



WHAT'S FOR LUNCH? HOW DOES FOOD AFFECT YOU AND THE WORLD?

A Service-Learning Inquiry Model

Developed by the Colorado Assessment and Service-Learning Study
Group

Chairs

Kate Cumbo, Ph.D., Colorado Department of Education, Office of Service-Learning, and
Brian Loney, Ph.D., Jefferson County School District

Members

Barb Figg, Social Studies Teacher, Standley Lake High School
Mike Mattingly, Science Teacher, Standley Lake High School
Judy Jepson, Social Studies Teacher, Grand Junction High School
Guy Brickell, Social Studies Teacher, Glenwood Springs High School
Diane Vliem, Social Studies Teacher, Moore Middle School
Wesley Paxton, Assistant Principal, Rishel Middle School (formerly a math teacher at Hill Middle School).

Abstract

The Colorado study group shows how service-learning itself can be an excellent assessment “tool” to demonstrate students’ achievement of state standards. Through the various phases of a service-learning project (preparation, research, implementation of projects, and evaluation), students can meet a range of state standards. Within each phase, a variety of assessment strategies can be used to collect information about student learning related to specific standards.

This chapter shows how service-learning can be integrated across disciplinary areas to provide a rich curriculum addressing a wide range of state standards. This sample curricular unit integrates standards-based education with service-learning. Specifically, the unit examines the affects of food on human existence on both a global and local level through a multi-disciplinary, inquiry driven, service-learning model.

Contents

State Context	7-2
Introduction	7-3
Colorado’s Study Group	7-3
Context for the Unit	7-4
The Planning Template	7-5
Phase I: Preparation - Laying the Foundation	7-6
Phase II: Global Research - Building Knowledge, Skills, Procedures	7-9
Phase III: Local Research - Integrating Experience and Academic Knowledge	7-13
Phase IV: Implementation - Taking Action with New Knowledge	7-18
Phase V: Evaluation & Celebration - What Was Learned and Accomplished?	7-22
Conclusion	7-24
References	7-25

State Context

Like other states, the Colorado legislature has mandated standards-based education as part of its education reform efforts. The state has developed model content standards in eleven areas (language arts, math, science, history, geography, civics, economics, art, music, physical education, and foreign language). Individual school districts must adopt content standards in all of these areas which "meet or exceed" the state standards. The state has also developed a state assessment program to assess student progress toward meeting some of these standards. In addition to the state level tests, districts must adopt or develop assessments and report to their stakeholders.

Most of the work of determining student progress toward meeting standards, however, will fall on the shoulders of the classroom teacher. Many districts are using the concept of collecting a "body of evidence" concerning student achievement. "A body of evidence is a collection of information about student progress in meeting standards that incorporates multiple assessment strategies and episodes" (Asp, 1998). The body of evidence is anchored by data from large-scale assessments (district and state tests) where appropriate, and shared classroom assessments used by all teachers for particular grade levels and subject areas. Thus, while the state and district tests serve as evidence of student learning, most of the evidence about individual student progress will come from teachers collecting information at the classroom level through other student work and projects. The purpose of this chapter is to illustrate how service-learning can be a powerful tool for collecting evidence regarding student achievement.

WHAT'S FOR LUNCH? HOW DOES FOOD AFFECT YOU AND THE WORLD?

Introduction

In Colorado, we recognize service-learning as a method of learning and teaching that has the potential to move our educational system into the 21st century. Its potential lies in its ability to serve as a vehicle for integrating the needs of schools and communities while reflecting current reform agendas and providing meaningful learning experiences for students. In order for service-learning to play a role in transforming our schools, however, educators must become successful at linking service to learning - making connections between service experiences and academic learning explicit.

With the sheer number of educational reform initiatives introduced into our educational system, educators in Colorado and throughout the country are feeling "bombarded" and overwhelmed (Goodlad, 1990; Howey, 1995), with most viewing the various initiatives as "add-ons" to everything they are already doing in their classrooms. Educators are feeling pressured to address district content standards, develop and employ a variety of assessment techniques, and embrace reform initiatives that may only last until new reform movements become vogue. Ultimately, strategies must be designed and implemented for unifying reform initiatives and clarifying not only the content and curriculum, but also the methods for instruction and assessment.

Colorado's Study Group

The Colorado study group comprised district personnel and secondary teachers representing a variety of districts and content area specialties. Members were selected for their knowledge of service-learning, standards, and assessment. The study group first convened in 1996 and began by sharing "best practices" and identifying the needs in Colorado around the issue of connecting service-learning, standards, and assessment. Recognizing the importance of addressing the state standards, the study group decided that Colorado was in need of a comprehensive planning template that would link:

- (a) the typical phases of a service-learning project;
- (b) the content standards related to each phase;
- (c) possible instructional activities related to each content standard;
- (d) student products that could be used as evidence of student achievement; and
- (e) assessment strategies that corresponded to activities and products.

The planning template we created (**Table 7-1**) outlines how these five considerations are linked in the design of successful learning experiences. Later in the chapter we provide examples of how a particular standard could be addressed in the context of a service learning

project and what evidence would be produced indicating student progress toward meeting the standard.

Context for the Unit

The unit presented in this chapter is a composite of several service-learning projects that took place in Colorado during the 1996-97 academic year. This unit was developed around the question, "How does food affect human existence on a global and local level?" The model describes possible activities that relate to the topic of food as a global and local commodity. It explores how this essential question (Wiggins, 1989) could be addressed across the curriculum in the areas for which the state of Colorado has developed content standards.

This unit was developed to exemplify best practices in both service-learning and standards-based education.¹ Standards-based education calls for assessments that

- are authentic and address real-world issues and audiences when appropriate;
- are equitable and unbiased;
- are public and accessible (e.g., scoring criteria for assessments are made available to students and parents so that they are aware of what will be expected and how to improve performance);
- assess skills and knowledge as well as higher order thinking skills and complex cognitive processes such as hypothesizing and synthesizing; and
- call for students to apply and transfer what they learned in one situation to new problems and contexts (Stiggins, 1997).

The principles of sound assessment within standards-based education align with principles of good practice for service-learning — namely, real-world problem solving, authentic learning opportunities and audiences, and active student participation in all phases of the project. Integrating standards-based assessment practices into service-learning projects may thus take the form of having students participate in the development of assessment tasks and scoring rubrics, which increases student buy-in and participation in the educational process.

¹ Standards-Based Education Design Team, 1996; and RMC Research Corporation, 1996

Table 7-1: Planning Template (with explanations for categories and some examples)

PHASE: (e.g., Preparation, Global Research, Local Research, Implementation, or Evaluation & Celebration)				
Content	Content Standards	Instructional Strategies	Student Products	Assessment Strategies/Rubrics
Processes: (e.g., problem-solving, scientific/mathematical inquiry method, group consensus, etc.)	(State Content Standards that apply to processes)	(Teaching and learning activities that allow students to engage in the processes; e.g., science and math lab experiments)	(Work produced by students that shows evidence they have met process standards; e.g., group-generated prioritized list of food-related community problems)	(Strategies for determining whether and how well students currently understand process standards; e.g., journal entries)
Skills: (e.g., map reading; proposal writing; interview/research skills, data collection & analysis skills, etc.)	(State Content Standards that apply to skills)	(Teaching and learning activities that allow students to develop skills; e.g., conducting interviews/research/surveys)	(Work produced by students that shows evidence they have met skills standards; e.g., written project proposal)	(Strategies for determining how well students are attaining skills standards; e.g., rubric for written project proposal to be scored for content, organization, & grammar)
Knowledge: (e.g., Scientific concepts; persuasive and technical writing genres; graphic design principles, etc.)	(State Content Standards that apply to knowledge)	(Teaching and learning activities that require subject knowledge; e.g., science and math labs, debates, simulations)	(Work produced by students that shows evidence they have attained knowledge standards; e.g., a brochure that demonstrates graphic design principles & understanding of scientific concepts)	(Strategies for determining how well students have attained knowledge standards; e.g., student-created rubric to assess persuasive quality of presentation based on persuasive writing standards)

The Planning Template

The Planning Template provides an overview of the service-learning unit. **Table 7-1** shows a template for a single phase. There are five phases in our service-learning unit, each of which uses its own template. The phases include:

- (1) Preparation (Laying the Foundation)
- (2) Global Research (Building Knowledge, Skills, and Procedures)
- (3) Local Research (Integrating Experience and Academic Knowledge)
- (4) Implementation (Taking Action with New Knowledge)
- (5) Celebration and Evaluation (What Was Learned and Accomplished?)

These phases are a hybrid of service-learning best practices² and

Tasty Tidbits for Teachers

Standards-based reformers recommend that assessments be designed prior to instruction.

²As described by Toole, J. & Toole, P. (1993) in *Service Learning Cycle*; St. Paul, MN: National Youth Leadership Council and Compass Institute. Toole and Toole (1993) have developed a Service-Learning Cycle that summarizes the processes involved in service-learning in terms of What?, So What?, and Now What? These processes are described in more detail in the next section.

research/inquiry protocols such as the GIGI World Hunger Unit³. Within each phase, the content standards are delineated in Colorado’s format of processes, skills, and knowledge. The planning template for each phase and its accompanying explanation offer examples of how a particular content standard could be addressed in the context of a service learning project and what evidence of student learning would be produced and assessed.

Although assessment is described in the last column of the template, we would like to point out that the assessment strategies would be designed at the outset, after the content and standards have been identified. The Standards-Based Education Design Team (1996) recommends that assessments be designed prior to instruction so that they can guide what content is presented to students and what instructional strategies are employed. It is important to note, as well, that while standards from many content areas might relate to a service project, teachers would want to specify which standards would be assessed through the project and what the specific evidence of achievement would look like for those standards.

PHASE I: PREPARATION

Laying the Foundation

The primary purpose of Phase I of this service-learning model is to establish both the learning and the service context within which students will be working. One function of this preparatory phase is to identify and develop the processes, skills, and knowledge that students will need in order to address the question “How does food affect you and the world?” This can be achieved through classroom activities that help the students understand the purpose of the unit and the larger question being explored. Since this unit is comprehensive, it is helpful to start by providing the students with a “road map” or overview of

- (a) the learning to be accomplished (content and standards),
- (b) the role that the service-learning will play in the unit (overview of service-learning), and
- (c) how the learning will be assessed.

Table 7-2 shows the planning template filled in for Phase I.

Processes To make service-learning meaningful for your students, it can help initially to have your students explore issues of justice, equity, and group problem-solving to help them understand the benefits of working together and to help them see the classroom as a microcosm of our democratic society. Here is a good place to explain how journals and portfolios will be used and to introduce the “service-learning cycle” to help students understand the purpose and process of their service work. The cycle identifies questions that may be used for general reflection: *What?*, *So What?*, and *Now What?*. These questions guide consideration of the connections of service experiences and academic content.

³ A. David Hill, James M. Dunn, & Phil Klein (program developers) (1995). *Britannica Global Geographic System: Geographic Inquiry Into Global Issues (Hunger Module)*. University of Colorado—Boulder and Encyclopedia Britannica Educational Corporation, Chicago, Illinois.

Table 7-2: Planning Template for Phase I

PHASE 1: PREPARATION				
Content	Content Standards	Instructional Strategies	Student Products	Assessment Strategies/Rubrics
<p>Processes:</p> <p>1. Creating a "learning community" (classrooms as a microcosm of democracy)</p> <p>2. Group problem solving.*</p>	<ul style="list-style-type: none"> • Civics: 2, 4 • R&W: 3 	<ul style="list-style-type: none"> • Introduce Service-Learning Reflection Cycle (<i>What, So What, Now What</i>) • Introduce Journal & Portfolio to be maintained throughout the process • Develop a rubric for assessing Journal & Portfolio 	<ul style="list-style-type: none"> • Large scale Reflection Cycle Diagram for wall • List of "Learning Community" rules • Journal 	<ul style="list-style-type: none"> • <u>Journal Assignment</u>: Have students generate and write up an example of <i>What, So What, Now What</i> learning cycle (grammar, spelling punctuation, as well as concept can be graded if this is made explicit from outset)
<p>Skills:</p> <p>3. Map reading for resources and distribution patterns.</p> <p>4. Interview research skills.</p> <p>5. Survey research skills.</p>	<ul style="list-style-type: none"> • Science: 1 • Geography: 1 • R&W: 1, 5 • Math: 3 	<ul style="list-style-type: none"> • Introduce research skills. • Discuss methods for developing a survey • Discuss techniques for writing interview questions. • Create maps, charts, and graphs illustrating food issues. • Compare community map with "professional" maps. • Practice communication skills including interviewing and telephoning. 	<ul style="list-style-type: none"> • Interviews • Surveys • Portfolio • Journal log of research process and findings • Maps, charts, graphs 	<ul style="list-style-type: none"> • Rubric for assessing graphs, charts • Rubric for assessing surveys • Journal assignment about importance of survey, graphing and communication skills • Criteria for portfolio and selection of which products to include
<p>Knowledge:</p> <p>6. Ascertain students' existing knowledge of food-related concepts in science (calories, digestive system, or plant science), and other content areas.</p>	<ul style="list-style-type: none"> • Science: 2, 3 • R&W: 4 	<ul style="list-style-type: none"> • class discussions of various meanings of concepts • Class debates to strengthen their ability to provide coherent arguments to support their claims (topics include: What happens to your body when you skip lunch? Who is the FDA and are the FDA daily requirements appropriate for everyone?) • Demonstrations or experiments that support or refute students' initial concepts 	<ul style="list-style-type: none"> • Glossary of terms with various meanings • List of different claims about the importance of eating lunch, etc. 	<ul style="list-style-type: none"> • <u>Pre-Assessment</u>: Have students write their definitions of <i>nutrition, vitamins, minerals, calories, FDA requirements</i>, etc. • <u>Pre-Assessment Revision</u>: Have the students retake the pre-assessment after debate or demonstrations and explain how their conceptions have changed.

*See Active Citizenship Today (199?) For ideas about how to create a learning community and problem-solving protocol in your classroom.

For example, during service-learning units, reflection and assessment can be guided by three questions:

1) *What?* (descriptive phase): What are we doing? What are our responsibilities? What is the service? What is being learned? What skills are being applied?

2) *So what?* (synthesis phase): What is the importance of what we have learned? What is the larger context and meaning of the issues we have examined? What is the relationship between service and learning, between academic learning and personal experience?

3) *Now what?* (application and transfer phase): Now what can be done with the knowledge we have gained? How can we apply our new understanding to complex community issues?

The service-learning cycle is a helpful model for conceptualizing a service-learning project and the standards to be met by participation in the project. It reminds us continually to consider the connections between the service and the learning goals of the project and to help our students benefit by making reflection questions explicit. In this preparation phase, process-related activities could include having the student create a large-scale drawing of the “service-learning cycle” for the wall of the classroom, a declaration of “interdependence” for the classroom, and guidelines for how journals and portfolios should look and criteria for how they will be assessed.

Skills There are a few basic skills that may help the students during the unit. These include interview and research skills, map reading, and communication skills. These could be learned through methods such as debates, role-playing, and designing surveys. Students would use the research skills to acquire basic background information that will help them see the dimensions of the issues they are examining. Some time could also be spent in this phase helping students look at the scope of the problem. If, as in the case of this unit, the problem exists at a global scale, it is important to help students realize that they are concurrently members of several communities. While they will be looking at a global problem, the problem also manifests itself at a local level. By formally assessing students interviewing and information gathering skills, teachers can document whether students have met content standards identified at the start of the project (e.g. Reading and Writing Standard 5: “Students read to locate, select, and make use of relevant information from a variety of media, reference, and technological source”).

Knowledge It can be helpful to determine what knowledge your students have about the concepts or issues central to the unit (e.g., famine, digestive system, plant science). This could be done through structured brainstorming, journals, class discussion, or in-class written responses. If your students do not have some of the foundational knowledge they will need for the unit they could gain it through activities such as reading, lectures, debates, or experiments. A *content knowledge* assessment for Phase I could focus on measuring students “baseline knowledge” on issues related to the topic.

PHASE II: GLOBAL RESEARCH

Building Knowledge, Skills, and Procedures

Phase II explores the issue of “the impact of food on the world”, examining food-related issues at the global level (**Table 7-3**). In Phase II, emphasis is placed on mathematics, science, history, economics, and geography content standards. The primary activities and teaching strategies include students working in cooperative groups to gather evidence on

- (a) the availability of food sources nationally and globally, and
- (b) how this availability affects the people of various countries.

Using an inquiry approach, students are actively involved in observation, interpretation, experimentation, and research methodology. Students begin to plan their service learning activity by looking at public policy issues surrounding local, national, and global hunger through research in their library and by contacting government and private agencies dealing with this issue.

Ideas For Stimulating Interest in Service Learning Projects

- Using News Bank, Text on Microfiche, and the Internet in their library, students can locate current articles on the problem of hunger and begin to formulate their position on this issue.
- Literature and readings can be used to enhance the student’s knowledge and understanding of the growing problem that hunger has created. “Hunger in America” (Lieberman), *Sing Away the Hunger* (Barns), and *Hunger Moon* (Wilkinson) are just a few of the choices available.
- A simulation of a United Nations special meeting with students taking the roles of different countries and giving speeches on world hunger would help them to analyze their positions.
- The students could write letters to their state and federal legislators advocating changes they feel are necessary to combat this growing human problem.

Processes *Students demonstrate the scientific inquiry method.*

One strand of the global research phase could focus on science process skills. Students could apply scientific methods to maintain a daily log of nutrient intake, calculate nutritional content of foods, and assess their own energy needs and consumption.

Skills *Students practice skills collecting, investigating, and analyzing.*

The global research phase could involve information gathering from a variety of resources including Internet, newspapers and journals on the problem of global and local hunger. The students might derive definitions of *malnutrition*, *undernourishment*, and *balanced diet*. Students could research a variety of food-related topics and create presentations, which — along with lab reports from Strand I — can serve as evidence of



A student shows what she did during the Hunger Project, including making phone calls, creating a brochure, and talking to Safeway.

learning. The two strands may be supported by related concepts in other classes and serve as a launchpad for service-learning activities such as a food drive, a community garden, working with the homeless, or other ideas students might suggest.

Table 7-3: Planning Template for Phase II

PHASE II: GLOBAL RESEARCH				
Content	Content Standards	Instructional Strategies	Student Products	Assessment Strategies/Rubrics
<p>Processes: 1. Scientific and mathematical inquiry method (hypothesis generating and testing)</p>	<ul style="list-style-type: none"> • Science: 1 • Math: 1, 3 	<ul style="list-style-type: none"> • Science and math labs and experiments • Lecture and class discussion 	<ul style="list-style-type: none"> • Group-generated reasons for the importance of scientific inquiry methods 	<ul style="list-style-type: none"> • Student demonstrations assessed by group-generated checklist describing understanding of the components of scientific inquiry
<p>Skills: 2. Locating and using resources to conduct research on the impact of food on a global level 3. Public policy investigation procedures relating to food/nutrition on a global level 4. Data collection and analysis skills relating to impacts of food on a global level</p>	<ul style="list-style-type: none"> • Science: 1, 5 • Math: 1, 2, 3, 5, 6 • R&W: 1, 2, 3, 4, 5 • Civics: 2, 3 • Economics: 1, 2, 3 • Geography: 1, 2, 4, 5 • History: 2, 3, 4, 6 	<ul style="list-style-type: none"> • Activities that allow students to practice data collection skills from sources such as Internet, government documents, textbooks, etc. • Students develop a rubric for evaluating sources of information for their validity. • Review format and process used in developing a bibliography • Students begin a directory of "contacts" that includes names of people, places, phone numbers, on-line addresses where resources can be located • Students conduct phone interviews with contacts 	<ul style="list-style-type: none"> • Journal log of research findings and process • Bibliography • Human resource directory 	<ul style="list-style-type: none"> • Journal • Public policy review
<p>Knowledge: 5. Scientific concepts and methods needed to test hypotheses about the impact of food on some aspect of the world (pesticide usage, rainforest destruction, hunger) 6. Mathematical concepts and procedures related to calories and human energy 7. Impacts of politics/economics on food distribution and impact of food on human health 8. What constitutes good health and why it is important</p>	<ul style="list-style-type: none"> • Science: 1, 2, 3, 5, 6 • Math: 1, 5, 6 • R&W: 2, 3, 4 • Civics: 3, 4 • Economics: 1, 2, 3 • Geography: 2, 4, 5, 6 • History: 2, 4, 6 • Music: 1, 2, 4, 5 • P.E.: 2, 3 	<ul style="list-style-type: none"> • Biology and math labs • Cooperative learning groups • Debates • Mock World Court (see GIGI Hunger Unit: Global Issues in Geographical Inquiry) • Lecture and class discussion about impacts on human health • Study music and dance from various cultures that relate to food/harvest rituals • Students choreograph and put on a dance/music performance for their school and community • Involve P.E. teacher in designing experiments for students to investigate physical attributes of good health and physical fitness (skill tests, pulse rate, and its effect on performance, etc.) 	<ul style="list-style-type: none"> • Biology lab write-ups • Formal proposal for how to solve one food-related global issue (based on research) • Letters to legislators about food-related issues and proposed solutions • Journal • Notes, speeches, etc. used in preparation for debates for Portfolios • Dance/music performance 	<ul style="list-style-type: none"> • <u>Biology Lab</u> • <u>Math exam</u> • <u>Research/Position Paper & Proposal</u>: Have students present information in What? So What? Now What? format with authentic purpose of using data to propose a solution to global food-related issues. • Persuasive Letter rubric

Knowledge *Students present information in What, So What, and Now What format.* Once baseline information is collected, students can

work in groups to research nutrition topics. Their findings will be presented back to the class as posters, multi-media presentations, brochures etc. Topics might include: stages of starvation, nutrition related diseases, relationship of diet to heart disease and other conditions, child mortality and nutrition, vitamin deficiency conditions, agricultural issues, food supply and demand, food and population, vegetarian and meat diets, starvation relief efforts and other appropriate hunger related issues. The audience for these presentations might be other school classes or possibly parents and community.

Some suggestions for standards, instruction, student products and assessment strategies are shown in **Table 7-4**. The time frame for these activities might be two or three weeks depending on the needs of the teacher. The activities are intended to take place during science class but if interdisciplinary teams were in place, blocks of time for research and lab activities would be advisable. It is hoped that these activities would be supported by related concepts in math, language arts, and social studies. Once the students have gained experience and knowledge in food issues they should be ready to take their knowledge to the community in projects that will demonstrate their concern in the true spirit of service-learning. Through debates, a mock world court, studying cultural music and dance relating to food/harvest festivals, and looking at good health/physical fitness skills, students can begin to propose solutions to global food-related issues. Students could write letters to their legislators about these issues and propose solutions while developing speeches to promote public policy changes. Using the data they have collected through their process, skills, and knowledge levels, they are ready to move on to phase III, integrating their experience into the academic content area.

Table 7-4: Science Related Activities to Study Nutritional Value of Foods

Service-learning Framework	Standards	Instructional Strategies	Student Products	Assessment Strategies
PLAN: <ul style="list-style-type: none"> Begin weekly class average food intake index 	1.1, 2.1D	Students fill in a chart of their diet for a week	The chart	Establish a rubric for food energy index
<ul style="list-style-type: none"> Weigh and analyze school lunch to introduce guidelines for portion and weight estimates 	3.1A	Students learn to estimate portions and read dietary information	Completion of a designed worksheet to transfer to their intake index.	Practical task
ACT: <ul style="list-style-type: none"> What is a calorie? Calorimetry Lab 	3.1A	Students conduct tests on a variety of foods	Students collect data on a variety of foods	Lab report
<ul style="list-style-type: none"> Energy In/Energy Out Lab to establish basic energy needs 	3.2D	Students analyze their basic energy needs compared to their food intake	Students analyze energy derived from foods and basic requirements	Test ability to determine energy value of a variety of foods
<ul style="list-style-type: none"> Define malnutrition, under-nourishment, and establish minimums independently to compare with accepted values 	5.2C, 5.1D	Students establish criteria for adequate diets and compare to accepted values	Students establish criteria for undernourishment	Compare students' values with accepted values

Persuasive Letter Writing: Service-Learning as Authentic Assessment

As indicated in the Planning Template for Phase II, having students write letters to legislators about food-related issues serves as an authentic assessment of students' knowledge as well as a service-learning activity that allows students to apply their knowledge to real-world issues. Below is an example of a student letter (**Figure 7-1**) and a rubric used to assess persuasive writing (**Table 7-5**).

Amy Gallas
1400 North 5th Street
Grand Junction, CO 81501
May 24, 1999

Senator Ben Nighthorse Campbell
380 Russell Senate Office Bldg.
Washington, DC 20510-0605

Dear Mr. Senator:

I'm writing to fulfill my obligation as a citizen to the United States. Although I'm only 17 years old and unable to vote yet, it is my responsibility to stay involved in my government's decisions and policies whether I agree with them or disagree with them. At this moment, I would like to use the power I have to address the current issues in Kosovo, specifically humanitarian aid.

After reading articles posted on the CNN Internet site, I realize that the government currently searches for ways to help those refugees in Kosovo — to provide them with food, housing, and health care. However, I feel we have neglected to act on providing aid to those people who are still trapped within the war torn country. Recent issues addressed in the papers as of May 14 suggested air drops by the U.S. and NATO forces. However, as these articles stated, these air drops placed Americans in danger when the plane are required to fly too low to drop supplies. I'm glad that the government currently looks for new ways to help but these decisions are taking too long. The people within Kosovo are starving and dying in worse conditions than those who have become refugees.

With this letter, I would simply like to suggest that the government begin acting quickly on this problem. The people we attempt to save from war die from starvation. I realize that there are relief agencies already involved but the relief agencies can only supply so much help. Since the government has decided to become involved, it is our duty to help these people whose country has become a death site.

Sincerely,

Amy Gallas

Figure 7- 1: *Persuasive Letter*

Table 7-5: Persuasive Letter Rubric

PERSUASIVE LETTER RUBRIC			
Structure & Mechanics Grammar/ Components	10 - 7 Advanced	6 - 4 Average	3 - 0 Poor
	Writer makes a clear and obvious point in the opening statement and carries it throughout the letter. Letter has fewer than 3 errors, uses correct spelling, is well-organized, and flows.	Writer makes a point, but does not incorporate it throughout the letter. Letter has fewer than 6 grammatical or spelling errors, is organized, and flows.	Writer does not make a point or have a main idea. The letter is disorganized, confusing rather than coherent. There are more than 6 mechanical or spelling errors.
Supporting Evidence Degree of research support	10 - 7 Advanced	6 - 4 Average	3 - 0 Poor
	The writer has a thorough understanding of existing policy and cites many sources. The references flow throughout the letter and bring out new ideas.	The writer has an idea of the current policy and cites sources. The references are not all relevant or supportive.	The writer knows little or nothing about the current policy, does not cite sources, is not organized, and appears to have little knowledge of the subject.
Persuasion Degree of persuasiveness	10 - 7 Advanced	6 - 4 Average	3 - 0 Poor
	The letter produces an emotional response from the writing and displays an obvious feeling of compassion and commitment. Impressive even when the reader does not agree.	Letter demonstrates proficient knowledge of the subject but does not express it to the fullest potential.	Letter demonstrates little or no passion in the letter. Does not convince the reader of anything.

PHASE III: LOCAL RESEARCH

Integrating Experience and Academic Knowledge

In Phase III of this service-learning model, students investigate the issue of hunger on a local level (**Table 7-6**). In this phase, we focus on the use of a journal as an authentic assessment tool and as a record of the research methods used to develop the local service-learning project(s). Although presented in Phase III, the service-learning journal is a valuable tool to incorporate throughout all five Phases of the service-learning model.

Content Standards Phase III begins by identifying the content and standards to be covered. The instructor can do this or can ask students to identify the standards as part of their journal assignment. Once the standards to be met are identified, the student writing can focus on *how* the standards are being met through the various activities outlined for the unit.

Table 7-6: Planning Template for Phase III

PHASE III: LOCAL RESEARCH				
Content	Content Standards	Instructional Strategies	Student Products	Assessment Strategies/Rubrics
<p>Processes:</p> <p>1. Community needs assessment</p> <p>2. Group problem solving process to generate and prioritize list of most urgent food-related issues in the community (<i>So what?</i>)</p> <p>3. Group consensus processes for selecting possible project(s) to be undertaken by group.</p>	<ul style="list-style-type: none"> • Civics: 2, 3 • History: 2, 5 • Geography: 1, 2 • R&W: 2, 3, 4, 5 • Math: 1, 3, 5, 6 • Science: 1, 3, 5 	<ul style="list-style-type: none"> • Develop surveys to explore food-related issues in local community (survey skills taught in Phase I). • Use research skills to collect information from diverse sources on local food-related issues. • Generate list of food-related issues in local community. • Use preliminary selection process to determine which issues the group could feasibly address 	<ul style="list-style-type: none"> • Group-generated and prioritized list of food-related problems in the community. 	<ul style="list-style-type: none"> • Journal
<p>Skills:</p> <p>4. Proposal writing (identify need; propose solution; outline steps for implementation, etc.)</p> <p>5. Business and accounting skills (develop budgets, cost analyses; identify community resources)</p>	<ul style="list-style-type: none"> • Science: 1, 3, 5, 6 • Geography: 1, 4, 5, 6 • R&W: 1, 2, 3, 4, 5 • Math: 1, 5, 6 • Economics: 1, 2 • Civics: 3, 5 	<ul style="list-style-type: none"> • Group* discusses components of a proposal and develops rubric for assessing it (written & oral presentations). • Students present proposals to classmates, teacher and community representative(s). • Group assesses each other's proposals using rubric. • Students revise proposals based on feedback from peers, teacher, and community reps. • Group agrees on solutions/ project(s). 	<ul style="list-style-type: none"> • Student-generated rubric • Project proposal • Evaluation sheet for proposals 	<ul style="list-style-type: none"> • <u>Project Proposal</u>: Graded for content, organization as well as grammar, spelling, punctuation, etc. • <u>Journal</u>: Have students record their proposal-writing process and effects of the critique process. • <u>Portfolio</u>: Have students include their proposals, evaluation forms, etc. in their portfolios.
<p>Knowledge:</p> <p>6. Function and policies of local government and how they affect food-related issues</p> <p>7. How local economic and social systems affect food-related issues</p> <p>8. How citizens (including youth) can impact local policies and affect change in communities</p>	<ul style="list-style-type: none"> • Civics: 1, 2, 3, 4 • Economics: 1, 2, 3 • Geography: 1, 4, 5, 6 • R&W: 6 	<ul style="list-style-type: none"> • Students attend city council, school board, & chamber of commerce meetings. • Students present their group proposal to the community and enlist support. • Guest speakers from local government, homeless shelter, food bank • Service-learning projects in local agencies for better understanding of how people are directly impacted by state and local policies. • Read literature related to community activism, ethic of service, food/hunger, etc. 	<ul style="list-style-type: none"> • Notes from meetings • Notes from service-learning • Formal presentation to educate community about food-related issue(s) and the group's proposed solution (e.g., community awareness brochure) 	<ul style="list-style-type: none"> • <u>Social Studies Exam</u>: Generate case studies based on class experience at local meetings and agencies and have them identify the political, economic, social, and biological factors that contribute to the problem and possible solutions. • <u>Literary Critique</u>: Students compare literature with own experiences.

*Ideally the "group" would include students, teacher(s), community members, and the principal or other administrators.

Instructional Strategies An important next step is for the teacher to identify the different instructional strategies that best ensure that content and standards are not only covered but learned. For example, it is helpful to train students in problem-solving processes so they can work together as a “learning community” to identify solutions to the issue being studied. While this training could take place in Phase I of the unit, it could be applied at this stage.

Other instructional strategies that would support students as they carry out local research could include developing surveys, needs assessment exercises, consensus building techniques, and expert panel forums. Any of these would help students develop service project proposals that address the problem of hunger at the local level.

Student Products The third category, student products, highlights the proposals that students write to address the local food-related issues they identify through their local research. The service-learning journal is also an important product because it documents the processes, skills, and knowledge that led to the formation of the proposal. The journal could also include student-generated rubrics used to help select the proposed solution, feedback sheets to evaluate proposals, expert interview reports, student presentations of various solutions, and timeline estimations for completion of project. All of these provide students and teacher with rich evidence of learning from which students can draw as they assemble their final portfolios in Phase V. The use of a journal in connection with a service-learning project also helps the teachers maintain the integrity of the project. Too often completing the project itself becomes the focus of student efforts, and the reason for carrying out the project is lost. The service-learning journal can help eliminate this problem.

Assessment Strategies: The Student Journal The assessment strategy we illustrate in this phase is the student journal. We have found it to be useful for pulling together the various activities into a coherent whole that addresses the original inquiry questions. While some of the students’ entries may be subjective reflections that would not be graded, many of the elements listed above (rubrics, feedback sheets, interview reports, timeline estimations, etc.) can be scored. Reflection is an essential component of the service-learning model, and the journal is one systematic way to structure student reflection so that it relates to the issues and content being explored. The journal can be used during each phase of the service-learning unit and eventually form part of a student portfolio — the assessment technique featured in Phase V. We explain it here because it provides a meaningful collecting point for student research and the effect of that research on student thinking and problem solving.

What does the journal look like? We have found that a three-ring notebook works best because it allows students to add any additional handouts, forms, and assessment tools into the journal. Over the years, we and our students have developed a format for the journal that includes five major sections: cultivating the attitude, problem-solving processes, daily log, curricular connections (and standards addressed), and reflection. The students work on each of these sections on an on-going basis throughout

Tasty Tidbits for Teachers

This assessment was designed by Guy Brickell (Glenwood Springs High School) and Judy Jepson (Grand Junction High School). For more information, email Judy at: JJepson@gjhs.mesa.k-12.co.us

the unit. Journal writing is not a linear process, but one that helps students weave together the various and projects into a coherent unit. To ensure continuity, we try to structure each journal entry around the *What?*, *So What?*, *Now What?* of the service-learning reflection cycle. Thus, within each section, students are describing their experiences (*What?*), exploring the connections between their academic curricula and the learning taking place through service (*So What?*), and applying their new knowledge and insight to new problems and issues (*Now What?*).

Section I: Cultivating the Attitude A helpful first step in service-learning is to have students explore their beliefs and knowledge about service, community, civic responsibility, and social issues related to the unit (e.g., soup kitchens and their clientele). This can be done by providing students with provocative readings (fiction, poetry, reports), presenters (e.g., the director of Community Food Share), and videos that promote thought and discussion. Students are unlikely to question the purpose of service-learning if this part of the journal is strong. Cultivating the attitude is an on-going process and can be revisited throughout the unit. For example, to have students reflect at the end of the unit on how their conceptions of service, civic responsibility and hunger have changed can be a powerful experience.

Section II: Process The second purpose of a service journal is to document the problem-solving process that is used by the students to identify the specific issue or projects to be addressed. This is where the student records their research activities and could include surveys developed, interviews, and testimonials from experts that address the class on various issues. Finally, this part of the journal should describe the processes by which community problems/issues were identified and solutions were generated. If building group consensus was part of the problem-solving process, it should also be discussed.

Section III: Daily Log The third purpose of the journal is the traditional daily log kept by the student regarding work completed for the service-learning project. This will help the teacher to hold the student accountable for finishing the project. Some teachers use a special form that must be filled out by the students (and by community supervisors, if applicable) after each day's work on the service-learning project. This also helps the teacher keep track of what each student is responsible for during the project (and whether they are meeting the service agency's expectations).

Section IV: Connecting to the Curricula and Content Standards

Connecting the service to academic learning is an important part of the service-learning process. This means, for example, helping students see the connection between learning human and plant biology and issues of local and global hunger. By providing provocative journal questions, teachers can facilitate students' understanding of how their academic subjects relate to real world issues. This is a good place to weave in the content standards, perhaps by having students determine which ones are being addressed and how. One of the real strengths of using service-learning as a teaching methodology is the variety of academic standards that can be addressed in one project. This section helps with the

assessment phase of the project because now the students and teacher have a clear understanding of what is to be assessed.

Section V: From Reflection to Action The final purpose of the service-learning journal is “reflection to action.” This is perhaps the most critical section of the journal because it asks the student to apply their knowledge to some form of solution. This section requires students to analyze what they have learned over the course of the unit and to determine the impact they have had or could have on the community. Moving students from reflection to action is the heart and soul of service-learning. Service-learning hopefully becomes a way of seeing the world, one in which students envision themselves as contributing members of their community and are motivated to take action beyond the unit — or your time with them. They can also reflect on how the processes, skills, and knowledge they have acquired might be applied a different social problem or concern.

Because journals document so much of the service-learning experiences, they can be a large undertaking for teachers, especially if the teacher provides ongoing feedback to students throughout the unit. It can be effective to have the students do periodic “peer reviews” of each other’s journals to cut down on the teacher’s workload and to allow students to engage in peer dialogues around the issues being explored. For the journal to serve as a valuable authentic assessment tool, teacher and students should take the time beforehand to develop explicit expectations for how the journals will be reviewed and assessed. This helps ensure that the assessment process is as clear and objective as possible.



Students show off their World Hunger Poster.

PHASE IV: IMPLEMENTATION

Taking Action with New Knowledge

In Phase IV, students synthesize the processes, skills, and knowledge gained in Phases I through III to create a product that addresses the identified global food issues — but at a local level (**Table 7-7**). For example, as a culminating activity, students could create brochures that represent what they have learned and bring that information to their community. This can be even more effective if students each write and deliver a persuasive speech to go along with their brochure. The brochures and speeches can then be presented to local agencies, businesses, or student groups. In this way, students learn how to promote their ideas in more than one format, and persuade others in their community to take action on problems the students have identified.

Processes The brochure and persuasive speech can be best thought of as the product of five processes involved in quality service-learning: preparation, action, reflection, assessment, and celebration. Involved in each phase of this process, students learn the importance of each step, as well as how they fit together in a meaningful whole. The products in this phase represent and celebrate this learning.

Skills In order to be successful in this phase, students need to be taught the skills associated with the design, production, and distribution of a brochure that will educate the community about the food-related issue they select. In addition to the technical skills to produce the brochure, students must also have the skills to critically analyze and synthesize a large body of information and present it persuasively to a real audience. In this way, the brochure and speech are authentic assessments and quality service-learning activities.

Knowledge In addition to the content area knowledge needed to complete this phase, students need to know about the genres of technical and persuasive writing as well as graphic design principles. An example of a mock-up for the brochure is shown in **Figure 7-2**, and the rubric for assessing it in **Table 7-8**.

	<i>(Front side of brochure)</i>	
What community needs are not being met?	Student names, grade and team	Title of Project
How would meeting these needs improve our community?	Name of school school address school phone	What can be done? (Summary) Who will benefit?
	<i>(Back side of brochure)</i>	
WHAT is the issue?	SO WHAT solutions have been tried	NOW WHAT can I do?
How is this issue a problem in our community?	Which organizations or agencies are working to solve the problem?	(Outline of student plan)

Figure 7-2: Mock-up of Brochure

Table 7-7: Planning Template for Phase IV

PHASE IV: IMPLEMENTATION				
Content	Content Standards	Instructional Strategies	Student Products	Assessment Strategies/Rubrics
<p>Processes:</p> <p>1. Review <i>Now What?</i> phase of service-learning cycle.</p> <p>2. Procedures for implementing service-learning projects (preparation, action, reflection, assessment, celebration).</p>	<ul style="list-style-type: none"> R&W: 3, 4 	<ul style="list-style-type: none"> Discuss preparation necessary to implement project (skills, knowledge, assistance that will be needed to design and distribute a community awareness brochure). Discuss specific roles and responsibilities for students, teacher(s), parents, community member, and administrators. Brainstorm learning and service goals for the project. 	<ul style="list-style-type: none"> Formal statement of project's learning and service goals (and how they will be monitored and evaluated) 	<ul style="list-style-type: none"> <u>Journal</u>: Have each student determine his/her own service and learning goals for the project.
<p>Skills:</p> <p>3. Skills needed to design, produce, and distribute a brochure that will educate the community about unforeseen hazards that are affecting their food, water and health.</p>	<ul style="list-style-type: none"> R&W: 1,3, 4, 5 Visual Arts: 3 Math: 1 	<ul style="list-style-type: none"> Group designs brochure by synthesizing information generated in Phases II and III. Group pilots brochure and incorporates feedback. Instruction on grammar, punctuation, etc. Computer lab lessons on desktop design. Math exercises in cost effectiveness for brochure production 	<ul style="list-style-type: none"> Journal log recording steps for implementation and results of each step taken First drafts of brochure 	<ul style="list-style-type: none"> Journal Portfolio Grammar test
<p>Knowledge:</p> <p>4. Understanding of various writing genres including persuasive and technical writing</p> <p>5. How to use scientific and mathematical concepts and language to support an argument</p> <p>6. Knowledge of graphic design principles</p>	<ul style="list-style-type: none"> R&W: 2, 3, 4, 5 Science: 3 Visual Arts: 3 	<ul style="list-style-type: none"> Class discussion about what makes information "persuasive" Guest lecture and activities by professional in the community who writes brochures for a living Instruction on components of "good" technical writing Activities that allow students to experiment with creating persuasive text based on technical and nontechnical data Students print and distribute brochures to their community 	<ul style="list-style-type: none"> Final brochure Persuasive speech 	<ul style="list-style-type: none"> <u>Brochure</u>: Individual contributions to the brochure can be assessed by (a) having each student be responsible for a section of the brochure, or by having multiple brochures designed by only 1 or 2 students. <u>Speech Rubric</u>: Have students help create a rubric to assess the persuasive speeches that will support their brochures.

Table 7-8: Service-learning Brochure Scoring Rubric

Aspect	1 - In Progress	2 - Proficient	3 - Exemplary
WHAT? ✓ Issue identified ✓ Research shown	1) States the issue student is investigating 2) Identifies a source contacted 3) Shows the importance of the issue in our community using a researched fact	1) States the issue student is investigating 2) Identifies two sources contacted 3) Shows the importance of the issue in our community using two researched facts	1) States the issue student is investigating 2) Identifies three sources contacted, one of which is governmental 3) Shows how the issue is a problem in our community using three researched facts
SO WHAT? ✓ Solution offered	1) Identifies one organization or agency working to solve the problem 2) Describes their solution 3) Offers a way they could be assisted	1) Identifies one organization or agency working to solve the problem 2) Describes their solution 3) Offers two new solutions or ways to assist the organization	1) Identifies two organizations or agencies working to solve the problem 2) Describes their solutions 3) Offers three new solutions or ways to assist the organizations
NOW WHAT? ✓ Project described	1) Tells how the student can work to assist the above organization/ agency 2) Lists the steps needed to accomplish this work: a) action to be taken b) specific jobs and deadlines c) roles of students involved d) assistance needed and who will provide it 3) Lists improvements people in the community will see as a result of this project	1) Selects one of the above options for the student project and tells why it was selected. 2) States the objective of the project 3) Lists the steps needed to accomplish the project: a) action to be taken b) specific jobs and deadlines c) roles of students involved d) assistance needed and who will provide it 3) Lists improvements people in the community will see as a result of this project	1) Names one of the above options for the student project and tells why it was selected. 2) States the objective of the project including who will be helped by this project 3) Creates a chart of the steps needed to accomplish the project including: a) action to be taken b) specific jobs and deadlines c) roles of students involved d) assistance needed and who will provide it 3) Lists improvements people in the community will see as a result of this project
MECHANICS	1) Needs sentence structure 2) Spelling or punctuation errors 3) Needs to be typed or written neatly 4) Has distracting or irrelevant content	1) Written in complete sentences where appropriate 2) Perfect spelling and punctuation 3) Typed or written neatly in ink 4) Has no distracting or irrelevant content	1) Written in complete sentences where appropriate 2) Perfect spelling and punctuation 3) Neatly typed 4) Content clear and illustrated with graphics

Figure 7-3 shows a student’s persuasive speech along with its associated rubric.

**ACT/World Hunger
Social Studies and Language Arts
Oral Presentation**

Rubric/Checklist

Evaluator's Name _____
 Evaluator's Position and/or Relation to Speaker _____
 Speaker's Name _____
 Topic of Speech _____
 Date _____

Speech Standards	Needs Improvement	Meets Standard	Sophisticated
1. Speech begins with a catchy introduction and tells why the speaker is taking action on this problem.			
2. After the introduction, the speech first tells what outcome the speaker wants.			
3. Using a clear, concise description of the problem, its causes and effects, the speech explains why the speaker wants the outcome.			
4. Next, the speech explains how the speaker plans to get the desired outcome.			
5. The speech ends with a powerful conclusion that restates the main points of the speech.			
6. The overall effectiveness of the speech keeps the listener's attention.			
Presentation Standards			
1. The speaker's appearance and dress are appropriate for the setting.			
2. The speaker speaks clearly using a comfortable pace.			
3. The speaker maintains eye contact with the audience.			
4. The speaker only glances at the speech for key words and main points, not reading the speech word for word.			
5. When appropriate, the speaker uses gestures and nonverbal language to accentuate his/her points.			
6. The overall presentation of the speech is interesting and effective.			

**Hunger Project Speech
"Donations: Why Are There So Little?"
Nick Swails, Moore Middle School**

I'm here to ask if you're willing to change the law that prevents restaurants from donating untouched leftovers to food banks or soup kitchens. If you don't help, you will have to see the hunger on people's faces on the streets of our community.

The outcome that I want to see is that more donations show up at food banks and soup kitchens. I would also like to see more volunteers collecting donations and volunteers for food banks and soup kitchens. Finally lesser signs of hunger in our community.

The problem is the law that prevents restaurants from donating untouched leftovers to food banks or soup kitchens. This problem effects people on welfare and also the homeless. I want to change this because it will improve our community.

This is how I plan to achieve this outcome: I plan on talking to someone in our government about the health law. If I succeed in changing the law, I will be able to talk to restaurants about donating food. If I don't succeed, I will know that I have taken the time to help.

Finally, if you are willing to help you will make a lot of difference in people's lives. If you help me achieve the outcome I want, it can happen. Plus, you will be volunteering to help solve a community problem.

Figure 7-3: Student Speech and Accompanying Rubric for Speech

PHASE V: EVALUATION & CELEBRATION

What was Learned and Accomplished?

Phase V is the stage where everything comes together as students are asked to look back on their work and evaluate its effectiveness (**Table 7-9**). At the same time, students can build on their service-learning work to share it with other audiences and to look for ways to extend their work beyond the original project. This is an opportunity to bring together the body of evidence collected throughout the service-learning process, which can be done through a student portfolio.

Processes The two central processes for students to exhibit in this phase are reflection and evaluation. Reflection focuses on helping student to understand what they have learned over the course of the project (personally, socially, and academically) while evaluation focuses on the success of the service-learning project(s) for the students individually, for the class, and for the community. The reflection that has been on-going throughout the unit at this phase is cumulative. Student products include a self and a group assessment of the learning and service goals agreed upon at the beginning of the unit.

Skills Not only do students need to understand the overall evaluation process, they will also need specific skills to effectively evaluate the unit in terms of service and learning goals. Such skills include basic qualitative and quantitative data gathering, comparative analysis techniques, and technical writing skills. Student products in this phase might include surveys completed and analyzed, evaluation documents, and student journals that document the project's effects. These products demonstrate student abilities to reflect on and evaluate the effectiveness of their service-learning work.

Knowledge The knowledge students might demonstrate in this phase address four areas of understanding:

- How food affects you at local and global levels;
- The processes, skills and knowledge it takes to evaluate "How food affects you and the world";
- How to design, implement and participate in an integrated service-learning project; and
- The role of youth in communities.

Instruction activities for this phase might include group discussions, school or community fairs, providing information to the community, and presenting at conferences. Student products that can be used to assess student learning could include posters, journals, portfolios, and videotaped testimonials produced collaboratively by students and others from the community involved in the project.

Table 7-9: Planning Template for Phase V

PHASE V: EVALUATION & CELEBRATION				
Content	Content Standards	Instructional Strategies	Student Products	Assessment Strategies/Rubrics
<p><i>Processes:</i></p> <p>1. Reflection process that allows students to individually assess what they learned.</p> <p>2. Evaluation process that allows the group to evaluate the success of the project.</p>	<ul style="list-style-type: none"> • Math: 5 • Science: 1 	<ul style="list-style-type: none"> • Activities that help students explore whether the project accomplished its goals • Reflection, on-going throughout the unit, is done here as cumulative reflection (about the entire project) 	<ul style="list-style-type: none"> • Self-assessment of learning and service goals • Group evaluation of the project's learning and service goals 	<ul style="list-style-type: none"> • <u>Self-assessment</u> of learning and service goals • <u>Journal/Essay</u>: Were individual learning and assessment goals reached? Why or why not?
<p><i>Skills:</i></p> <p>3. Reflection skills that illustrate various ways of going through the <i>What?</i>, <i>So What?</i> and <i>Now What?</i> process.</p> <p>4. Evaluation skills including basic qualitative and quantitative data analysis techniques.</p>	<ul style="list-style-type: none"> • R&W: 2, 3, 4 • Science: 1 • Math: 3, 5 • History: 2 	<ul style="list-style-type: none"> • Discussion and activities that help students understand the importance of evaluation and procedure required to do it effectively • Group-generated recommendations about how the project could be better (be sure to include community members and administrators) 	<ul style="list-style-type: none"> • Evaluation documents • Surveys, interviews, tests used to measure effects of project • Journal 	<ul style="list-style-type: none"> • <u>Journal</u>: Have students evaluate the program by asking, "What happened? How did it impact the community? What could be done differently?" etc. • <u>Evaluation</u>: Have students write up a formal evaluation based on diverse sources of data including results from surveys, interviews, tests, and observation
<p><i>Knowledge:</i></p> <p>5. Understanding of how food affects "you" (local level) and "the world" (global level)</p> <p>6. Understanding of what it takes (processes, skills, knowledge) to address the question "How does food affect you and the world?"</p> <p>7. Understanding of how to design, implement, and participate in an integrated service-learning project</p> <p>8. A broadened conception of the role of youth in communities — and communities in schools</p>	<ul style="list-style-type: none"> • Science: 1, 3, 5, 6 • Economics: 1, 2 • Geography: 2, 4, 5, 6 • R&W: 4, 5 • Civics: 4 	<ul style="list-style-type: none"> • As a group, decide what evidence best addresses the question, "How does food affect you and the world?" • School or community "Fair" that showcases all the products generated during the unit that contribute to the question "How does food affect you and the world?" • Brainstorm next steps for project • Students provide assistance and information to people and organizations that want to know more about issues raised in the brochure(s) • Present at state and national service-learning (and other) conferences 	<ul style="list-style-type: none"> • Products and displays for fair • Journal • Portfolio • Videotaped testimonials by students on <i>What? So What? Now What?</i> for overall unit 	<ul style="list-style-type: none"> • <u>Portfolio</u>: Compilation of student work, assessed based on a rubric designed collaboratively in Phase I. • <u>Journal</u>: Although journals were read and evaluated throughout the unit, they can also be assigned a final grade based on the criteria and rubric designed in Phase I. • <u>Individual Products for Fair</u>: Student products (displays, charts with text, music, etc.) Can be assessed based on criteria designed collaboratively by students, teachers, and community members.

Instructional Strategies: Portfolios as the Culminating Assessment of Service-Learning

Each student can be asked to compile a formal portfolio over the course of the service-learning unit. The portfolio represents the students' selection of evidence of mastery of identified processes, skills, and

knowledge related to the Colorado Content Standards acquired during the unit. Portfolios can be assessed using a rubric that helps determine how well students addressed the original inquiry question “How does food affect you and the world?” with an emphasis on the claims they make and the evidence they present to support their claims. Below are some suggestions for how we help students organize these portfolios.

We ask students to use their portfolios to tell a coherent story about how food affects you and the world told through their own eyes. It is organized with tabbed dividers for each phase of the unit (Planning, Global Research, Local Research, Implementation, Evaluation and Celebration). Within each section, students list the content standards they mastered, including evidence for how they met the standard. The evidence includes a description written by the student along with artifacts, products, and/or assessments that relate to that standard — including selections from their service-learning journals. The portfolio should provide evidence and critical analysis of the service and learning goals determined at the outset of the project.

Portfolios should be standardized in terms of the required content, but allow for personalization at the same time. By establishing criteria for what should be included in the portfolio and providing organizational guidelines, you can assure that the important information is included. Within these parameters, students are free to select work that represents their individual learning from this service-learning unit. In this way, portfolios can be a powerful tool for accountability that honors the personal learning styles and needs of each student.

Conclusion

Through the process of developing this unit, the members of our study group learned we didn’t need to rethink our assessment practices as much as we needed to rethink our assessment perspective. As experienced teachers, we already had a lot of tools and strategies to assess student work. We discovered that we didn’t need new techniques for assessing what students learned through service; we simply needed to become more clear on what standards are addressed in service-learning and what evidence of achievement is produced that we can then assess.

Our planning template allowed us to see how standards, instructional strategies, products, and assessment are all tied together. As we laid out each phase of the service-learning process, we came to realize how well service-learning itself serves as a vital piece of the assessment process. In each phase, numerous standards are addressed and a variety of products are created that serve as evidence of student learning. With this evidence in hand, it is relatively easy to provide feedback and evaluation of this work based on rubrics that articulate criteria of quality.

References

- Asp, E. (1998). In Ron Brandt (Ed.), *Handbook of research on student assessment*. Washington, DC: Alliance for Curriculum Reform.
- Goodlad, J. I. (1990). *Teachers for our nation's schools*. San Francisco, CA: Jossey-Bass, Inc.
- Howey, K. R. (1995). The United States: The context for the restructuring and reconceptualization of teacher preparation. In M. F. Wideen & P. P. Grimmer (Eds.), *Changing times in teacher education: Restructuring or reconceptualization?* (pp.19-33). Washington, DC: Falmer Press.
- RMC Research Corporation (1996). Parents ask about standards. Denver, C. 0.: RMC Research Corporation.
- Standards-Based Education Design Team (1996). *Characteristics of a standard-based classroom in Colorado*. Denver, C. 0.: Goals 2000/Partnership Office, Colorado Department of Education.
- Stiggins, R. (1997). *Student-centered classroom assessment*. NJ: Prentice-Hall.
- Toole, I., & Toole, P. (1993). *Service-learning cycle*. St. Paul, M. N.: National Youth Leadership Council & Compass Institute.
- Wiggins, G. (1989). Teaching to the (authentic) test. *Educational Leadership*, 46(7), 4147.

