issue Analysis: Student gathered and synthesized sufficient information to make social and ecologically sound decisions. Consider the following:

   a) identification of players involved in the issue and evaluation of their roles by an examination of different values and perspectives
   b) identification and clarification of their own value positions related to the issue and to the proposed solutions.

Opts____________________________________________________________________15pts

Comments:

Content Focus Questions (Student demonstrated critical thought and presented thoughtful answers to content focus questions)

Opts____________________________________________________________________25pts

Comments:

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**Action Plan:** Student helped alleviate a local problem and affected appropriate change in their community that was consistent with their values. Consider the following:

a) setting of appropriate goals  
b) identification of various action strategies that would help solve their project issue  
c) evaluation of alternative solutions  
d) effectiveness of action in helping to solve a particular issue  
e) evaluation of action  

---

**Symposium:** **Student effectively presented the issue and its possible solutions.**

---

**A symposium offers students the opportunity to present their research and action proposal to the public. Logistically, it serves as a deadline for students to synthesize their information and compile it in a manner that is understandable to a less educated audience. The symposium provides affirmation to students that they have become relative "experts" in this issue, and that others are interested in their work. The symposium can serve as an opportunity for students to publicly affirm their beliefs about the issue, explain why they have chosen the action they have, and what type of change they hope to affect.**
Group Assessment *

Rate each team member on a scale of 1 (no effort) to 5 (excellent)  

<table>
<thead>
<tr>
<th>Student Names</th>
<th>(include yourself)</th>
</tr>
</thead>
</table>

A. **Group Participation**
- Did his/her fair share of work.
- Did not try to dominate the group or interrupt.
- Participated in group activities.

B. **Staying on Topic**
- Paid attention, listened to what was being said or done.
- Made comments aimed to get the group back to topic.
- Did not get off topic or change the subject.

C. **Offering Useful Ideas**
- Gave ideas and suggestions that helped the group.
- Offered helpful criticisms and comments.
- Influenced the group's decisions and plans.

D. **Consideration**
- Made positive, encouraging remarks about group members and their ideas.
- Gave recognition and credit to others for their ideas.
- Was considerate of others.

E. **Involving Others**
- Involved others by asking questions, requesting input, or challenging others.
- Tried to get the group working together to reach group agreements.
- Seriously considered the ideas of others.

F. **Communication**
- Spoke clearly, was easy to hear and understand.
- Expressed ideas clearly and effectively.


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Self Assessment

Three ways that the group worked effectively together:


Two ways to improve group work:


Three ways I worked well with the group:


Two ways I could improve my work with the group:


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Focus Questions For Teacher Implementation of Phase 6: Assessment

** What knowledge, skills, and behaviors do you value and therefore want to account for in an assessment strategy?

** Devise and assessment strategy for a CPI project.
PROJECT EVALUATION

This final section is designed to help you evaluate what worked well and what could be amended for future CPI projects. The developers of the CPI model recognize that implementing a community-based project that engages students in cooperative problem-solving can be a significant challenge. As stated by teacher William Hammond, "teachers who try to provide students with opportunities to take action to improve the environment must often swim upstream against the system." Teachers face limited time, resources, and funding, and often rigid curriculum standards and class structures. Yet, a growing number of teachers recognize the benefits of more active and community-based learning. So, despite the barriers, many teachers are moving students beyond the acquisition of knowledge and toward more cooperative, integrated, and issue-based learning.

Consider the implementation of your initial CPI project as the first step in your personal action plan for educational reform. As recommended for students, now evaluate the outcome of your action (your student's project), and refine your plan for the next CPI project. Continue to "recycle", to modify and refine your actions until it meets your criteria for success. Again, the CPI model does not match traditional class procedures, nor the expectations from many students, parents, teachers and administrators. Perhaps only small changes in your teaching will be possible at first while you generate support and confidence from others in your reform efforts. With time, experience and increased collaboration among your colleagues, teaching through the CPI methods will become easier and more successful.

The following questions are designed to help you assess the effectiveness of your project. Please rate yourself in the following categories. Describe the activities and processes that worked well, and the changes you will make for your next project. Rate yourself on the rubric scale provided.
Teacher Self Assessment

PROGRAM GOALS:

• Phase 1: Team Building. Students built an alliance that worked cooperatively and effectively as a group.

Successful activities and processes that you will continue:

Describe the changes you will make for the next project:

• Phase 2: Community Exploration. Students identified pertinent community issues and choose one issue to investigate in-depth.

Successful activities and processes that you will continue:

Describe the changes you will make for the next project:

• Phase 3: Issue Investigation. Students developed the knowledge and skills necessary to organize and execute an issue investigation.

Successful activities and processes that you will continue:

Describe the changes you will make for the next project:
- **Phase 4: Issue Analysis.** Students identified different positions related to an issue and clarified their own personal position.

  Opt.

  Successful activities and processes that you will continue:

  Describe the changes you will make for the next project:

  Opt.

  - **Phase 5: Taking Action.** Students helped resolve a local problem by taking action that was consistent with their values.

    Opt.

    Successful activities and processes that you will continue:

    Describe the changes you will make for the next project:

    Opt.

    - **Content Focus Questions (CFQs):** CFQs represented your curriculum requirements and students successfully integrated these questions into their issue investigation.

      Opt.

      Successful activities and processes that you will continue:

      Describe the changes you will make for the next project:

      Opt.

      - **List the other goals you stated for a CPI project and evaluate your effectiveness.**

      Opt.
GENERAL PROCEDURE:

- Assess your effectiveness in generating support from administrators, teachers, community members and students.
  
  Opts ____________________________________ 5 pts

- Assess your ability to restructure the necessary class procedures.
  
  Opts ____________________________________ 5 pts

- Assess your facilitation skill - your ability to guide students through the student-directed project and sequence activities that developed their skill, knowledge and motivation.
  
  Opts ____________________________________ 5 pts

- Assess your effectiveness in integrating multiple disciplines and in collaborating with other teachers.
  
  Opts ____________________________________ 5 pts

- Assess your use of diverse materials and resources.
  
  Opts ____________________________________ 5 pts

- Assess the effectiveness of your student assessment form in evaluating their achievement in the five phases.
  
  Opts ____________________________________ 5 pts

TOTAL SCORE out of 100 _________

Consider ways to improve your score and to develop sustainable projects. Implementing CPI projects becomes easier with increasing experience and collaboration. Your chances for involving students in community projects will be enhanced if you stay involved with local issues and develop your personal participatory skills. Not only will this develop connections to the larger community, but you will serve as an ideal role-model for your students.

Best of luck. Please feel free to provide feedback regarding this manual to:

Nicky Phear
401 South 2nd West
Missoula, MT 59801
RESOURCES

Student Action Groups:

Caretakers of the Environment, International
2216 Schiller Avenue
Wilmette, IL 60091
A global network of secondary school teachers and students active in environmental education.

Children's Alliance for the Protection of the Environment (C.A.P.E)
P.O. Box 307
Austin, TX 78767

Earthstewards Network (206) 842-7986
P.O. Box 10697
Brainbridge Island, WA 98110
E-mail: earthsteward@igc.apc.org
A network of active, caring people who provide resources and participate in projects aimed at the creation of a healthy, sustainable planet.

Earth Force (703) 243-7400
1501 Wilson Boulevard, 12th floor
Arlington, VA 22209
A new national kids environmental non-profit. Over 5000,000 kids have participated in Earth Force programs since its inception in 1994.

Global Response, Young Environmentalist's Action (303) 444-0306
P.O. Box 7490
Boulder, CO 80306-7490
Environmental topics, issues and actions for the classroom.

Kids Against Pollution (KAP)
P.O. Box 775
Closter, NJ 07624

Kids For A Clean Environment (Kids F.A.C.E.) (615) 331-7381
P.O. Box 158254
Nashville, TN 37215
Kids environmental action group. The organization offers newsletters.

Natural Guard (202) 787-0229
142 Howard Avenue
New Haven, CT 06519
The organization works with inner-city kids in community action.

Student Environmental Action Coalition (800) 700-SEAC
P.O. Box 1168
Chapel Hill, NC 27514-1168
E-mail: seac@igc.apc.org
High school and college students who have organized to address a range of environmental and justice issues.
Student Pugwash USA  
815 15th Street, NW, Suite 814  
Washington, D.C. 20005  
E-mail: uspugwash@igc.apc.org

Student Pugwash USA is a non-profit, educational organization dedicated to inspiring a commitment among students and young professionals to solve problems through responsible use of science and technology. For middle and high school.

YMCA Earth Service Corps  
Natural Resource Center  
909 Fourth Avenue  
Seattle, WA 98104  
(800) 733-YESC  
(206) 382-5013

YMCA organization empowers young people to be effective, responsible global citizens by providing opportunities for environmental education and action, leadership development, and international and cross-cultural exchange.

Resources For Action Projects:


Educators for Social Responsibility  
23 Garden Street  
Cambridge, MA 02138  
(617) 492-1764

Information about how to involve teachers in creating new ways of educating for active and responsible participation in the world.


References:


Disinger & Howe (1990) Environmental Activities for Teaching Critical Thinking. Eric Clearinghouse for Science, Mathematics and Environmental Education. Columbus, OH.


Harris, Lou (1993) Survey on "Children and the Environment".


Monroe, Martha. "Converting "it's no use" into "hey, there's a lot I can do": a matrix for environmental taking." Clearing. Issue #67- Jan./Feb.


