

# 4-H TECHNOLOGY SKILLATHON

**Bill Pabst, 4-H Youth Specialist, Missouri**

Adapted from: CONDUCTING A 4-H DAIRY SKILLATHON  
*JEFFREY K. RENEAU, Extension Dairy Specialist, MN and THOMAS D. ZURCHER, Extension  
4-H Specialist, MN*

## **What is a 4-H Skillathon?**

A 4-H skillathon is an excellent way to involve 4-H members in challenging, fun, learn-by-doing activities. This educational method develops problem solving, communication, and technology skills. Skillathons are a series of mini-learning stations with a facilitator at each station. Skillathon activities can be used as a fun introduction to a topic, an initial assessment of skills, or as an evaluation of skills learned. The 4-H members can participate as individuals or as teams.

The participants rotate from station to station, attempting to perform the specific tasks given at each station. Typically, activities are planned to take less than ten minutes, but this can vary. 4-H members are given feedback on their performance and supported by the facilitator as needed. However, the station facilitator encourages the 4-H members to test their knowledge and abilities before giving them assistance. The facilitator engages the participants by asking about the process of learning and possibilities for applying the skill. For team activities the facilitator can encourage group problem solving.

Skillathon activities should be at various levels of difficulty appropriate to the level of the learners. The more advanced youth can help plan, setup, and staff stations. The event can focus on instruction, assessment, or competition. A skillathon works well during project meetings, clubs, camps, fairs, achievement days and almost any 4-H setting. It is an excellent way to involve several project groups in a program at once. By asking various project groups to set up one or two learn-by-doing stations, the entire club or group can be actively involved. In addition, leading skillathon activities gives practice and recognition to the leadership and learning of 4-H members. As always in 4-H, involve youth to the greatest extent possible in the planning and conducting of 4-H activities-learn by doing and learn by leading.

## **Generic Checklist for a Skillathon Event**

- Define target audience and style of participation – i.e. individual, team, skill level, age level
- Decide on the level or purpose of the event – i.e. introduction, practice, assessment, competition.
- Decide on the stations wanted, considering time and resources available.
- Make up one or more realistic situations and tasks for each station.
- Decide who will be in charge of and facilitate each station.
- Decide on the equipment or supplies needed at each station.
- Delegate responsibility for gathering supplies.
- If a team event, decide on a plan for creating teams.

- If competitive, decide on scoring method.
- Decide on a plan for rotating through the stations- i.e. scheduled rotations, unscheduled drop-in.
- Plan a closure or recognition activity- i.e. demonstrate or explain tasks, give awards, certificates

### **Station Setup and Information**

Station topics and tasks are only limited by imagination and interest. Each station should have a sign identifying the station's topic, station number (if numbers are used), name of the event, and the facilitator's name. The 4-H Clover logo is always good to identify an Extension youth event. Essential materials, equipment, and supplies for the task should be organized to facilitate a quick start as participants arrive. Additional resources should be available so they can be easily supplied as needed. Extraneous items are sometimes included with essential items to increase the difficulty of the task. The situation and task information should be a handout or on a poster so that the teams can start working the task immediately. A part of the task may be "resetting" the task so it is ready for the next participants. Time limits may be a part of the event format to encourage participants to move through the stations or as a competitive feature. If time limits are used, the station should have a timer with an audible alarm.

### **Responsibilities of the Station Facilitator**

It can sometimes be challenging and always rewarding to be a helper at one of the stations. The extent to which the participants develop project and life skills from the event depends largely on the facilitator. Here are suggested steps to follow.

- Familiarize yourself with the topic, tasks, and any available project guides, supplies, and training aids.
- Create a list of questions to ask each team about the topic.
- Set up the station to include task sign, necessary supplies, and work area(s).
- Allow the participants to discover for themselves how to accomplish the task before telling or showing them.
- Facilitate the learning situation by giving the minimum assistance to keep the participants moving toward the task goal. Assist and then step back.
  - ask leading questions
  - briefly share or explain key knowledge
  - demonstrate key skills
- Ask the 4-H members how they would set up and conduct this activity at a 4-H event.
- Mark the participation card if one is used.
- Prepare your station for the next team.
- Following the skillathon, inventory and pack up all equipment, materials, and signs.

### **Sample Technology Skillathons**

Teams of two to four participants are self-selected. Teams rotate through the stations at their own pace. Not all teams will experience every station. If a station is busy the teams may skip a station and perhaps return later. There will be six to ten other stations on a

variety of technology topics. Stations should be designed so three to five teams can be working at a time at the station. Participation and achievement awards will be given to teams.

- **Station #1. Aerospace – Flight Simulators**

- **Supplies needed for the station:** Three to five computers running Microsoft Flight Simulator. Handout listing tasks.
- **Situation:** You are using Microsoft Flight Simulator 2004 to learn about and practice skills related to flying.
- **Task 1**
  - Directions: Perform a successful take-off from Mieg field in Chicago in a Cessna Skylane 162. This task is related only to the control of the aircraft during take-off. Pre-flight procedures and control tower communications are not required for this task.
  - Time Limit: 2 minutes
- **Task 2**
  - Directions: Circle Mieg field in Chicago in a Cessna Skylane 162 and perform a successful landing on the field. This task is related only to the control of the aircraft during landing. Control tower communications are not required for this task.
  - Time Limit: 10 minutes
- **Task 3**
  - Directions: Demonstrate the programs help function to learn about flight concepts.
    - Locate the help section that discusses the four forces of flight. What are they?
    - Locate the help section that discusses the use of the ailerons. When does a pilot use ailerons?
  - Time Limit: 3 minutes

- **Station #2. 4-H On The Web**

- **Supplies needed for the station:** 3 to 5 laptop computers with internet connection. Handout listing tasks.
- **Situation:** You have been assigned the task of finding 4-H information on the Internet for use by your supervisor. Demonstrate your skills finding information on the Internet using search engines and other web search skills.
- **Task 1**
  - Directions: Locate the following information and create a list of findings by copying and pasting the information and URLs in a Word document.
    - What was the fourth H in 1911 before it was changed to Health?"
    - What are the 6 C's of the 4-H Study of Positive Youth Development research project funded by the National 4-H Council?

- What are the dates and location of the 2005 National Collegiate 4-H Conference?
      - What is the mission statement of the California 4-H Youth Development Program?
      - Where can you find National 4-H Strategic Plan information?
      - How many 4-H youth were in 4-H nationally last year?
    - Time Limit: 10 minutes
  - **Task 2**
    - Directions: Locate resources to help determine the appropriate use of information found on the Internet and create a list of findings by copying and pasting the URLs and in a Word or Notepad document.
      - Locate a definition of plagiarism
      - Locate a discussion of fair educational use
      - Locate a checklist for evaluating web-based information
    - Time Limit: 10 minutes
- **Station #3. Robotics**
  - **Supplies needed for the station:** Three to five Robotix's kits including switched controller, microprocessor programmable controller, four or more motors, at least one wire per motor, four or more wheels, and assorted necessary and extraneous structural parts in each kit. Programmable controller instruction booklet. Poster listing task and directions.
  - **Situation:** Demonstrate your problem solving, mechanical, and programming skills by assembling mechanical and electrical parts into a functioning robotic device.
  - **Task 1**
    - Directions: Using the parts provided, create a device that can be controlled to go 1) forward and backward and 2)turn left and right
      - Assemble the device
      - Demonstrate and explain the device
      - Disassemble and return parts to appropriate location
    - Time Limit: 20 minutes
  - **Task 2**
    - Directions: Using the microprocessor controller, program a pre-assembled device to perform a set of instructions.
      - close the gripping device around an object
      - Lift the object
      - Move the object by rotating the arm
      - Open the gripping device to drop the object
    - Time Limit: 20 minutes