

EM4873E



# Dairy Cattle and Dairy Goat 4-H Member Advancement

## Leader Guide



By

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## **PERSONAL DEVELOPMENT OPTIONS**

1. Lead the Pledge of Allegiance and 4-H Pledge at a 4-H meeting.
2. Lead a song or a game at a 4-H meeting.
3. Preside at a meeting of your 4-H club.
4. Write a news story for a local paper.
5. Participate in a radio or television program.
6. Present a demonstration or illustrated talk to your club.
7. Present a demonstration or illustrated talk to a group other than your 4-H club.
8. Host a 4-H meeting. See that everyone is welcomed and made comfortable.
9. Participate in a community service project.
10. Chair a club committee.
11. Participate in a judging contest.
12. Serve as a junior leader.
13. Serve as a teen leader.
14. Attend 4-H camp.
15. Attend a Statewide 4-H Teen Workshop.
16. Serve as clerk, chair, or apprentice judge at a 4-H show.
17. Develop and exhibit a science display related to dairy cattle or goats.
18. Serve as a camp counselor.
19. Make arrangements for a tour by your club.
20. Arrange for a film to be shown at your club meetings.
21. Secure a speaker to talk at your club meeting.
22. Develop some options of your own with your parents' and leader's guidance.
23. Participate in a "bowl" contest.
24. Visit an agricultural processing plant.
25. Complete your 4-H Record Book.
26. Attend a field day.
27. Explore a career and report back to your club or leader.
28. Be a big brother or sister to a new 4-H member.

## LEARN BY DOING

In the Dairy Advancement Program, 4-H goals for young people are accomplished by using dairy program knowledge and the “learn by doing” method. Studies show that such experience-based, action-oriented learning has the greatest long-range impact on the learner. 4-H makes a special effort to tailor its programs and teaching methods to totally involve youth in hands-on learning. This process is called “exploratory learning.”

Exploratory learning encourages youth to EXPLORE, REFLECT, and APPLY knowledge.

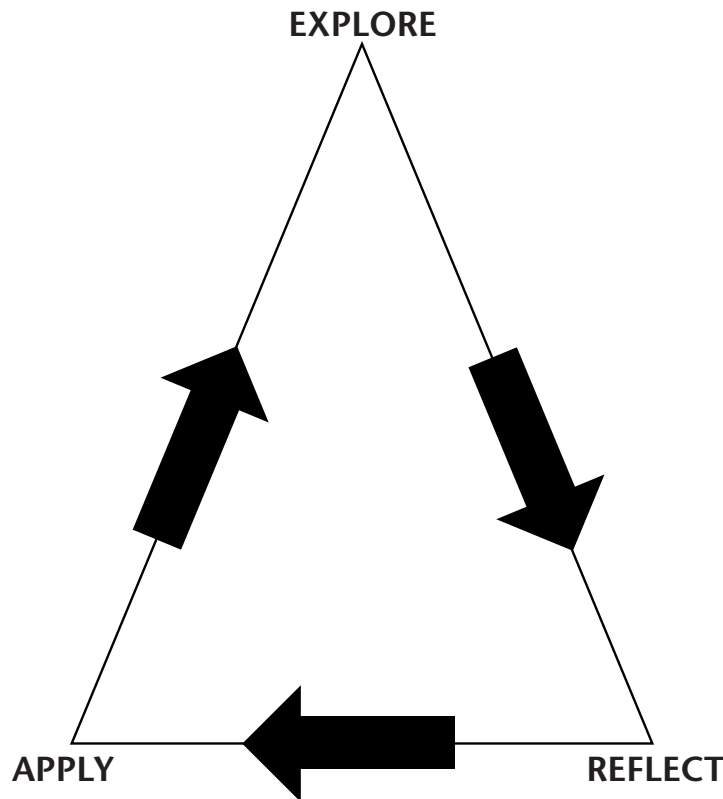


FIGURE 1. Exploratory Learning Model

### EXPLORE AN ACTIVITY

Youth explore and learn when they are involved in a hands-on activity. For example, you might teach a young person how to trim a hoof; or the amount of feed or water a dairy animal consumes in a day.

### REFLECT ON THE ACTIVITY

Young people reflect on the activity by sharing what happened. What did they observe? How did they feel about the experience? Was it fun? Was it hard? For example, the group might investigate what they observed and felt about milking a goat. Ask questions such as, “How can you do a better job of judging?” or “What is in the feed that gives the animal more energy to produce milk?”

## **APPLY THE ACTIVITY**

Members then apply what they have learned to their everyday lives in their homes, schools, and communities. Ask them, “What have you learned? How can you use these new skills at home or school?” Your young people have now learned how to apply the skills of judging and decision making or the knowledge gained about nutrition, for example, to their everyday lives.

The exploratory learning process can turn any experience, good or bad, into a learning experience. To make it work well, youth must understand how they can apply the skills and knowledge learned from the activities.

Using the Exploratory Learning Model for youth in the dairy project:

- makes the project more interesting and enjoyable;
- helps develop personal skills and project skills;
- allows youth to advance according to their ability, interest, and willingness to work; and
- helps young people develop greater insights about working with dairy animals.

## **HOW TO USE THE ADVANCEMENT CHECKLIST**

Include the Advancement Checklist as part of the youth’s project records. The basic Advancement Program is divided into six steps; all the skills in each step are required. Each step builds on the previous one; they must be completed consecutively.

Youth can demonstrate skills for higher steps while they are working on skills for a lower step. They cannot complete the higher step until they have qualified for all preceding steps. Most of the information to complete the skills is contained in WSU Extension publications, listed in EM2778, 4-H Projects and Publications, or other recommended curricula (see reference list).

The Advancement Program allows youth to work at their own pace and have immediate success. As each skill is completed, you initial and date the skill. When a member has completed the skills for each step, he or she is qualified to receive an advancement certificate for that step.

# ADVANCEMENT CHECKLIST

## STEP 1

You must complete fourteen skill options and three personal development options to pass Step I.

Skill Options	Date Passed	Approved By
1. Spell the names of five breeds of dairy cattle or five breeds of dairy goats and describe two important characteristics of each one.	_____	_____
2. Name, locate, and correctly spell these parts of a cow or goat: muzzle, withers, back, pin bones, rump, hock, pastern, teats, flank, chest floor, heart girth, udder, barrel, loin, chine.	_____	_____
3. Learn the correct spelling, definition, and pronunciation of the following: artificial insemination, brucellosis, colostrum, dairy character, dam, sire, heifer, kid, mammary system, purebred, grade, crossbred, registered, yearling, parturition, lactation, gestation period.	_____	_____
4. Describe six of these desirable characteristics and tell how each may aid productive ability: strong back, width and length of rump, width between pins, long deep barrel, wide deep chest, strong legs, leanness, sound udder, uniform teat size and placement, depth of flank.	_____	_____
5. Describe six of the following undesirable characteristics and tell why each is undesirable: meatiness, undersize, narrow shallow chest, weak pasterns, weak udder attachments, strutted teats, tilted udder, overshot or undershot jaw, pendulous udder.	_____	_____
6. Teach an animal to lead.	_____	_____
7. Learn to show your animal.	_____	_____
8. Make a rope halter (optional for goat projects).	_____	_____



## STEP II

You must complete fifteen skill options and three personal development options to pass Step II.

Skill Options	Date Passed	Approved By
1. In addition to the parts of a dairy cow or goat learned in Step I, identify, locate, and correctly spell these parts: ribs, thurls, crops, thigh, brisket, knee, heel, stifle, hoof, poll.	_____	_____
2. Learn the meaning of and how to spell ten of these terms: bacteria, chlorine solution, conformation, contagious, infectious, contaminated, dehorn, inheritance, mastitis, milkfat, naval, offspring, progeny, scours, vaccination, antibiotics.	_____	_____
3. Learn the meaning of and how to spell five of these terms: carbohydrates, green chop, legume, protein, silage, supplement, total dry matter (TDM), crude fiber.	_____	_____
4. Clip an animal for clean milk production or for showing.	_____	_____
5. Describe two methods of removing horns from a dairy animal. Help dehorn at least one animal.	_____	_____
6. Know the purpose and recommended use of five of these pieces of equipment: nipple bottle, strainer, strip cup, farrier's (hoof) knives, hoof trimmers, balling gun, magnets, rotary tattoo.	_____	_____
7. What is a parasite?	_____	_____
8. Describe the recommended methods for control of any three of the following: heel flies, horn flies, stable flies, house flies, lice, stomach worms, lung worms.	_____	_____
9. Try to control one type of parasite and report results and methods.	_____	_____
10. Learn the average TDN and protein values of five of these dairy feeds: linseed oil meal, barley, oats, corn, wheat, cottonseed meal, soybean oil meal, beet pulp, bran, whole cottonseed, corn silage.	_____	_____



## STEP III

You must complete fourteen skill options and four personal development options to pass Step III.

Skill Options	Date Passed	Approved By
1. Keep monthly milk and/or fat production records on at least one animal for at least one year.	_____	_____
2. Visit a goat dairy or commercial dairy farm and learn what the operator does to make the operation successful. Report your observations to a club meeting, discussing management techniques used in feeding, breeding, and milking.	_____	_____
3. List five livestock sanitation practices a dairy operator should observe and tell why.	_____	_____
4. Describe a recommended milking procedure.	_____	_____
5. Learn to recognize four of these health problems and identify at least one recommended treatment for each: hoof rot, milk fever, pink eye, ringworm, shipping fever, scours.	_____	_____
6. List four practices a dairy operator should observe to prevent and control mastitis.	_____	_____
7. Describe the symptom leading to parturition, the process of a normal birth, and how to care for the mother and baby following birth.	_____	_____
8. Describe what the dry period is, how the cow or doe is dried off, and how she should be fed during this period.	_____	_____
9. Name and describe three ways to manage pastures. Give benefits or advantages of each, or limitations that may exist in your area.	_____	_____
10. Learn the length of gestation and intervals of heat periods of goats or cattle and how to figure freshening dates.	_____	_____

**Skill Options**

**Date Passed    Approved By**

11. Describe the conditions necessary for a dairy to meet the Grade A Producer Farm Requirements under the Washington State Uniform Fluid Milk Act.

Reference: Contact the Washington State Department of Agriculture

\_\_\_\_\_

12. Take a soil sample, have it analyzed, and report the nutrient levels.

Reference: Contact county extension office for soil sampling information

\_\_\_\_\_

13. List five major products from dairy cows or goats.

\_\_\_\_\_

14. Report on how to register a purebred animal.

\_\_\_\_\_

**Personal Development Options (select from list on page 2)**

1. Give a demonstration or talk to your club. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

\_\_\_\_\_ is qualified and has completed all requirements for Step I of the Dairy Advancement Program.

Name of Club Member

\_\_\_\_\_ Age      Club No. \_\_\_\_\_

\_\_\_\_\_ Approved by \_\_\_\_\_

Date

Advancement Chair or Committee

\_\_\_\_\_ Club Leader



## STEP V

You must complete four skill options and five personal development options to pass Step V.

Skill Options	Date Passed	Approved By
1. Name the four compartments of a cow or goat stomach.	_____	_____
2. What is the function of the rumen?	_____	_____
3. Describe traumatic gastritis ("hardware disease").	_____	_____
4. Write a report on one of these topics:		
A. Make a drawing of the udder of a cow or goat; explain milk secretion and milk let-down.	_____	_____
B. List the nutritional ingredients of milk.	_____	_____
C. Explain the nutrients that milk-producing animals need for growth, maintenance, and milk secretion.	_____	_____
D. Explain reproduction in the dairy female.	_____	_____

### Personal Development Options (select from list on page 2)

1. Give a demonstration or talk to your club. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

\_\_\_\_\_ is qualified and has completed  
Name of Club Member all requirements for Step I of the Dairy Advancement Program.

\_\_\_\_\_ Age Club No. \_\_\_\_\_

\_\_\_\_\_ Approved by \_\_\_\_\_  
Date Advancement Chair or Committee

\_\_\_\_\_  
Club Leader

## STEP VI

You must complete all five skill options and five personal development options to pass Step VI.

Skill Options	Date Passed	Approved By
1. Report on how milk is processed from the farm to the store, according to regulations.	_____	_____
2. Grade A milk is marketed in three classes. Explain which dairy products come from each class.	_____	_____
3. Each month the Federal Milk Order Administration publishes a price for each class of milk and an average price for all milk. How does each producer's receipt per 100 pounds relate to the average price?	_____	_____
4. Indicate which of the following functions are performed by the Federal Milk Order Administration, the Milk Stabilization Division of the State Department of Agriculture, or the producer marketing cooperative.	_____	_____
A. Determines the Class III price of milk.	_____	_____
B. Collects money from milk processors and handlers.	_____	_____
C. Determines the price of quota milk.	_____	_____
D. Performs butterfat testing service for producers.	_____	_____
E. Determines the percent of parity at which to support manufactured products.	_____	_____
F. Collects and processes surplus milk.	_____	_____
G. Coordinates movement of milk to its logical destination of highest value.	_____	_____
H. Provides the trucking to move producer milk.	_____	_____
I. Determines the amount of base and excess milk for each producer.	_____	_____
5. Describe the functions of the following agencies:		
A. Washington Dairy Products Commission	_____	_____
B. Washington Dairy Council	_____	_____
C. Washington Dairy Association	_____	_____
D. Dairy and Consumer Service Division of the State Department of Agriculture	_____	_____



## REFERENCES

Use these references to get information for the skill options.

### Dairy Cow References

Dairy Cow Unified Score Card

<http://www.extension.umn.edu/youth/mn4-H/projects/docs/PDCA.pdf>

Tying Rope Halters

[http://pubs.ext.vt.edu/404/404-280/404-280\\_pdf.pdf](http://pubs.ext.vt.edu/404/404-280/404-280_pdf.pdf)

Working with Dairy Cattle

<http://www.holsteinfoundation.org/education/workbooks.html>

### Dairy Goat References

Tying Rope Halters

[http://pubs.ext.vt.edu/404/404-280/404-280\\_pdf.pdf](http://pubs.ext.vt.edu/404/404-280/404-280_pdf.pdf)

EM4425E, Goat Project, Leader Guide

<http://cru.cahe.wsu.edu/CEPublications/em4425/em4425.pdf>

EM4894E, Your Dairy Goat

<http://cru.cahe.wsu.edu/CEPublications/em4894/em4894.pdf>

EM4781E, Dairy Goat Show Procedures

<http://cru.cahe.wsu.edu/CEPublications/em4781/em4781.pdf>

### Agency References

Washington Dairy Products Commission

<http://www.havemilk.com/>

Washington Dairy Council

<http://www.eatsmart.org/>

Washington State Dairy Federation

<http://wastatedairy.com/>

Dairy and Food Division

<http://agr.wa.gov/FoodAnimal/Dairy/>



4-H 

WASHINGTON STATE UNIVERSITY  
EXTENSION

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