

COLORADO 4-H YOUTH DEVELOPMENT STEM AND K-12 PARTS OF THE ACTIVITY TEMPLATE

This guide is intended to help activity writers as they use the Colorado 4-H STEM and K-12 Activity template when developing activities for 4-H clubs, groups, school enrichment and afterschool audiences. The activity template is a blend of curriculum development parts as suggested by National 4-H and Colorado Department of Education.

Title

Give a catchy title that will generate interest in the activity.

Content Area

List the 4-H project or school subject where this activity will be used, e.g., Science, Foods & Nutrition. If the activity fits more than one project area, list the project area that it fits best.

Tags

Insert keywords that users would use to search for this activity on the Internet.

Grade/Age

Select the grade(s) that you are targeting in your activity. Common grade divisions are K-2, 3-5, 6-8 and 9-12.

Learner Outcomes

These are stated as measurable gains in knowledge or attitude. Identify desired results. What do we want learners to know, understand, and be able to do?



Colorado Academic Standards

Select at least 1 and no more than 3 Colorado Academic Standards for the activity.

Find standards at

<http://www.cde.state.co.us/standardsandinstruction/coloradostandards-academicstandards>.

Your selection will be reviewed by others who are familiar with academic standards.

Here are examples used in other 4-H activity lesson plans:

- Science. 1. Physical Science. 1. Objects can move in a variety of ways that can be described by speed and direction
- Mathematics. 3. Data Analysis, Statistics, and Probability. 1. Visual displays of information can be used to answer questions

Success Indicators

Create a simple statement of 5 to 10 words that describes what the youth does to complete the activity. Start with an action verb. Should indicate the skill to be practiced and the subject matter involved, e.g., “Decide between two alternatives to select a product.”

4-H Life Skills

Indicate at least one life skill youth will practice during the activity. The primary purpose of each 4-H activity is to provide an opportunity for youth to practice a life skill while exploring a topic related to a project or subject. Go to http://www.colorado4h.org/agent_resources/handbook/01-Intro-and-Philosophy/F-TargetingLifeSkills.pdf for a list of life skills in the Targeting Life Skills Model.

4-H SET Abilities

The 4-H program outlines thirty important science processes and refers to them as 4-H SET Abilities. These thirty 4-H SET Abilities include distinct and measurable behaviors and are critical elements of experiential learning and inquiry. Identify at least one SET Ability that the youth will practice during this activity. Find the list and descriptions of SET abilities here: <http://www.4hstemk12.colostate.edu/wp-content/uploads/2014/08/Thirty-4-H-SET-Abillities.pdf>



Time Needed

Include the time (in minutes) needed to complete the activity, e.g., 30 minutes or 45-60 minutes. Your activity should not take more than 60 minutes to complete. If it takes more than an hour, consider dividing your activity into two.

Materials List

Include all materials needed to complete the activity. Include optional materials as well. Be specific with size and number. Give a bulleted list of supplies or materials that will be needed to present the activity to a group.

Vocabulary

List the key terms and vocabulary youth will learn in the activity. The first appearance of these words is bolded in the text and is defined in the narrative or in the sidebar.

Background (60-80 words)

Background information for the facilitator is provided here. Include a paragraph or two of background information that sets the tone or scene for the activity. Also be sure to include a short description of the intended educational setting. For example:

- (For an activity called “Today I Feel Silly” for youth K-2) Silly, cranky, excited or sad – everyone has moods that can change each day. Youth need to explore, identify and even have fun with their ever-changing moods. This activity works well with 4-H Cloverbuds or younger 4-H afterschool kids.
- (For an activity called “Friendship” for youth in grades 3-4) Having youth interact and get along with each other is vital to a productive group. This session will help youth who do not know each other to interact, have fun together, get to know each other, and see how they are alike and different. This activity works well in a variety of settings



Opening Questions

Include a question that will capture youths' interest and guide thinking. Opening questions help set the stage for the activity. Questions should promote discussion and interaction and stimulate learner thinking and encourage ideas, speculation, and the formation of hypotheses. Questions should not have a single "right" answer.

- Why do you think clean water is important?
- What types of things do you think can make water dirty?
- What are some things you know about sound?

Experience

Here is where you will list all the specific steps and directions that the facilitator will need to carry out the activity. This list will vary greatly from activity to activity. The to-do list must involve youth in practicing the life skill and SET ability designated for the activity. Provide a means for the youth to show some aspect of their learning. Include what youth does (completes a chart or checklist, describes an experience, keeps records, etc.)

Share/Process/Generalize

In order for youth to take what they have just experienced and use it effectively in their everyday lives, they must think about it and interpret its meaning for themselves. That's why facilitators need to "talk it over" with youth participants. Create questions for each of the reflection steps of the experiential cycle (Share, Process, Generalize, and Apply) that focus on behavioral skills more than on the content. Include 1 or 2 questions for each step. Avoid yes, no, and single answer questions. If several activities reinforce the same skill, some or all of the processing and applications steps may be included after the last activity in the series. Refer to the experiential cycle as an additional resource.



Share

Include questions that anyone who does the activity can answer. Share questions should generate data for the process questions. Include questions that ask what was done, how the youth felt, etc. Include some open-ended questions that prompt sharing. Relate the sharing directly to the experience.

- What did you do?
- What did your group do when?
- What did you see? Feel? Hear? Taste?
- What was most difficult? Easiest?

Process

Include questions that ask about important aspects of the subject matter content, the experience, and the life skill practiced. Include some open-ended questions that prompt reflection. Relate the reflection directly to the experience.

- How will learning _____ help you?
- What other situation like this have you had?
- What did you learn about (life skill or project skill) through this activity?
- Why is the life skill you practiced important?

Generalize

Include questions that make the experience real for the youth in terms of everyday life experiences. Ask questions about the life skill practiced and the content being addressed. Include some open-ended questions that prompt generalizing. Relate the generalizing directly to the experience.

- What similar experiences have you had (with this life skill or project skill)?
- What similar challenge/problem/feeling have you faced? What did you learn
- How does what you learned relate to other parts of your life?

Term and Concept Discovery

This section provides a general introduction of content/concepts/vocabulary words. The vocabulary words are provided as back ground information for the facilitator, but youth need to develop these concepts through their own exploration and define the terms out of their own experience.



Apply

Include questions that ask how the life skill and content applies to other likely situations.

- How can you use what you learned?
- How can you apply (the life skill you practiced) in the future?
- How did this activity change your thinking about _____?
- What will you try to do differently next time you _____?

Career Connection

Identify and include various careers that are related to this activity. One of the outcomes for 4-H STEM is that youth pursue education and careers in STEM.

Career Connection provides the facilitator an opportunity to incorporate a relevant career conversation with the youth.

References

List all sources, including name(s) and title(s) of the author(s) and any other resources used to develop your activity. Any citations should be accurate and complete, so others can locate the resource. Book titles should be in italics. Include the ISBN number for books printed after 1972. Try to use national resources that others can access easily. Here are some sample citations:

- *I Will Be Your Friend – Songs and Activities for Young Peacemaker, Teaching Tolerance*, Southern Poverty Law Center, Montgomery, Alabama, 2003, Activity #5 (free CD and music book).
- Reading activity adapted from *The Michigan Team Nutrition Booklist*, Michigan Team Nutrition, Family and Consumer Sciences, Michigan State University, 2002.

Author(s)

Give yourself credit for developing this activity lesson plan.

- Created by Your Name, Your Title, CSU Extension, Your County.

Supplemental Information

(if needed) Include additional information, handouts, charts, answers, etc.

