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4-H After-School Program: Bloco Drum and Dance, Part 11. Developing and Implementing an Evaluation Plan

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Authors
Conklin-Ginop, Evelyn L.
Junge, Sharon K.
Pulley, Karyn

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**Part 11: Developing and Implementing an Evaluation Plan**

**EVELYN L. CONKLIN-GINOP, 4-H Youth Development Advisor, University of California Cooperative Extension, Sonoma County; SHARON K. JUNGE, Acting State Director of 4-H Youth Development; and KARYN PULLEY, 4-H Youth Development Volunteer, UCCE, Sonoma County.**

**Curriculum Overview**

This is part 11 of an 11-part series on planning, developing, and coordinating a 4-H drum and dance after-school program. The series is based on the successes of the Sonoma County 4-H Drum and Dance Program, an experiential (hands-on, learn-by-doing) education effort sponsored by Sonoma County 4-H in partnership with the Windsor School District. The program capitalizes on the positive group experiences of Brazilian Bloco drumming and dance to help youth build self-esteem, embrace personal discipline, develop commitment to their community, and build musical skills. Besides attending regular practices and 4-H meetings, the Sonoma County group performs in local and regional parades and cultural festivals.

The overall positive experience and sense of belonging also have important side-benefits for participating youth, helping to improve their academic performance, reduce teen pregnancy and high school drop-out rates in the group, and discourage gang participation. The program is open to all youth: both boys and girls of all ethnic backgrounds, economic status, and abilities participate.

Each publication in the series covers an important component of the program, with useful tips and tools for making it work for youth in your area. At the end of many of the publications are ready-to-use handouts, forms, and flyers that you can customize for your local use.

**Publications in the Curriculum:**

- Part 1. Introduction to 4-H Youth Bloco Drum and Dance (8427)
- Part 2. Developmental Characteristics of Participating Youth: Age-Based Programs (8428)
- Part 3. Fundraising for Your Program (8429)
- Part 4. Developing Positive Relationships (8430)
- Part 5. Planning Activities and Performances (8431)
- Part 6. Planning a Successful Field Trip (8432)
- Part 7. Effective Strategies for Management and Staffing (8433)
- Part 8. Developing a Schedule for Group Activities (8434)
- Part 9. Planning: Steps to Success (8435)
- Part 10. Making Good Nutrition and Exercise Part of the Program (8436)
- Part 11. Developing and Implementing an Evaluation Plan (8437)

Visit [http://www.windsorbloco.org](http://www.windsorbloco.org) for a recruitment video and PowerPoint presentation to help promote and start a program of your own.
Developing an Evaluation Plan

With recent increased interest in organized after-school activities for children, large amounts of federal and state funding have become available for these programs. Educators, researchers, practitioners, and policy makers all are interested in knowing how these dollars will impact the communities in which they are invested, and that means evaluation and documentation are all the more important as aspects of after-school programs. Future policies regarding after-school programs will be influenced not just by national research and evaluation investments; local evaluation efforts will also provide important information to decision makers.

Evaluation serves multiple purposes for an after-school program. In addition to helping programs be accountable to their multiple stakeholders—funders, schools, parents, student participants, and communities—evaluation helps programs to strengthen themselves. Engaging in frequent, active evaluation is one way for after-school programs to track progress toward their goals and ensure that they are meeting the needs of communities.

What Are You Evaluating?

More and more policy makers, funders, and youth program directors are looking for concrete ways to see that the dollars and efforts they expend on programs are indeed having a positive impact on the youth they are intended to serve. As a result, more and more after-school programs are turning their attention to evaluation.

Evaluation is a key component in running a successful after-school program. Regular evaluations provide feedback on the effectiveness of the program’s work and help focus efforts to improve the program by targeting the areas in greatest need of change. When you use a variety of assessment methods, you get a better overall picture of the after-school program. You also get more useful results when you involve several different people with different perspectives in the evaluation process.

Before you begin, determine what your desired outcomes for the 4-H Drum and Dance after-school program are. Outcomes might include:
- improving the participants’ self-esteem
- fostering a safe environment
- developing leadership skills in older youth
- improving the health of participating youth through nutritious snacks and exercise

Developing a Plan

A good evaluation plan is flexible enough to allow for modification when program needs change or if the evaluation results are not as expected. The data you gather during the evaluation phase is important both when it comes to assessing a program’s effectiveness and when you consider the possibility of program expansion. In addition, a sound evaluation plan may help you secure external funding. As the program evaluation team begins to develop a plan, they will realize it involves more than just gathering information: It involves asking questions about your 4-H Bloco Drum and Dance after-school program to determine whether it is meeting the goals established by the Advisory Committee and providing service for the teen participants.

Evaluation techniques include surveys, candid collection of data, contextual observation,
paper prototyping, micro surveys, focus group interviews, and measuring website hits. Several of these techniques use technology to produce superior data and analysis at a fraction of the cost of traditional methods.

Sound management practices will ensure that resources are available to conduct a program evaluation, and thoughtful planning will guarantee that both the quality and quantity of data will meet the needs of the project’s stakeholders. Good analysis of the data will make it easier to share with stakeholders and will make them more likely to implement the recommendations.

Before you begin your evaluation, make sure you have a plan for it that includes a careful needs assessment and a clear set of objectives. This plan will help the evaluation team determine what the analysts need to know and find ways to collect or retrieve the information needed for drawing conclusions and making vital decisions. The plan also serves as the guiding tool for the evaluation team, keeping them focused.

Starting with the right questions can help you focus your evaluation, set your objectives, anticipate possible problems, and manage your resources wisely. Questions to ask yourself when starting to plan an evaluation may include:

- What question(s) is the evaluation trying to answer?
- Who are the stakeholders for this evaluation? Who will be affected by the results? Who will use the results?
- What data do we need in order to answer these questions and how are we going to interpret the data?
- What obstacles are we likely to encounter while collecting and analyzing the data?
- What financial and human resources can we bring to this evaluation?
- What methods should we use?
- What are we going to do with the results?

A descriptive, summary evaluation of a program can help demonstrate to stakeholders that the program is meeting its objectives. An action-oriented, formative evaluation can help define the program’s objectives more clearly and you can then use the feedback to make changes where necessary.

An evaluation plan should:

- Describe the project’s stakeholders.
- Identify the questions the evaluation will answer.
- Explain the kind of data you expect to collect.
- Demonstrate how you will collect and analyze the data.
- Describe how you will deliver your results to your stakeholders.
- Outline the budget for the evaluation.

Choosing a Method

When examining the options for evaluating a 4-H Drum and Dance after-school program, our evaluation team chose to use the survey method to determine whether the project was effective in
changing teens’ attitudes or behaviors. The survey is a classic method for data collection: it is flexible, easy to implement, and offers a nearly limitless range of possible data with reliable results. The data gathered during an effective survey provides the evaluation team an opportunity to gain new insight into a program. Through this process the team can gather large amounts of feedback directly from individuals who are affected by the program. Surveys can measure the program’s strength.

Surveys have a number of uses. For example, you can use them to measure change over time by monitoring preprogram conditions as compared to postprogram conditions, you can use to gather reliable data regarding various teens’ motivation for participating in the program, and you can be sure of consistent collection for data from multiple sources data because all teen respondents respond to exactly the same questions presented in exactly the same way.

writing a good survey for evaluation

To design an effective survey
- Determine what type of survey the program will need to send out and to whom it needs to be sent.
- Make sure your respondents have the skills, knowledge, and (if necessary) access to the required technology to complete the evaluation.
- Collect data from a statistically meaningful sample size. It is not necessary for you to survey every participant.
- Provide incentives for participants to complete the survey.
- Consider whether the evaluation team needs to provide assistance to the participants in order for them to complete the survey.
- Protect respondents’ privacy when you ask them for sensitive information. For online surveys, the website can easily encrypt the data to preserve anonymity.

- Time your survey appropriately with regard to the information you hope to gather. Pretest data can be used to guide the program’s development during the year, whereas posttest data can be used to measure the program’s success and come up with proposed changes for the future. A look at the program’s objectives will help the evaluation team determine what kind of data it needs to collect.

Good questions are essential to a survey’s success. Questions should be extremely focused to prevent the kind of unexpected responses that confound data analysis. When formulating a question, start by deciding what type of answer you wish to receive. If you want a lengthy description or opinion, ask an open-ended question, such as “What did you do today in school?” If you want a “yes” or “no” response, ask a closed question, such as “Did you go to the Drum and Dance Program today?”

Part of composing a good question is finding a way to measure the expected responses. Make a list of possible indicators that relate to the type of response the evaluation team is seeking. For example, if an instructor is trying
to determine the quality of a person's exercise habits, indicators would include what type of exercise they do and how many days of the week they exercise.

According to Hollister and Hill (1995), “Even minor changes to the wording of a question (or to the response options) will limit your ability to make comparisons between the pretest and the posttest.” Asking a question such as “How often do you warm up before class?” with response choices of “always,” “sometimes,” “seldom,” and “never” is not the same as asking “Do you warm up before class?” with the response choices “yes” and “no.” Keep it consistent.

An effective method for obtaining consistent survey responses is to use a Likert scale. A Likert scale allows a participant to provide feedback that is slightly more expansive than a simple close-ended question but that is much easier to quantify than a completely open-ended response. A Likert scale lists a set of statements (not questions) and provides a 5- or 6-point scale against which the participant can rate his or her level of agreement or disagreement with the statement. Here is an example of a 5-point scale:

- I was able to take my heart rate and record it on the chart.
  - Strongly Agree
  - Agree
  - Not Sure
  - Disagree
  - Strongly Disagree

With a 6-point scale, you might add a response such as “Not Applicable” to the end of the list to ensure that your participants have a way to opt out of the question while still allowing you to quantify their response.

Because the number of responses is limited, each response can be given a numerical value, making statistical data analysis for the evaluation team. For example, a “Strongly Agree” response may be counted as a value of 1, “Agree” as 2, and so forth. But be careful: when you use too many Likert scales and cluster them together, participants often settle into a pattern, circling the same response for a number of different questions. If possible, space the Likert scale questions out over the length of the entire survey.

Once you know what indicators you need to measure, you can start to formulate a valid question. In the case of the drum and dance student, one valid question is “How many times a week do you exercise?”

To make sure that your questions will generate the kind of data your program seeks to measure, try administering a trial version of the survey to a sample of participants.

Set a time and place for the evaluation team to meet and discuss what type of information needs to be covered in your survey. Make a list of needs, keeping the goals of the program in mind. Organize the questions into groups and define the target issue for each question. When designing issue-based questions, keep in mind the following:

- Outcomes and impacts
- Program implementation
- Program context (How does the program fit into the local setting?)
- What needs is the program addressing?
- What information do you need to gather with your questions?

Keep the survey simple. With a long, complicated survey, participants will often quit part way through. If you need more detailed information for the program, consider using two different surveys. One can be a simple overview of the program content and can be widely distributed. The other can be longer and more detailed but with a more limited distribution. It may be necessary to offer your incentives or compensation to your participants in exchange for completing the longer survey.
What Is in It for the Participant?

In many cases, simply providing an appropriate incentive will get you the number of responses you need for an effective evaluation. In determining what type of incentive to offer, keep in mind that it should be significant to the specific person or group and that not all incentives work for everyone. There are two types of incentives that are effective in helping build a good response base: intrinsic incentives and extrinsic incentives.

1. Intrinsic incentives encourage a personal response that motivates the individual participant to become more involved. Intrinsic motivation tends to be much stronger than extrinsic motivation because it connects an individual to a behavior in a more personal way. Target this kind of incentive to whatever it is that drives a particular teen to succeed. Examples of intrinsic incentives might include instilling a teen with a sense of personal accomplishment for completing a task that he or she might not have been able to complete on his or her own, and then sharing a sense of that ability with others. For example, if a person succeeds at losing weight, he or she may want to share that experience with others through participation in the evaluation survey. This kind of participation is an altruistic response to what the individual senses that other team members need, and fosters a sense of solidarity in the group.

2. Extrinsic incentives work by providing participants with a reward for performing a specific behavior. While extrinsic incentives are not as effective intrinsic incentives for engendering long-term behavioral changes, they can be extremely effective for achieving short-term results such as participation in a survey. Extrinsic incentives are easy to offer because they can be as simple as the offer of an extra half-hour on participants’ lunch breaks or the offer of a small amount of money. You might even offer participants a benefit for which they would normally have to pay, such as free professional health advice in return for filling out a health survey.

Privacy Is a Must

Some participants do not respond to surveys that include personal information. Make sure to take precautions that will protect respondents’ privacy when you are asking for legally protected or sensitive information.

As an example of this type of protected information, participating youth need to obtain parental consent before they can participate in an evaluation. This requirement is based on the legal concept that children, until they turn 18, are not able to make legal decisions for themselves. It is important that you find out what consent requirements are in effect in your state and whether your state requires the consent of more than one parent. If youth participate in your Bloco Drum and Dance group evaluation without obtaining state-required parental consent, you could be leaving your group open to a lawsuit.

Once you have obtained parental consent, explain these precautions to your participants and let them know that their answers and the evaluation survey’s results will remain anonymous. If you decide to use traditional paper surveys, make sure all information pertaining to confidentiality is outlined in an accompanying letter or on the front of the survey. For online surveys, data can easily
Timing Is Important
The timing of a survey affects its results in terms of pre or post data. If you wait and survey your participants too long after the program is over, they may not remember the program in enough detail to provide accurate information. On the other hand, if you want to determine whether participants experienced lasting effects from the program, testing too soon could be a problem. Also, the longer you wait before you survey program participants, the more likely it is that their knowledge will be contaminated by other factors. For example, if a person takes a course on lung cancer prevention and then goes home and reads a book on a related topic, he or she might end up being better informed than if he or she had relied on program content alone, and that can skew your data to show a more highly educated participant than the actual program’s results would justify.

How the Information Will Be Used
Program evaluation takes time and patience. The goal of data analysis is to synthesize information in a way that makes sense of it. The program evaluation team will need to ask the following questions:
- How will the survey responses be organized?
- How will the program tabulate the survey results?
- What statistical method will be used? Will you need to use statistical data at all?
- How will you analyze any narrative portions of the evaluation?
- Who will organize and analyze the survey information?
- Who will interpret the survey information? (Interpretation is the process of attaching meaning to the analyzed data.)
- Who should be involved in the data analysis?
- How will you share the information? With whom will you share it?

Develop conclusions and suggestions. It is important that the evaluation be used to improve and enhance the after-school program. It is important that you developing useful timelines and deadlines.

Decide who the target audience is for your survey results and determine how your program intends to supply the information. Besides your primary target audience, what other community groups could benefit from your evaluation?

Communicate with the Stakeholders
Just as communication within the team is important, you need to make sure to communicate effectively with your stakeholders and keep them actively involved. An effective evaluator can draw out important information from the experts and transform it into meaningful conclusions and useful recommendations.

Regular communication with stakeholders also paves the way for the smooth presentation of
evaluation results. By keeping your stakeholders apprised of the project’s progress and midcourse corrections, you will create a political climate that is receptive to implementation of an evaluation’s recommendations.

How Is the 4-H Bloco Drum and Dance Program Evaluated?

Youth participation in program evaluation is a way of involving young people in assessing community programs that affect their lives. It is not token involvement, but active engagement in which youth have real influence on decisions. Program operators are realizing that when they involve participating youth in evaluation and research about the programs, their efforts serve multiple purposes. These include

- Enhancing the development of individual youth and encouraging their active involvement in the decisions that affect their lives.
- Contributing to the development of the organization and building its capacity to grow and improve.
- Providing youth with opportunities to create real change in their community.

In the Sonoma County 4-H Bloco Drum and Dance Program we tried several methods of evaluation, including taking heart rates after drumming and dancing classes to measure impact of exercise and conducting focus group interviews about health and nutrition. The survey results were hard to track, however, and the data were not consistent. After several attempts to develop evaluation tools that would be meaningful to youth, the evaluation team made up of teens, adults, 4-H Staff, and community agency personnel chose the pretest/posttest method. (See Appendix for a sample 4-H Bloco Drum and Dance questionnaire).

Given recent increased interest in and recognition of the importance of involving youth as researchers, the Sonoma County 4-H Bloco Drum and Dance Program staff conducted a set of focus group interviews with representatives from the three sites we served as a way to obtain input for our survey.

This method included applying a pre-coded measurement procedure that invited the direct participation of youth in evaluating the outcome. The pretest/posttest measurement strategy that involved youth in progress monitoring proved to be more useful as a tool for evaluation and for improving comprehensive programs for multi-risk youth. (See results from the Sonoma County 4-H Bloco Drum and Dance Program study in the Appendix).

Conclusion

The program planning, implementation, and evaluation processes benefit from a strong data collection and evaluation structure, and the creation of an effective evaluation tool first and foremost requires good organization on the part of the evaluation team. The evaluation structure addresses not just the physical mechanisms that pertain to evaluation, such as data collection tools and evaluation personnel, but also nontangible attitudes among stakeholders about evaluation. The survey is an evaluation tool, a communication mechanism that functions between and among the various stakeholders involved in the program. In order for a strong evaluation tool to exist, all of the stakeholders must be in agreement about the program’s needs, goals, and intended outcomes. By building a data collection and evaluation infrastructure into the program from the very start, you can create an environment that will support effective evaluation efforts in the future (Anderson-Butcher, Newsome, and Ferrari 2003).
References


**Inquiry and Experiential Learning**

The activities in this curriculum were designed around inquiry and experiential learning. Inquiry is a learner-centered approach in which individuals are problem solvers investigating questions through active engagement, observing and manipulating objects and phenomena, and acquiring or discovering knowledge. Experiential learning (EL) is a foundational educational strategy used in 4-H. In it, the learner has an experience phase of engagement in an activity, a reflection phase in which observations and reactions are shared and discussed, and an application phase in which new knowledge and skills are applied to real-life settings. In 4-H, an EL model that uses a five-step learning cycle is most commonly used. These five steps—Experiencing, Sharing, Processing, Generalizing, and Application—are part of a recurring process that helps build learner understanding over time.

For more information on inquiry, EL, and the five-step learning cycle, please visit the University of California Science, Technology, and Environmental Literacy Workgroup’s Experiential Learning Web site, [http://www.experientiallearning.ucdavis.edu/](http://www.experientiallearning.ucdavis.edu/).

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Communication Services
1301 S. 46th Street
Building 478 – MC 3580
Richmond, California 94604-4600
Telephone: 1-800-994-8849 or 510-665-2195, FAX: 510-655-3427
e-mail inquiries: anrcatalog@ucanr.edu
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Appendix

Forms and informational booklets published by the California State 4-H Office are available free of charge at www.ca4h.org/Resources/Publications/. Look for the “Project Leader’s Digest” for guidelines on setting up 4-H activities.

Many counties now offer or require online enrollment in 4-H programs. Contact your local UC Cooperative Extension County Office for information.

If your 4-H program is outside of California, please contact your state’s 4-H office to obtain correct, current information.

Evaluation Plan

- Sample Evaluation Participation Letter to Parents Spanish and English
- Sample Evaluation Participation Consent Form
- Sample Questionnaire: Evaluation of 4-H Bloco Drum and Dance Program
- How to Take a Heart Rate
- 4-H Bloco Drum and Dance Exercise Evaluation Handout
- Heart Rate Chart
- Observation Sheet
- Using Evaluation in the 4-H Bloco Drum and Dance Program: Windsor’s Results
Sample Evaluation Consent Letter for Parents

Date

Name
Line 1 Address
Line 1 Address

Dear Parents,

As you know, your child participates in the 4-H Bloco Drum and Dance Program. To help us find out whether the program is effective in meeting its goals, we will be evaluating the program using questionnaires. We would like to have your child participate in this evaluation session in November.

In order for your child to participate in the evaluation we need your permission. Please read, sign, and return the enclosed Consent Form as soon as possible.

Sincerely,

Evelyn Conklin-Ginop
4-H Youth Development Advisor
Grant Coordinator

Dennis Bonê
4-H Bloco Dum and Dance Site Director

Encl.
Sample Evaluation Consent Letter for Parents (Spanish Language)

Date

Name
Line 1 Address
Line 1 Address

Estimados Padres,

Su hijo/hija toma parte en el Programa de 4-H Tambor y Baile. Para ayudarnos averiguar si el programa es efectivo en la reunión en las metas, nosotros estaremos evaluando el programa utilizando cuestionarios. Queremos que su hijo/hija tome parte en esta sesión de la evaluación en octubre-noviembre.

En orden que su hijo/hija tome parte en la evaluación nosotros necesitamos su permiso. Favor de leer, firmar y regresar la Forma del Consentimiento tan pronto como posible.

Atentamente,

Evelyn Conklin-Ginop
4-H Youth Development Advisor
Grant Coordinator

Dennis Bonè
4-H Bloco Dum and Dance Site Director

Encl.
CONSENT FOR YOUR CHILD TO PARTICIPATE IN A PILOT RESEARCH STUDY

UNIVERSITY OF CALIFORNIA, DAVIS

Title of Study: Pilot of Evaluation of 4-H Bloco Drum and Dance Program
Investigator: Marc Braverman, Ph.D., Dept. of Human and Community Development, UC Davis, (530) 752-7003

PURPOSE
You are being asked to allow your child to participate in an evaluation of the 4-H Bloco Drum and Dance Program. We hope to learn whether the program is effective and how it can be improved. The purpose of this overall research project is to help us find out whether the 4-H Bloco Drum and Dance Program is meeting its goals.

PROCEDURES
If you decide to allow your child to volunteer, she or he will be asked to complete a questionnaire, which will probably take about 30 minutes.

RISKS
There are no risks to you or your child from their participation in this study.

BENEFITS
It is possible that your child will not benefit directly by participating in this study. However, we believe that your child will enjoy the activities of the program itself, and she or he may enjoy the opportunity to give us feedback about how the program is working. Their participation in this study will also provide a benefit to other young people like themselves because it will enable us to make the 4-H Bloco program as high-quality as possible.

CONFIDENTIALITY
We will keep all information strictly confidential. We will not connect anyone’s name with the questionnaire answers when we share the results of this study, and we will not use your name or your child’s name in writing about the study. Absolute confidentiality cannot be guaranteed, since research documents are not protected from subpoena.

COSTS/COMPENSATION
There is no cost to you or your child beyond the time and effort required to complete the procedure described above.

Consent Form Version: Prog.
Participant’s Initials_______

(IRB approval)
RIGHT TO REFUSE OR WITHDRAW
You or your child may refuse to participate in this study. You or your child may change your mind about being in the study and quit after the study has started.

QUESTIONS
If you have any questions about this study, please contact Evelyn Conklin-Ginop, Robyn Caruso, or Marc Braverman, who will answer them at:

Evelyn Conklin-Ginop, 4-H Youth Development Advisor, UC Cooperative Extension, 2604 Ventura Ave., Room 100-P, Santa Rosa CA 95403. Phone: (707) 565-2681

Robyn Caruso, Dept. of Human and Community Development, UC Davis, Davis CA 95616. Phone: (530) 752-2766

Marc Braverman, Dept. of Human and Community Development, UC Davis, Davis CA 95616. Phone: (530) 752-2766

If you have any questions regarding your rights and participation as a research subject, please contact the Office of Human Research Protection at (916) 734-6897 or write to the University of California, Davis, Office of Human Research Protection, Ambulatory Care Center, Suite 3870, 4860 Y Street, Sacramento, CA 95817.

CONSENT
YOUR SIGNATURE, BELOW, WILL INDICATE THAT YOU HAVE DECIDED TO ALLOW YOUR CHILD TO VOLUNTEER AS A RESEARCH SUBJECT AND THAT YOU HAVE READ AND UNDERSTOOD THE INFORMATION PROVIDED ABOVE. YOU WILL BE GIVEN A SIGNED AND DATED COPY OF THIS FORM TO KEEP. YOUR CHILD WILL ALSO BE GIVEN A COPY OF THE EXPERIMENTAL SUBJECT’S BILL OF RIGHTS AND THE LETTER TO RESEARCH PARTICIPANTS.

Signature of Participant or Legal Representative __________________________ Date _________ Time ______

Signature of Investigator __________________________ Date _________ Time ______

Consent Form Version: Prog.
SAMPLE POST-TEST EVALUATION FORM

Instructions: For each of the following questions, please circle the letter of the answer that comes closest to your opinion or fill in the information that is requested.

1. How old are you? (Do not count upcoming birthdays.)
   ___________ years old.

2. What is your gender?
   a. Female
   b. Male

3. How do you describe yourself?
   a. Black or African American
   b. Asian
   c. White or Caucasian
   d. Latino, Hispanic, or Chicano
   e. Native American/American Indian
   f. Hawaiian or other Pacific Islander
   g. Mixed race/ethnicity

4. What grade are you in?
   a. 6th grade
   b. 7th grade
   c. 8th grade
   d. 9th grade
   e. 10th grade
   f. 11th grade
   g. 12th grade

5. What school do you go to?
   a. Windsor Elementary School
   b. Windsor Middle School
   c. Cali Calmecac Middle School
   d. Windsor High School
6. What kinds of grades did you mostly get last year?
   a. Mostly A’s
   b. About half A’s and half B’s
   c. Mostly B’s
   d. About half B’s and half C’s
   e. Mostly C’s
   f. About half C’s and half D’s
   g. Mostly D’s
   h. Mostly below D

7. On how many of the past 7 days did you exercise or participate in physical activity outside of your regular school classes for at least 20 minutes? Examples might include fast dancing, team sports, running, fast bicycling, etc. (Do not count 4-H Windsor Bloco activities or your school PE classes.)
   a. 0 days
   b. 1 day
   c. 2 days
   d. 3 days
   e. 4 days
   f. 5 days
   g. 6 days
   h. 7 days

8. On an average school day, how many hours do you watch TV?
   a. I do not watch TV on an average school day.
   b. Less than 1 hour per day
   c. 1 hour per day
   d. 2 hours per day
   e. 3 hours per day
   f. 4 hours per day
   g. 5 or more hours per day

9. During the past 12 months, on how many sports teams did you play? (Include any teams run by your school or community groups.)
   a. 0 teams
   b. 1 team
   c. 2 or more teams
10. During the past 7 days, how many times did you drink 100% fruit juices such as orange juice, apple juice, or grape juice?  
(Do not count punch, Kool-Aid, sports drinks, or other fruit-flavored drinks.)
   a. Not at all
   b. 1 to 3 times during the week
   c. 4 to 6 times during the week
   d. 1 time per day
   e. 2 times per day
   f. 3 times per day
   g. 4 or more times per day

11. During the past 7 days, how many times did you eat fruit?  
(Do not count drinking fruit juice.)
   a. Not at all
   b. 1 to 3 times during the week
   c. 4 to 6 times during the week
   d. 1 time per day
   e. 2 times per day
   f. 3 times per day
   g. 4 or more times per day

12. During the past 7 days, how many times did you eat vegetables or green salad?  
(Do not count French fries.)
   a. Not at all
   b. 1 to 3 times during the week
   c. 4 to 6 times during the week
   d. 1 time per day
   e. 2 times per day
   f. 3 times per day
   g. 4 or more times per day
13. During the past 7 days, how many times did you eat French fries?
   a. Not at all  
   b. 1 to 3 times during the week  
   c. 4 to 6 times during the week  
   d. 1 time per day  
   e. 2 times per day  
   f. 3 times per day  
   g. 4 or more times per day  

14. During the past 7 days, how many times did you eat candy, cake, or other sweets?
   a. Not at all  
   b. 1 to 3 times during the week  
   c. 4 to 6 times during the week  
   d. 1 time per day  
   e. 2 times per day  
   f. 3 times per day  
   g. 4 or more times per day  

15. During the past 7 days, how many days did you take a vitamin pill?
   a. 0 days  
   b. 1 to 2 days  
   c. 3 to 4 days  
   d. 5 to 6 days  
   e. Every day  

16. In your opinion, is it important that kids your age learn about what life is like in different kinds of cultures?
    a. Definitely important  
    b. Probably important  
    c. I don’t have an opinion on this.  
    d. Probably not important  
    e. Definitely not important
17. In your opinion, is it important that kids your age get opportunities to spend time with kids from other races and cultures within California?
   a. Definitely important
   b. Probably important
   c. I don’t have an opinion on this.
   d. Probably not important
   e. Definitely not important

18. In your opinion, is it important that kids your age get opportunities to spend time with kids from other countries?
   a. Definitely important
   b. Probably important
   c. I don’t have an opinion on this.
   d. Probably not important
   e. Definitely not important

19. Is being in a gang a good idea for young people your age?
   a. Yes, definitely
   b. Yes, probably
   c. I don’t know.
   d. No, probably not
   e. No, definitely not

20. Have you ever belonged to a gang?
   a. No
   b. Yes

21. Do you belong to a gang now?
   a. No
   b. Yes

22. Are any of your good friends in a gang?
   a. No
   b. Yes
23. Do you think you will be in a gang next year at this time?
   a. I definitely will.
   b. I probably will.
   c. I don’t know.
   d. I probably will not.
   e. I definitely will not.

24. (If you are not currently in a gang) Do you think that being involved in the 4-H Windsor Bloco Project will help you to stay out of a gang?
   a. Yes, definitely
   b. Yes, probably
   c. I don’t know.
   d. No, probably not
   e. No, definitely not

25. Do you think that being involved in the 4-H Windsor Bloco Program will help most kids to stay out of a gang?
   a. Yes, definitely
   b. Yes, probably
   c. I don’t know.
   d. No, probably not
   e. No, definitely not

**Should kids your age think about their health when deciding…**

26. …what they will eat?
   a. Definitely important
   b. Probably important
   c. I don’t have an opinion on this.
   d. Probably not important
   e. Definitely not important

27. …whether they will drink alcohol?
   a. Definitely important
   b. Probably important
   c. I don’t have an opinion on this.
   d. Probably not important
   e. Definitely not important
28. ...whether they will smoke cigarettes?
   a. Definitely important
   b. Probably important
   c. I don’t have an opinion on this.
   d. Probably not important
   e. Definitely not important

29. ...whether they will use chewing tobacco?
   a. Definitely important
   b. Probably important
   c. I don’t have an opinion on this.
   d. Probably not important
   e. Definitely not important

30. What does the pulse measure? (Circle only one.)
   a. The heart rate
   b. The rate of breathing
   c. The oxygen flow in the body
   d. How tired you are

31. For healthy eating, how many servings of vegetables and fruits should you eat each day?
   a. 1 serving
   b. 3 servings
   c. 5 servings
   d. 8 servings

32. Most fruits and vegetables provide the highest nutrient content if they are eaten:
   a. Microwaved
   b. Uncooked
   c. Fried
   d. It does not matter how they are cooked.

33. To be healthy, most people should exercise at least:
   a. Once a week
   b. Twice a week
   c. 30 minutes a day
   d. 2 hours a day
HOW TO TAKE A HEART RATE

There are several ways to monitor the intensity of exercise. The best way is to take your heart rate during the exercise, within the first 5 minutes of your cardiovascular exercise session, and again just before the cool-down.

Your heart rate is measured in beats per minute (BPM). Here are two ways to check your heart rate during exercise:

One way is to purchase a heart rate monitor that you can strap around your chest. The monitor attaches to a digital wristwatch display that tells you exactly what your heart rate is at a specific moment in the exercise session. A second way is to feel your pulse at either the carotid artery, the temporal artery, or the radial artery. The easiest sites to monitor are the carotid and radial arteries. To feel you carotid artery, gently place your index finger on your neck at a point in the middle of the space between your collarbone and your jaw line. To feel the radial artery, place your index and middle fingers on the thumb side of the underside (palm side) of your wrist. Using the second hand on a watch or clock, count the number of pulses in 6 seconds and multiply that number by 10. This gives you the number of times your heart is beating in one minute.

To easily get an idea of what your own maximum heart rate should be, just subtract your age from 220. For example, a 13-year-old would have a maximum heart rate of 207 BPM (220 – 13 = 207). A healthy heart rate under moderate exercise is about 70 percent of the maximum, or 145 BPM for that same 13-year-old (0.7 x 207 = 145).

Duration is the length of time the exercise activity is performed. A good minimum duration for moderate exercise is 30 minutes per day.

Frequency is how often the activity is performed. We recommend that adolescents exercise as many days a week as possible. This kind of regular exercise can improve the health and well being of adolescents. Personal goals such as weight gain may alter these numbers for an individual. Personal differences, such as an individual's athletic ability or medical conditions, may also affect how long or how often you want to exercise.

Basic physiology. When a body uses its muscles, it requires food to fuel the muscles. In order to burn that food and create energy, the body needs oxygen. The more activity, the more oxygen it requires, the faster the breathing (respiration), and the faster the heart pumps to deliver the blood, rich with oxygen and calories, to the muscle cells of the body. By measuring your heart rate and respiration rate, you can estimate how many calories your body is burning. An elevated heart rate is a sign that the body is using more calories than usual.

Adapted from Mountain States Health Alliance, How to take your heart rate, retrieved on November 2, 2009, from www.msha.com/body_sibling02.cfm?id=684.
Adolescents are at risk for being overweight. With increases in television viewing and fast food consumption, teens today are becoming more overweight at an earlier age. What helps keep teens fit is plenty of regular exercise and a healthy diet with a consistent selection of fresh-grown foods. Foods of this type are satisfying, filling, and relatively low in calories. According to Dr. Janson’s “Nutrition Education Newsletter” for 2001, teens need to exercise daily and cut down on fat and fast foods.

The results of this onslaught of low activity and fast "fat foods" are seen every day. One recent book, Fast Food Nation, shows the parallel between the increases in fast junk food restaurants and the rise of obesity in America. A recent scientific study showed an ominous trend: In teens 15 to 19 years old, 10 percent had arteriosclerosis damage in their aorta, and 50 percent had it in their right coronary artery.

The 4-H Bloco Drum and Dance Program is a way to encourage youth to make exercise and good eating habits a part of their daily routine. It is much more fun to be involved in an activity than to do calisthenics. This study on exercise used experiential education (hands-on and learn-by-doing) to involve teens in the learning activity.

**METHOD: COMPARING HEART RATES**

**Topic:** Exploring the effects of physical activity on the heart rate, measured by pulse.

**Goal 1:** To know and apply the concepts, principles, and processes of scientific inquiry by learning how to take a pulse rate after exercise.

**Goal 2:** To achieve and maintain a health-enhancing level of physical fitness based upon continual self-assessment and periodic checking with the school nurse.

**Objectives**

When asked, the students will be able to

- Correctly measure their heart rate during physical activity.
- Demonstrate an understanding of the effect of exercise on the heart through accurate recorded data and multiple descriptions of the effects on the body.
- Identify one reason why the heartbeat increases with different activities.

**Process Skills**

- **Observation.** Participants will observe changes in the body, specifically the heart, that occur while performing drum and dance activities.
- **Communication/Recording.** Participants will record observations as well as actual heart rates on the observation worksheet. The first recording will be
completed by the school nurse to ensure that the information is recorded correctly.

- **Measuring.** Participants will measure their heart rate by counting the number of beats per 15 seconds, then multiplying by 4 to get the number of beats per minute.

**Materials Used**
- Watch with a second hand
- Whistle
- Clipboard
- Observation sheet

**Activity**
Explain and record heart rate after each drum and dance class.
- The school nurse will demonstrate how to take a heart rate correctly.
- Each participant will have his or her heart rate taken by the school nurse.
- Each participant will practice taking a heart rate.
- Each participant will take his or her own heart rate and write it down on the clipboard.
- Each participant will record observations about his or her body made while taking his or her heart rate.

**EVALUATION**
Evaluation for this learning process is based on several factors:

1. First, there will be informal observations made by the school nurse during the guided first lesson and by participants while practicing taking a pulse. The nurse will note whether participants are measuring their pulse accurately and using correct finger placement.

2. Second, the observation sheet used for data collection will serve as a way to assess the participant's ability to measure his or her pulse. For example, if a participant wrote down a pulse rate of 5 beats (per 15 seconds), the nurse would know that the participant either used the wrong finger placement, counted wrong, or made a mistake writing down the number.

3. The data that participants record on their observation sheets will allow them to demonstrate their understanding of the effects physical activity has on the body. They will be able to recognize that the heart rate increases with physical activity and then identify possible reasons why this happens.

**RESULTS**
This evaluation looks at the effects of exercise for junior high and high school teens by letting them measure and record their own heart rates. Forty-six participants were involved in this evaluation.

- All participants noticed changes in their body shape and increased heart rate after each class.
While weight measurement was not a required part of the study, participants noticed a reduction in overall weight (between 5 and 10 pounds) by the end of the school year.

The weight findings were as follows:

<table>
<thead>
<tr>
<th>Both groups (46 participants)</th>
<th>Dancers (22 participants)</th>
<th>Drummers (24 participants)</th>
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<tbody>
<tr>
<td>37 reported a 5- to 7-pound weight loss.</td>
<td>20 reported a 5- to 7-pound weight loss.</td>
<td>17 reported a 5- to 7-pound weight loss.</td>
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<td>6 reported a 10-pound weight loss.</td>
<td>4 reported a 10-pound weight loss.</td>
<td>2 reported a 10-pound weight loss.</td>
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<tr>
<td>3 reported no weight loss.</td>
<td>2 reported no weight loss.</td>
<td>1 reported no weight loss.</td>
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## HEART RATE CHART

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Sex</th>
<th>Weight</th>
<th>Heart Rate</th>
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*Keep track of students’ heart rate after each class.*

*Heart rate during exercise indicates level of fitness and intensity of exercise.*
## OBSERVATION SHEET

<table>
<thead>
<tr>
<th>Date</th>
<th>Heart rate</th>
<th>Describe body changes after exercise</th>
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Name: _________________________________
Our evaluation team decided to use the pre-test/post-test method as our evaluation instrument. It was important for the program to document the findings in such a way that educators, researchers, practitioners, and policy makers could visualize the impact of the program and continue to support it financially. Below are the results from the 4-H Bloco Drum and Dance Program.

A study was conducted using the survey/questionnaire method. The program served 80 youth and adults. Below are listed the 2004–2005 results for those participating in the program. Some of the students declined to take the survey due to lack of parental permission. The survey was developed by the California Youth and Families at Risk (CYFAR) Team led by Robyn Caruso, CYFAR Manager. Copies of the survey and parent permission sheets are included in this appendix and can be replicated for your own use.

The 4-H Windsor Bloco Drum and Dance Program targets middle school and high school students of ethnically diverse backgrounds in the Windsor School District. The goal of this program is to improve the availability of positive activities for teens within the targeted community. The program introduces youth to Brazilian, Afro-Cuban, West African, and Hip Hop rhythms and dance. Participants learn basic concepts of music and the techniques for playing various instruments.

Since the program is implemented after school and is held at the school sites, the program runs on the school year calendar. Recruitment for the program began in September and it was up and running in October; it concluded at the end of May. During the 2004–2005 school year, the program served 80 middle and high school youth.

The program met twice a week during the entire school year. In 2004–2005, the advanced drumming class was on Mondays from 2:00 to 3:30 at Windsor High School and the beginning drumming class was at Windsor Middle School from 3:30 to 5:15. The dance classes were held at Windsor High School for both high school and middle school youth on Mondays and Thursdays from 3:30 to 5:15. All classes met together once or twice a month to practice as a cohesive group. Each class focuses on drumming and dancing, with costume and/or mask making incorporated in the spring. The nutrition component allows us to enhance the participants’ knowledge of food choices through food demonstrations, food tasting, and the provision of healthy snacks at each rehearsal.

**Methodology**

The program was evaluated using a pre-test/post-test design. The youth were asked to complete a multipage self-administered questionnaire at the beginning and the end of the program.
Sample
A total of 26 youth participated in the evaluation, with 24 completing the pre-test and 15 completing the post-test. Of these 26 youth, a majority (61.5%) were female. In terms of ethnicity, 73.1% of the participating youth were Latino, Hispanic, or Chicano, 11.5% were of mixed ethnicity, 7.7% were Caucasian, 3.8% were Native American, and 3.8% were African American. Many of the teens agreed not to be involved in the evaluation because we were unable to obtain parental consent. The local Site Director believes that many parents were unwilling to consent because of concerns regarding their legal status in this country or because they didn’t understand the evaluation (even though the forms were sent home in the primary language spoken at home). Sixty percent of the 4-H Bloco Drum and Dance youth come from single-parent homes and many come from immigrant families. Some of the participants are from low-income families, and many are academically challenged.

Results
A comparison of the pre-test and post-test surveys revealed that the 4-H Bloco Program did have a positive impact on the participants in regard to exercise, food choices, appreciation of other cultures, feelings about gangs, and awareness of their health. Program participants did not show a gain in health knowledge.

Exercise and Nutrition
After participating in the 4-H Bloco Program for a school year, more of the teens exercised outside of school classes at least 3 days a week for at least 20 minutes (93% as compared with 58.3% at pre-test). Further, the number of youth who participated in a team sport increased significantly over the year. At post-test,
62.5% of the teens reported playing on a team sport, while only 46.7% did so on the pre-test.

While the amount of exercise the teens engaged in increased over the school year, the amount of television they watched did not decrease. According to the pre-test, 20.8% of the youth reported watching less than 1 hour of television a day or none at all, as compared with 26.7% at post-test.

In addition, the post-test showed that the teens ate more fruit and vegetables and less sweets and French fries at the end of the school year. Specifically, 98% of the teens who completed the post-test ate fruit 4 to 6 times in the past week, whereas only 66.7% of the teens reported eating fruit as frequently on the pre-test. While the increase in vegetable consumption was not as dramatic, it did increase from 87.5% of the teens eating veggies or green salad at least 1 to 3 times in the past week to 93.3%. Only 41.7% of the teens reported not eating French fries in the past week on the pre-test, while the number increased to 50% on the post-test.

The amount of candy and sweets the teens consumed also decreased over the school year. On the pre-test only 29.2% of the teens reported not eating sweets at all or only 1-3 times in the past week, with that number increasing to 73.3% on the post-test. Finally, the number of teens who reported taking a vitamin pill increased over the year (20% did at pre-test and 33.3% did at post-test).

**Cultural Appreciation**

When comparing the data from the pre-test and the post-test it was clear that students seemed to have gained a better appreciation of other cultures. Seventy-five percent of the teens felt it was “definitely important” or “probably important” for kids their age to learn about what life is like in different cultures on the pre-test, while 100% of the teens felt this way on the post-test.

Seventy-five percent of the teens felt it was definitely or probably important for kids their age to get opportunities to spend time with kids from other races and cultures within California on the pre-test, and 80% felt this way on the post-test. On the pre-test, 75% of the teens believed it was definitely or probably important for kids their age to have opportunities to spend time with kids from other countries, while 73.3% felt this way on the post-test.

**Gangs**

One of the secondary goals of this program is to serve as gang deterrence for young people in the Windsor community. In recent years the gang problem in Sonoma County has grown significantly. Because of this, the pre-test and post-test asked the program participants about gang involvement and their feelings about gangs.

In regard to gang involvement, none of the teens on the pre-test reported currently belonging to a gang, while 7% (one teen) on the post-test reported belonging to a gang. (As a side note, it is important to mention that participating youth are not supposed to be involved in a gang.)

Teens were also asked if they had ever belonged to a gang, with 7% reporting that they had on the pre-test, and 13% reporting that they had on the post-test.
On both the pre-test and the post-test, a majority of the teens reported having a good friend in a gang (52% on the pre-test and 60% on the post-test). On the pre-test, 72.5% of the teens surveyed felt that it was not a good idea for young people their age to be in a gang, while the number slightly increased to 80% for the post-test.

When asked if they thought they would be in a gang this time next year, 72.5% of the teens on the pre-test reported that they would “definitely not” or “probably not.” On the post-test, 93.3% of the teens felt that they would not be in a gang. Even though this question was a projection for the upcoming year, it was encouraging that the number of teens who did not think they would be in a gang increased over the year.

Finally, the teens were asked if they thought being involved in the 4-H Bloco Program would help them stay out of a gang, and if it would help most kids stay out of a gang. On the pre-test, 87.5% of the teens felt that it would help (definitely or probably) for themselves as well as others. Interestingly enough, the post-test figure for both questions was nearly identical, at 86.7%.

**Health Awareness**

Participating in the 4-H Bloco Program also seemed to have a positive impact on the teens’ overall health awareness. When asked if they thought kids their age should think about their health when deciding about what they will eat, 79.2% of the youth in the pre-test felt it was “definitely important” or “probably important,” while 93.3% felt this way in the post-test.

On the pre-test only 66.7% of the teens felt that it was “definitely important” or “probably important” that kids their age think about their health when deciding to drink alcohol, and 75% felt that it was “definitely important” or “probably important” that kids their age think about their health when deciding to smoke cigarettes. Further, 70.8% of the youth felt it was “definitely important” or “probably important” that kids their age think about their health when deciding whether or not to chew tobacco. On the post-test, all of the teens felt this way about deciding to drink alcohol, smoke cigarettes, or chew tobacco. Overall, it was clear that more teens on the post-test believed that other youth should consider their health when deciding about what to eat or whether to drink alcohol or smoke.

**Health Knowledge**

The pre-test and post-test also contained a few questions to assess general health knowledge. Data from these questions indicate that the teens did not acquire health knowledge as a result of participating in the program. In fact, fewer of the teens got the answers correct on the post-test. For example, 93.3% of the teens correctly defined "pulse" on the pre-test while only 69.6% did so on the post-test. In addition, on the pre-test only 46.7% of the youth knew that the daily recommended servings of fruits and vegetables was five, while 29.2% did so on the post-test. Nearly the same amount of teens (80% at pre-test and 78.3% at post-test) knew that it was recommended that most people exercise for 30 minutes a day.
Discussion
The evaluation of the 4-H Bloco Program for the 2004–2005 school year revealed many significant things about the program. It is clear from the evaluation that the program is a success on many levels and that it has had positive impacts on the lives of the participating young people.

The teens’ health awareness was certainly affected by the program. After participating in the 4-H Bloco Program, more of the teens believed that it was “definitely important” or “probably important” that other youth should consider their health when deciding about what to eat or whether to drink alcohol or smoke.

As a result of the 4-H Bloco Program, the teens are not only more aware of their health, they are taking better care of themselves as evidenced by their eating choices and physical activity rates.

At the end of the program, significantly more teens exercised outside of school classes and played team sports. Simply put, the teens were generally more physically active than when they had started the program. The program did not seem to decrease the amount of television that the teens were watching. However, this did not appear to impact activity levels since a larger percentage of teens were exercising and playing sports at the end of the program. In addition to being more physically active, the participating teens were also practicing better nutrition. More teens reported eating more fruits and vegetables, eating fewer sweets, eating fewer French fries, and taking a vitamin pill more regularly.

One of the intended outcomes of this program is greater cultural awareness and diversity appreciation. This is especially important in a community as diverse as Windsor. Teens participating in the 4-H Bloco Program seemed to gain a better appreciation of other cultures as more of them reported that it was “definitely important” or “probably important” for kids their age to learn what life is like in different cultures and to spend time with kids from other cultures within California at post-test.

Another of the intended outcomes of the program is gang prevention. This is a critical issue right now for the young people in Sonoma County. This is validated by the fact that more than half of the participating teens reported having a good friend in a gang. When comparing the pre-test and the post-test it was interesting that nearly the same proportion of youth (87.5% on the pre-test and 86.7% on the post-test) believed that the program would “definitely” or “probably” help them and others stay out of a gang. The fact that so many teens saw Bloco as a gang alternative in the beginning (before even participating) is powerful. The message is clear: Young people see this after-school program as something that will help them resist gangs. The 4-H Bloco Program also seemed to have an impact on the youth when it came to their feelings about gangs.

At the conclusion of the program, almost all of the students (93%) reported that they did not think they would be involved in a gang in the coming year.

Awareness of specific health knowledge among program participants regarding pulse, recommended number of daily servings of fruits and vegetables, the best way to consume produce, and the recommended daily amount of exercise was
the only weak part of the program. If the intention is that participants will learn these items, it is important that they be included in the curriculum. If not, these questions should be omitted from the evaluation.

Overall, the 4-H Bloco Program is helping teens become more physically active, practice better nutrition, appreciate other cultures, be more aware of their health, and resist gangs.