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Michigan 4H Projects Leader's Guide to Assist Members in Project Selection
Michigan State University Cooperative Extension Service
4-H Club Bulletin

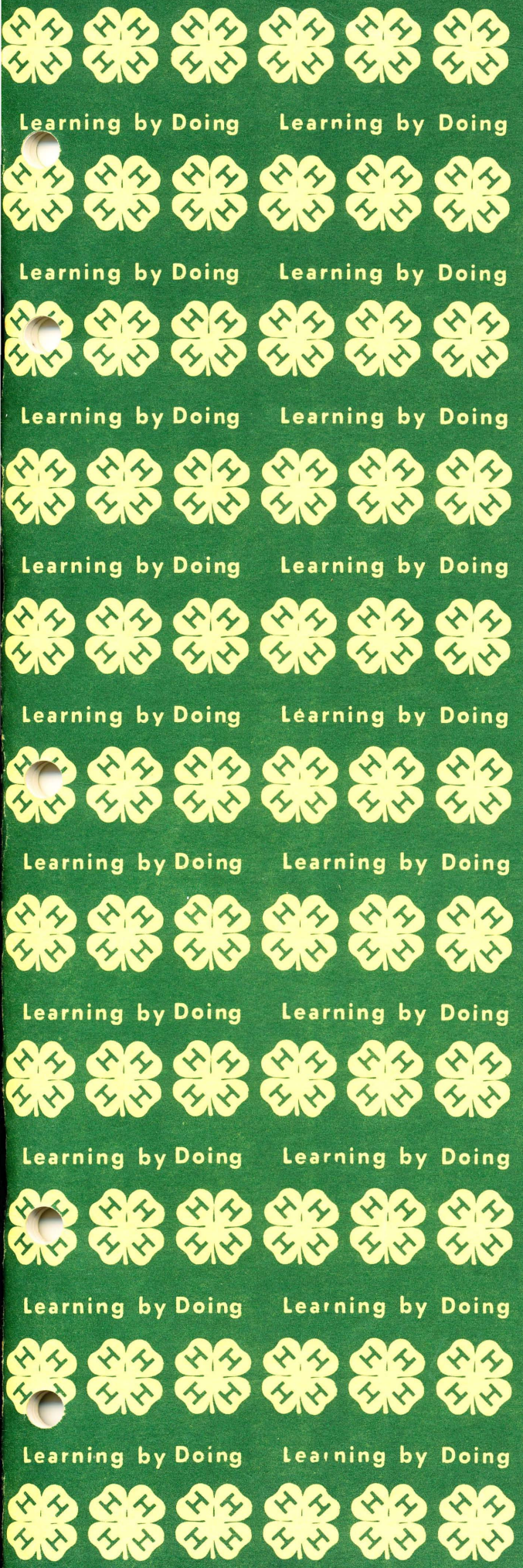
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MICHIGAN 4-H PROJECTS

LEADER'S GUIDE
TO ASSIST MEMBERS
IN PROJECT SELECTION

Michigan State University
Cooperative Extension Service
4-H Club Program

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TABLE OF CONTENTS

What Is A 4-H Leader?	Page 3	Teaching Techniques	Page 8-9
Helping Members Learn	4-5	How To Use This Book	9-10
Member Evaluation With Leader	6	Planning Your 4-H Club Meeting	10-11
Multiphase	6-7	Supplies Available	11

PROJECTS

Archery (Conservation Appreciation)	23	Horses (Livestock)	48-50
Automotive Care and Safety	12	Horticulture	39-42
Beef (Livestock)	46-47	Basic Plant Science	39
Business Program (Town & Country Business)	60	Flower Garden	40
Basic Conservation	17	Fruit	41
Child Development (Children, Youth, Adults in Family Living)	13-14	Production and Marketing	41
Clothing (Knitting)	14-16	Vegetable Gardening	42
Conservation	17-24	Landscape	43
Basic	17	Leathercraft	43-44
Forest	18	Junior Leadership	45
Soil and Water	19	Knitting (Clothing)	15-16
Wildlife	20-21	Livestock	46-52
Appreciation (Archery, Wildflowers, Rocks & Minerals)	22-24	Beef	46-47
Dairy	24-25	Horses	48-50
Dog Care and Training	26	Sheep	50-51
Electrical Science	27-28	Swine	51-52
Entomolgy	28-29	Management For You in Your Family (Formerly Money Management)	53
Family Living - Children, Youth, Adults in Family Living	14-16	Personal Improvement	53-54
Field Crops	30-32	Production and Marketing (Horticulture)	41
Fire Prevention (Safety and Fire Prevention)	58-60	Photography	54-55
First Aid (Safety and Fire Prevention)	59	Poultry	56-57
Flower Garden (Horticulture)	40	Preservation (Foods and Nutrition)	35-37
Foods - Nutrition (Preservation included)	33-37	Rabbits	58
Preservation	35-37	Safety and Fire Prevention	58-60
Forest Conservation	18	Sheep (Livestock)	50-51
Fruit (Horticulture)	41	Swine (Livestock)	51-52
Gun Safety (Conservation Appreciation)	22	Soil and Water (Conservation)	19
Handicraft	43-45	Town and Country Business Program	60
Leathercraft	43-44	Tractor Care and Safety	61-62
Woodworking	44-45	Vegetable Gardening (Horticulture)	41
Home Design (Formerly Home Improvement)	38-39	Wildlife (Conservation)	20-21
		Wildflowers (Conservation Appreciation)	23
		Woodworking (Handicraft)	44-45

What Is a 4-H Leader?

4-H LEADERS ARE adults with addled minds and a soft spot in their hearts for kids—all kinds of kids; their own kids, other people's kids, tall kids, short kids, thin kids, not-so-thin kids, regular kids, square kids, responsive kids, and ungrateful kids from ten-agers to teenagers. At their own time and expense, and neglecting their own personal interests, they serve without pay and often without parent cooperation, knowing that they are necessities that the Agricultural Extension Service and the 4-H membership could not do without. Seldom are there enough of them and that is the reason they become leaders—so their own offspring can join the 4-H organization.

Leaders are usually to be found in the midst of a more or less attentive group of kids, numbering anywhere from 3 to 15, teaching projects such as cooking, dressmaking, electricity, gardening, chicken raising, horsemanship, canning, tractor operation, home improvement, forestry, camping, etc. They generously and regularly open their homes to scuffing feet, vocal enthusiasm, extemporaneous wrestling matches, and unauthorized pillow fights. And somehow, in spite of alien influence, skills and knowledge are miraculously transferred from leader to child in varying degrees.

A leader explains to, shows how, does for, phones up, pleads with, bosses around, and reminds for the tenth time; and when the result is negative, he patiently swallows an urge to throttle good and once again explains to, shows how, does for, phones up, pleads with, bosses around, and reminds for the tenth time.

A 4-H leader is either the most naive person in the world, or the most stout-hearted. A female leader who is afraid of bugs will accept a project group in entomology. A male leader, whose specialty is sales promotion, will tackle animal husbandry for the sake of 4-H members

who want to raise sheep. And if a group of 4-H youths ever venture a trip to the moon, it is certain that their leader, however reluctant and earth loving, will not only accompany them to their destination, but will pioneer better and speedier methods to arrive safely.

No one gets madder, tired, is more often offended, forgives more quickly, shows better sportsmanship, or is a bigger pushover to a request for community service than a 4-H leader. He is Determination with its fingers crossed, Patience with a twinkle in its eye, Ambition drawing tomorrow's blueprints, and Zeal that observes no curfew.

A leader is usually going to, coming from, or planning for a 4-H event. When he is not hauling kids in cars; supervising assorted sales, arranging tours, sponsoring skating parties, snow trips, or conventions, coaching demonstrations; conducting dress revues, horse shows, or talent nights — he is attending night meetings, day meetings, council meetings, club meetings, leader's meetings, and emergency meetings. In his spare time he collects record books, cleans up the club meeting place, judges at fairs and field days, and reads extension literature.

4-H leaders are sometimes happy, but often are frustrated, discouraged, disgusted, and vow that they will quit 4-H forever with as little violence as possible. That is — until their charges suddenly blossom forth with blue ribbons, gold medals, exemplary conduct, unsuspected poise, inner-glow, and unmistakable admiration for their leader shining in their eyes.

That is when the soft spot in every leader's heart grows softer, and the new 4-H year finds him in the midst of his more or less attentive group explaining to, showing how, doing for, phoning up, pleading with, bossing around, reminding again — except for one difference. Three more members have been added to the club.

By MRS. MOLLY BROOKS, 4-H Leader, Contra Costa County, Calif.

Helping Members Learn

As suggested by Mrs. Molly Brooks, above, a 4-H leader is many things — advisor, pal, counsel, teacher, magician, Mr. or Mrs. Fixit, chauffeur, referee, pacesetter, arbitrator, meeting go'er and much more. All because they are people who are interested in helping boys and girls learn to be useful, productive citizens — interested in helping boys and girls learn some things they themselves have decided on.

This bulletin (314-B) is designed to help members select useful and worthwhile projects that are of interest to them and to help leaders with the task of helping the member learn.

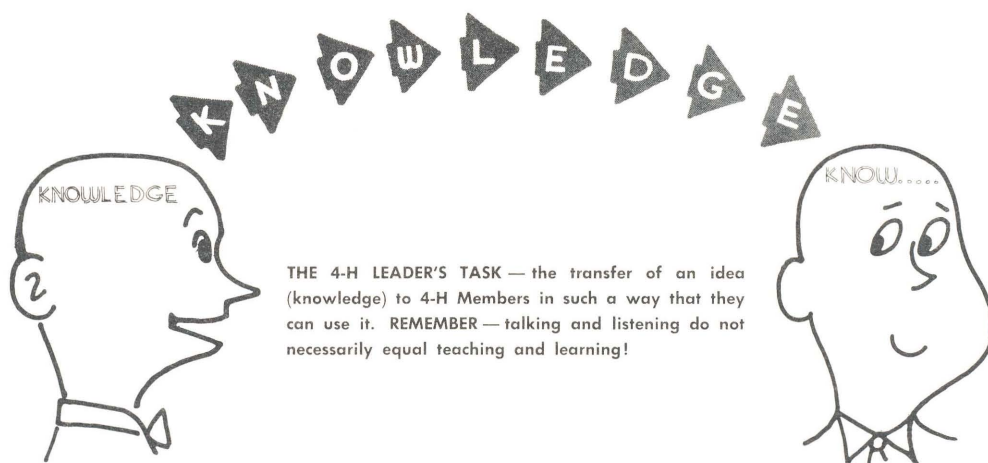
We had these five goals in mind in writing this guide.

1. *To help leaders and members know what project areas have been developed. (Those for which members and leaders bulletins are available, with M.S.U. resource people assigned.)*
2. *To help leaders assist members in the selection of individually useful and worthwhile projects.*

3. *To help members visualize what they can expect to learn.*
4. *To help leaders organize what they can do to help the member learn.*
5. *To help leaders develop useful and satisfying teaching techniques and program plans.*

The one central job for you as a leader is that of helping the member learn. Stated another way, the primary job of a 4-H Club leader is that of teaching. We're all teachers many many times a day, with our own families and friends. We seldom think of giving information in these terms, however.

4-H leaders, and many school teachers too, that we've worked with have found it useful to think of their job as one of transferring an idea (their mental picture of that idea) from their head to the head of another in such a way that the other can use it.



"In such a way that he can use it" is the real challenge. The question for the teacher is — How can I present the information so the student's interest will be aroused and so he will do more than just listen to the information? What can I do to be sure the student "chases the idea" and makes it a part of him? The steps in teaching listed below should, if followed, improve the likelihood that the student will "chase the idea".

Steps in Teaching

Step 1. Getting the attention of the learner. Club members are not always aware of the importance or interest of things they will learn in their projects and activities. The leader needs to get their attention directed toward new ideas or experiences.

ILLUSTRATION: A group of 13 year-old girls become fascinated over a picture of Miss America shown them by their foods project leader.

Step 2. Stimulating the learner's interest. Once attention has been captured, the leader may then appeal to the members' basic needs and interests to get them to give further consideration to the idea. In easy stages, the leader reveals how the new idea, skill, or action will be a benefit to the Club members. It helps to present only one new idea at a time. Make it definite and specific. The method of presenting should be attractive, require only a short period of attention and a small amount of mental effort to understand.

ILLUSTRATION: The foods leader asks the girls if they would like to be as lovely as Miss America. She points out Miss America's good health as one of her keys to loveliness.

Step 3. Arousing the member's desire for information. The teacher must stimulate the member's interest until he is willing to act, to do something about learning for himself. The leader must convince the boys and girls that this information or experience will be helpful to

them in their own situations, that it will fill some basic need or desire of their own.

ILLUSTRATION: At this point, the foods leader begins to ask the girls if they know anything about Miss America's health habits.

Step 4. Convincing the learner that he should act. The leader needs to make certain that the learner understands just what is to be done; that he knows how it applies to his own situation. The leader helps the member to feel that he is capable of doing this new thing; that it will turn out all right. Seeing other people get good results may help him to imagine better how he can do it and succeed.

ILLUSTRATION: After learning about Miss America's health habits, the girls begin to compare them with their own health habits.

Step 5. Getting action by the learner. It is the leader's job to make it as pleasant and easy as possible for the members to act on their new information. The leader will want to try to remove all objections and blocks to action and to be willing to help slower members with patience and slow steps until they can take on the new idea or experience.

ILLUSTRATION: Through an example like Miss America, the foods leader convinces her members that they should be concerned with proper diet, skin care, exercise, and adequate rest.

Step 6. Making certain that the learner obtains satisfaction. The leader helps the member to evaluate what he has done. They discuss the advantages and various accomplishments. The leader gives approval wherever earned.

ILLUSTRATION: After the girls have begun to change their health habits, their foods leader encourages the girls to evaluate the results of their newly acquired health habits. This age is the time when acne, overweight and other equally unpleasant fates greet young people. If they can see improvement in themselves or even their

friends, it will inspire them to continue their new found ways of healthful living.

In 4-H we are most fortunate that 4-H'ers come to us on their own initiative. They are not compelled to attend. This usually means they are attending because they are interested and do want to learn. We can't bank on this, however, for we know that folks join 4-H for a variety of reasons.

The problem is that we're not sure what the member is interested in. One thing we can be fairly certain of is that not all members will have identical interests, even if they are enrolled in the same project. PEOPLE ARE DIFFERENT. Each 4-H member is different from every other. We as teachers must find out what each member wants to learn, how he wants to learn it, and what we can do to help him learn. Before you as a leader get to feeling that this is an impossible task, let's hasten to say that it is not. Really what we're saying is this: If you as a leader are aware of the individuality of each of your members, you can increase the likelihood of learning for that individual by a few words of encouragement, by an example within that member's way of thinking, or by using illustrations or demonstrations that "make sense" to that member.

So far we've been talking about what the member WANTS to learn. I'm sure you are asking yourself "IS THAT ALL WE TEACH HIM, JUST WHAT HE WANTS TO LEARN?" Indeed not! There are many things that we as 4-H leaders will need to teach. Things that the member is not aware of. You can rightly raise this question "how can the member know what he wants to learn if he doesn't know what's available?" "How can a member possibly know that he should learn something now that he will need to serve as a base for later learnings?" BUT REMEMBER — We can't teach them what they don't want to learn. Our task is to arrange the situation so they will want to learn what it is we're trying to teach. Go over the steps in teaching outlined above and think creatively about how you would present what you want to teach so as to be fairly certain your members would be anxious to learn it. When you've thought about how you might present your case or "arrange the situation" the following "ways for getting 4-H members to learn" may be helpful to you.

Ways for Helping 4-H Members Learn

Steps in Teaching	Examples, With 4-H Members
1. Make the Meeting Place Comfortable.	1. In a school or farm center arrange chairs in circle, if possible. In a home, be sure everyone can see and hear. For a farm tour or demonstration, have a warm, dry place for meeting.
2. Get the Members' Interest.	2. A clothing leader might set up a simple exhibit of synthetic materials to get interest in a study of textiles. Roll calls might ask for your favorite food, some fact about electricity, the type of feed being used, etc. Post card notices of a meeting might suggest a "surprise", illustrate a demonstration, list topics to be discussed.

3. Start Where the Members Are.
4. Have Every Member Active.
5. Make Teaching Practical.
6. Teach by Association of Ideas.
7. Teach Basic Principles.
8. Use a Variety of Teaching Techniques.
3. Begin with a question period. Find out what they are thinking about or have them make a list of the things they would like to know about the project or subject being discussed.
4. Several members can be used to set up the meeting place and to handle games, singing, refreshments. Demonstrations and judging can use many members. A practice or "try-out" session should follow teaching and involve all members in the "learn by doing" process.
Before the meeting, members can be used to help with planning and making arrangements.
5. Have members work on equipment which they actually use at home. Do not demonstrate care of a dairy barn or preparing a meal with more elaborate equipment than most of the members have.
Use real animals, articles, appliances, etc. (not pictures) whenever possible, to teach characteristics and types.
6. The parts of a tractor and their functions can be learned more easily if they are all related to familiar objects such as the steering gear, clutch, brakes, etc.
A recipe for a custard will be more easily understood if it is related to already practiced methods of cooking eggs.
7. Rather than merely telling a 4-H crops member what fertilizer to use, explain why specific materials are needed by various plants in certain soils. Food members should learn not just what to eat for a good breakfast, but the nutrients needed and the effect on their health and energy.
8. At a sheep project meeting on grooming, show the brush, card and shears; explain their uses; illustrate on a blackboard or poster; demonstrate the shaping of wool; let each member practice grooming a sheep; discuss results and problems; review and summarize what was taught.

Teaching Techniques

We have said that we can teach if, and only if, the member is ready to learn. We, as leaders, need to know how to use a variety of methods and techniques which will help the member learn. We cannot always use a demonstration or always use a lecture, etc. We need rather to ask, what am I trying to teach and how can I put it across to the members?

You can't smell a rose by reading about it. You can't tell texture of soil or cloth by looking at it or smelling it. You can't tell somebody about the blue of a lake in the mountains at sunset. You can't see or feel the taste and smell of good silage.

The five senses are the gateway to the mind. We see, hear, smell, taste and touch as we learn about things from childhood. We need to play upon our senses, all of them, all the time. We need to ask, "how many senses can I work on with this information presented in this way?" Methods, in this case, would mean the way a leader planned to combine the various teaching techniques to insure, for this 4-H Club and in this instance, maximum learning. PEOPLE ARE DIFFERENT. Each leader will present the material differently. Each leader will use different techniques and in different combinations, and this is the way it should be. You can borrow teaching ideas from other leaders, but it is not likely that you can make them work for you exactly as they worked for the other person.

The important thing is that you know your members, know what teaching techniques are available, and know how to use them. Knowing how to use them comes only with study and practice. There is no magic formula.

It will help us remember to watch the reactions of the members to see if they are understanding what is being said. If you get puzzled looking frowns, or general inattention, better try to put it across another way.

Member Evaluation with Leaders

An important part of learning is evaluation. There is no better way to make clear to boys and girls that you are genuinely "interested in them as persons". When they know that you personally care about their progress they are likely to learn more.

There is no one in better position to know how much the member has learned (about his 4-H project or the business of growing to a responsible citizen) than the members' own leader. Better still a combination of the member, his parent, and his leader.

In the process of evaluation, the leader and member have the opportunity to share in evaluating the member's accomplishments — what he has learned — be it in clothing, dairy or photography. This procedure gives the member a much greater sense of personal involvement than does the judging of exhibits. Members have a chance to see that everyone has needs, some in common with others, some highly individual, and that needs and values can give meaningful direction to what we want to learn and how hard we are willing to work on it. Learning is increased by early setting of goals (by the member) and by positive approaches to improving one's self through what one chooses to learn. More positive views of one's abilities are possible when he is able to feel and know his own needs and values. He can then begin to "take charge" and change them. In this way members can begin to move toward a feeling of "can-do-it-ness".

At one of your first Club meetings, discuss the things members want to learn this year. Also discuss the new skills they will learn and the activities they will carry out in order to learn these things.

Have each Club member write down the things he wants to learn this year, the skills he wants to develop and the articles he will make in order to do these things. (Younger members may need more guidance than older members.) Collect and keep these lists. Check each month with individual members to see what progress is being made and how they feel about it. At the end of the project, visit with each member about their accomplishments in relation to their originally stated goals and help them set new goals for the next year's project. This is evaluation.

From the member's point of view then, evaluation is an essential "tool for learning". From the leader's point of view it is a necessary *tool for teaching*. If you attempt to help the member learn you must know what he wants to learn and what he now knows and feels about the learning project selected.

Ideas for helping you and your members set goals will be found in this outline under the "learning plan" section of each project. "Learning activities" are listed to give you the suggestions of the things your members might choose to make or do in order to reach these goals. You will find more ideas in the bulletins for each project.

Multiphase

Not only do we know that *people are different*, we also know that certain age groupings *are different* in rather predictable ways. We, as 4-H leaders to be successful as teachers and leaders, need to have a working knowledge of what in the Michigan 4-H Club program is called the MULTIPHASE CONCEPT.

Multiphase means 4-H members (and all people for that matter) move through *many phases* in the growing up process. Youngsters at different ages have different interest spans, different needs for love and recognition, different abilities to understand complex materials, desires to be with others of the same or opposite sex, needs for guidance in selecting and carrying out activities, etc.

Multiphase is a program tailored to meet the needs and interests of each individual member.

Planning Programs with Different Age Groups

In the following charts, the basic traits of these three age groups are listed along with some suggested types of developmental experiences which the 4-H program can provide for each.

YOUNGER 4-H MEMBERS

(Age 9-12, Grade 4-7)

Characteristics

1. Live in a neighborhood world and are loyal to it.
2. Not too busy except at play. Vacation periods relatively free.
3. Want to belong to gang, probably not co-educational. Like symbols and regalia. Accept rules and regulations.
4. Are eager, enthusiastic, and easily motivated. Learning how to make choices.
5. Accept direction and leadership blindly; have developed little leadership ability. Want to be self-reliant, but lack foresight.
6. Interest span is short. Lay out work in small pieces. Keep project lessons short.
7. Want to earn spending money.

Significance to 4-H Program

1. Small local clubs, in walking distance if possible.
2. Meetings may be frequent, camping and other activities may be long. Can meet after school and on Saturdays.
3. Single sex groups. Meetings and group activities are important for their own sake. Use symbols and regalia, ceremonies, songs, etc.
4. Projects are required, but allow for self-selection. Awards and incentives needed. Achievement recognition.
5. Adult leader takes most responsibility at first. Develop leadership through assigning leadership jobs whenever possible.
6. Closely supervise individual projects, demonstrations, etc. Plan instruction carefully, and apply it in small doses. Literature and records should not be too difficult. Include some recreation, mostly simple games, at every meeting.
7. Economic projects, exhibits and contests important.

5. Are self-conscious. Have strong desire to conform and be accepted by own age group. Need help in personal self-improvement.

6. In "trying-out" age, openminded. Want to explore but not study intensively. Impatient with local community.

7. Want voice in own program.

8. Need for citizenship development and building democratic attitudes and values.

9. Interested in what various jobs are like and vocation.

5. Stress group activities which will make them feel at ease with one another. Provide opportunities for experiences which will give each a feeling of importance. Discuss self-improvement question.

6. Advanced projects for those interested but not required. Talks, discussions, tours, conferences, and other group educational activities appropriate. Stress club community projects.

7. Encourage and assist with self-determined program. Stimulate vision through questions and suggestions.

8. Encourage democratic group procedure and discussion of social and economic problems.

9. Provide chance to observe vocations by tours, movies.

OLDER 4-H MEMBERS

(Ages 14-18, high school)

Characteristics

1. Establish independence toward adulthood.
2. Learn social skills (and acquire managerial ability).
3. Achieve level of reasoning of which capable.
4. Strong peer group attachments.
5. Prepare for marriage.
6. Prepare for responsible citizenship.
7. Are aware of appearance and personality.
8. Develop interest in a broader horizon.

Significance to 4-H Program

1. Urge independent activity in selecting, planning project; add responsibility as junior leader.
2. Encourage member to take responsibility for more planning of meetings for family and friends. Let members assume responsibility in club.
3. Encourage member to develop originality and initiative in entire project.
4. Encourage group activities boys and girls can share.
5. Learn more social and managerial skills.
6. Encourage group activities in church and community affairs.
7. Help members get factual information on effect of food on appearance, skin condition, hair, weight.
8. Help members get a broader concept of the world around them, and gain an understanding of how they can cooperate with other organizations and business groups.

EARLY TEEN 4-H MEMBERS

(Ages 12-14, Junior high school)

Characteristics

1. Live in larger community with wider loyalties and interests.
2. Busier with home, school, and community activities, but need to be busy.
3. Boys and girls want social activity together. Interested in meeting others.
4. Developing leadership ability. Need and accept adult counsel but not control. Desire for independence.

Significance to 4-H Program

1. Community groups with ties to wider areas. Inter-community.
2. Meet less often; plan evening meetings; activities such as camps should be of shorter duration.
3. Coeducational groups. Program largely social and recreational.
4. Allow and encourage group to function under its own leadership, but provide counsel and guidance when needed and desired. Encourage leadership of younger group.

The Needs of the 4-H Club Member

Youth needs to *belong*. At about ten the youngster wants to belong to a "gang". A club group with a well-defined purpose and program will meet his desires and hold his interests. Every boy and girl needs to feel accepted, not only by other members, but the leader, too. The leader should accept each child as he is and guide him in the best direction. The leader should see that each child gains a place of importance in and with a group and has a feeling of belonging. He will re-enroll as long as his friends are in the group and he feels wanted.

They want to *be successful*. Youth needs and wants to develop skills. Skill in project work, demonstrations, and judging, skill in activities and recreation, feeling at ease socially, — all are important in their world. They need variety because they can only keep interested in one topic for a short period.

They need an opportunity to learn how to do things successfully. Most of all they want to develop the skill necessary in getting along with others.

Recognition is an important need in the life of a youngster. A spoken "well done" is often a sufficient reward for the completion of a difficult task. A youngster needs a great deal of encouragement if he is to maintain his interests. Every boy and girl has an innate desire to be of service to others. Opportunities to carry out the Heart "H" should be given to the ten-year-old as well as to older members.

Youth needs responsibilities in proportion to its age. The younger member has about all he can do at his age level if he learns to be responsible for his project, his project report, and his participation in Club meetings. He is not able to make too many choices. Each year he should be able to add a few more responsibilities.

The adolescent needs and likes freedom in choice. He has developed to the point where he likes to make decisions, not only for himself, but for the group. With the older adolescent, the leader should act as an adviser, allowing the members to assume the major responsibility under his guidance.

Leadership jobs offer opportunities for growth and development. A youngster will strive to live up to the ideas of his 4-H pledge if his interests and needs are met as they appear at each stage of his development.

Affection or love is just as essential in personality development as is milk to the growing person. We need to know that we are wanted and loved in spite of our shortcomings.

In personality development, the leader must keep in mind many things; some for the group as a whole, some for the individual. Balance is the key word. A boy or girl growing in a balanced way is poised, comfortable, and happy. Leaders must have a great interest in the boy or

girl and be guided by keen insight and understanding of the child's individual problems in order for the boy or girl to enjoy a balanced personality development.

If 4-H Club members gain *approval, independence, friendships, status, belonging, achievement, and security* they will have a well-balanced program and your 4-H Club will succeed in holding its membership.

Techniques

Lecture — Usually means that the teacher speaks to the group from prepared notes without the benefit of visual aids or without opportunity for the group to break in with questions. We don't very often see this technique in its pure form. When new facts or information are to be presented the lecture method may be used for a short period of time. It should be combined with other techniques such as small group discussion, agree-disagree statements, questioning, etc., to be sure that members understood what was said and how they can use it.

It's a good idea to tell members before you start that you are going to talk for awhile and that they then will be active in discussing what they heard.

Illustrated talk — An off-shoot of the lecture technique whereby the teacher supports the talk with drawings, posters, actual articles, "gimmicks", etc. This is a very good technique to use with 4-H Club members.

The drawings or posters don't need to be professional art pieces. All they have to be is interesting and clear. For example in entomology, rather than just talking about the various shapes and distinguishing characteristics of insects, sketch them on a large sheet of paper or blackboard or have an actual specimen or picture of it. Many times the item talked about is in the members' bulletin and you can have them follow along in their books.

Discussion — This technique takes many forms ranging from the teacher raising a question to the whole group and allowing free-flowing answers and questions by both the teacher and students — to small group discussion whereby the groups are given one, or two, or three topics which they discuss and report back to the larger (whole) group.

This technique is excellent in that members share in the pooling of experiences, ideas, information, and hunches. Members really get involved and are likely to learn more as a result of this involvement, assuming of course that most had something to contribute at the beginning of the discussion and that many learned as a result of it.

The discussion must have direction, be more than a "bull-session". The group should know: what topics are to be discussed, how the group is to be divided for discussion or whether they will discuss as a total group, how

much time is allotted for discussion, and how the group's work will be reported back and summarized.

Question and Answer Technique — There is a wealth of information in the experiences and knowledge among the group members themselves. Questions and answers are a quick and efficient way to pool and share this knowledge. The right questions from the leader can stimulate the group to center their attention and thoughts on the subject.

A question and answer session may take place in different ways:

1. The leader may ask the question and call upon the group for answers.
2. The leader may draw questions from the members and he or a resource person, if one is present, may answer them.
3. The leader may draw questions from the group, then turn the question back to the group for an answer.

Demonstration — "Show me" is a good way to think of this technique. Basically, the teacher shows the student how to do something. For example, if I were to take you out to the garage right now and have you look on while I changed a tire — and if at the same time I explained what I was doing, as well as showing you how to do it, then this is a *Demonstration*. This is a most effective technique in 4-H and one often used by members and leaders alike, as they share knowledge about projects and activities.

Another kind of demonstration is the *result* demonstration. The result demonstration shows by example the effect of putting a recommended practice into effect. For example, it is recommended that ascorbic acid be used on fresh peaches to keep them from turning brown. You can demonstrate the results of using ascorbic acid by taking a fresh peach, peeling it, cutting it in half and treating one half with the recommended treatment and leaving the other half untreated. Place both in open containers for half an hour and show results. Similar demonstrations can be done with fertilizers on crops, varieties of plants, kinds of wood finishes, etc. The list is unlimited. The technique is a most effective teaching tool. Refer to 4-H Bulletin 111B, *Let's Give A Demonstration*, 111C, *Demonstrations for your Community*, and 311, *4-H Leaders Guide in 4-H Demonstrations*.

Work session — Follows nicely from any of the above and gives members a chance to "learn by doing". The work session is the back-bone of 4-H Club work. In this technique, members, under the guidance of leaders, have opportunities to test and perfect their new learnings. For example, after talking to the group about how to apply wood finish, have everyone practice with the recommended material and method.

Individual study — A good technique to strengthen member initiative and build confidence in ability to handle independent work. The leader's role here is to guide and encourage the member in his exploration.

Experiments (trying new things) — The "let's explore" notion quickens the pulse of young and old alike. This is a most successful technique for 4-H members when based on individual and/or group study. We see if our new ideas will work. Such individual work provides many, many, *result* demonstrations and much new information.

Tour — Home Visit — An impending garden tour will do more to kill those big weeds than all the modern chemicals. A visit by the leader and fellow members will provide an opportunity for constructive suggestions, will assure the host member that folks care about him and will add to the fun and comradeship of the group. The tour or home visit is particularly helpful in projects that cannot be readily transported to the Club meeting, such as crops, gardening, livestock, home improvement and landscaping. Tours also can be to view long-time result demonstrations — places using recommended practices, for example. Tours can be to places having direct educational bearing on a specific project or they may be of a more general nature. For example, a tour to a museum as opposed to a tour of an electrical supply house for members of an electrical club.

Exhibits — The preparation of an *educational* exhibit by the member is a good teaching tool. The emphasis needs to be on what should go into the exhibit and why it should go in. The question is: "what should we tell people by way of this exhibit and how can we put it across?" See 4-H Bulletin, 317A, *Let's Make An Exhibit*.

Exhibits constructed by you or other leaders or members are effective interest-getters. Exhibits can be used to teach subject matter. In essence, the exhibit is a way of putting information in view of the student over a long period of time.

How To Use This Book

A project is the core of the 4-H Club member's experience. It is the basis of membership in the local club and is the center of many activities and experiences in which members should be encouraged to participate. The experienced member will find satisfaction in expanding

his project work, in learning experiences of greater depth, in career or avocational possibilities and in learning the "why" behind the "how to do it." Each of these relates to the project the member selects.

This bulletin is a catalog of 4-H projects which have

much time is allotted for discussion, and how the group's work will be reported back and summarized.

Question and Answer Technique — There is a wealth of information in the experiences and knowledge among the group members themselves. Questions and answers are a quick and efficient way to pool and share this knowledge. The right questions from the leader can stimulate the group to center their attention and thoughts on the subject.

A question and answer session may take place in different ways:

1. The leader may ask the question and call upon the group for answers.
2. The leader may draw questions from the members and he or a resource person, if one is present, may answer them.
3. The leader may draw questions from the group, then turn the question back to the group for an answer.

Demonstration — "Show me" is a good way to think of this technique. Basically, the teacher shows the student how to do something. For example, if I were to take you out to the garage right now and have you look on while I changed a tire — and if at the same time I explained what I was doing, as well as showing you how to do it, then this is a *Demonstration*. This is a most effective technique in 4-H and one often used by members and leaders alike, as they share knowledge about projects and activities.

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his project work, in learning experiences of greater depth, in career or avocational possibilities and in learning the "why" behind the "how to do it." Each of these relates to the project the member selects.

This bulletin is a catalog of 4-H projects which have

been sufficiently developed to have member bulletins printed and resource people mobilized for effective learning experiences. Read through this bulletin and be familiar with its contents. Under each project heading you will note overall objectives for that area. Below this, three columns give you (1) the member and leader materials available, (2) what the member can (and should) learn from enrollment in that project, and (3) activities designed to help the member learn.

Sit down with your members, as suggested in the "member evaluation" section, with this book in hand and together work out what project(s) the member wishes to enroll in.

When counseling 4-H members on project selection, the following points may be helpful to you:

- The project should fit the member's home and family situation.
- The member should have a sincere interest in the project.
- The project should be suited to the member's physical and mental liabilities — not too easy nor too difficult — a challenge that he can accomplish.
- Availability of competent leadership — either yourself or other club leaders in the community — who can guide the member in the project selected.

As a leader, you will find that the project is a useful tool to teach boys and girls many new skills. But more important is helping boys and girls grow into useful adults in all walks of life.

The Growth of a 4-H Member

As a 4-H member the boy and girl is primarily interested in, and focused on, the work of their selected project. As leaders, however, we must work on a much broader base of concern. We must help boys and girls

develop and grow in many ways. We should strive to develop in each member:

- A desire to be creative.
- A healthy attitude toward work and a continuously developing career plan.
- An appreciation of knowledge and the ability and willingness to share it.
- A desire to reach their potential: mental, physical, spiritual, moral.
- A way of thinking, feeling, and acting towards others which stresses the uniqueness and personal worth of each individual.
- An understanding of the basic political, social, and economic institutions at work in our society and a person's responsibility to them.
- A desire to be active in one's community and to take the leadership in those areas where he can.
- An openness to new ideas and experiences.
- A desire for life-long learning.
- A pattern for the purposeful use of leisure time.
- An ability to apply principles of management in one's daily living.

Some ways in which the interests of boys and girls change have been discussed in this bulletin. You will find others in 4-H Bulletin 314A, *Michigan 4-H Club Leader's Guide*. If you don't have a copy, you can get one from your County Extension Agent. It will be a valuable help to you. Remember, as a 4-H leader, you are helping members:

- Have a *useful work experience* along with the responsibility for their project and club activities.
- Gain *knowledge* and *skill* to improve their *attitudes* for satisfying home and family life.
- Serve in *leadership* responsibilities, thus developing their talents for helping others.

Planning Your 4-H Club Meetings

Here are the essentials that are included in a good 4-H meeting:

- Business session
- Project work
- Recreation.

BUSINESS SESSION: This part of the meeting gives your members training in parliamentary procedure. They learn to share in a democracy. Make this part of the meeting short and snappy.

Your club may not have a business meeting each time they meet — only when they have business to transact.

It should be conducted by the members and their elected officers with the leader helping or advising only as needed. This experience helps 4-H members grow into good, useful citizens.

PROJECT WORK: This might also be called the educational section. Through project work the members learn skills, good work habits, the value of working together and pride in their accomplishments.

It may include demonstrations, judging, talks, tours, slides, movies and discussions as well as actual work on individual or group projects by the members. 4-H members "learn by doing."

RECREATION: Growing boys and girls need clean wholesome recreation to help develop their minds and bodies. It develops both physical and mental health. Young people make new friends and learn social skills through a good recreation program.

Many games may be used in a well-rounded program. They include several types such as get-acquainted, active, quiet, musical, large group, small group, singing and pencil and paper games.

Variety is important. New ideas and new experiences keep members interested not only in recreation but in all of your club's programs. The "multiphase" idea can be applied to these aspects of your club program, too. You'll soon notice a difference in the things which interest different age groups in your club. As these differences are noticed, you can help your members plan something that attracts each age group.

Here are some suggested club activities that might be included in your club program:

Guest Speakers:

Safety — police officers
Livestock feeds — elevator manager
Clothing — clothing store buyer
Wildlife — conservation officer
Child care — nurse

Animal diseases — veterinarian
Care of the hair — beauty operator

Special Events:

Parents' night
Foods show (or other project show)
Christmas carolling
Club dress revue
Local dairy show

Tours of:

Meat market
Automobile factory
Clothing store
Visit member's projects
Grain terminal
Farm machinery dealer
Livestock auction
Canning factory
Lumber yard
Freezing plant

You and your club members will think of many other ideas, too. Your members will "grow up" as they have the experience of planning the club program. Give them plenty of opportunity to plan for themselves, but be available to assist them when needed.

Supplies Available

Your County Extension Agent will provide you with supplies necessary to a successful 4-H club program. These supplies include:

- Leader Guides
- Member enrollment cards
- Project bulletins for members
- Project reports and records
- Recreation materials
- Secretary's record book
- Treasurer's record book
- Achievement certificates for members
- Membership pins
- General 4-H program information through letters, training meetings and special events.

Visit your County Extension Agent to obtain these and any other valuable helps that he has available for your use. Leaders have also found that the other youth organizations and many commercial concerns are good sources of educational materials useful in helping the member learn. Libraries are also excellent sources of references and learning materials.

Encourage your members to read their bulletins carefully, then to practice what they read. The wise use of bulletins or other literature is essential to good project work. Some tips on the use of bulletins are: (1) discuss the bulletin when it is given to the member, (2) make assigned readings with each member reporting on a section, (3) talk about information in the bulletins at club meetings. Bulletins are valuable — use them wisely.

To help you understand the Michigan 4-H Bulletin identification system, you will be interested to know that all 4-H materials are numbered by the following system:

<i>Type of Publication</i>	<i>Number series</i>
4-H Member's Bulletins	100 - 199
4-H Reports	200 - 299
Leader's Guides	300 - 399
4-H Forms	400 - 499
4-H Miscellaneous	500 - 599

At present, not all 4-H publications used in Michigan carry the series number, but it is good to use the 4-H series number when ordering supplies from your County Extension Office. Most counties will provide you with a 4-H Bulletin Order Blank to order your supplies as indicated for each project in this bulletin.

Automotive Care and Safety

Objectives:

To develop an understanding of the importance of the motor vehicle on our way of life.

To develop a clear knowledge of highway safety and proper attitudes of highway courtesy.

To create an understanding of traffic regulations and other laws related to the ownership and operation of motor vehicles.

To help young drivers acquire the ability to understand the basic parts and principles of the automobile, and to perform the elementary car maintenance operations efficiently.

To help boys and girls achieve and enjoy the fullest opportunities as a safe and efficient automobile driver.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>14-18 Year Olds</i>	
For Members: Unit I <i>The Car and the Highway, 121A</i> For Leaders: Unit I <i>The Car and the Highway, 321A</i>	Appreciate the importance of the automobile in our way of life. Learn about traffic codes and your responsibility as a driver. Learn about Highway Safety. Participate in a community Highway Hazard Hunt. Become familiar with the owners' manual. Understand the basic principles of the internal combustion engine. Understand what makes an automobile run. Become familiar with car costs and keeping car records. Learn about "carkeeping".	Complete 7 or more lessons in the Unit I workbook, including worksheets and related activities. Make an educational display, either on a group or individual basis, illustrating what has been learned. (Poster, drawing, cut-away, display of parts, etc.) Member evaluation with leader.
For Members: Unit II <i>Maintenance and Operation, 121B</i> For Leaders: Unit II <i>Maintenance and Operation, 321B</i>	Learn about handling the car safely on the road. Learn about the engine as a power unit. Learn the importance of clean air for the engine. Become familiar with the automotive fuel system. Learn about the ignition of the air-fuel mixture. Participate in group activities. Learn how engine temperature is controlled. Learn about the selection of lubricants. Learn about the care of tires. Learn what it costs to own and operate a car.	Complete 7 or more lessons in the Unit I workbook, including worksheets and related activities. Make an educational display, either on a group or individual basis, illustrating what has been learned. (Poster, drawing, cut-away, display of parts, etc.) Member evaluation with leader.
For Members: Unit III <i>Operating the Car Efficiently, 121C</i> For Leaders: Unit III <i>Operating the Car Efficiently, 321C</i> Promotional Brochure: <i>4-H Automotive—A Project For You, 521A</i> (Use with New and Prospective members.)	Learn what to look for in buying a used car. Learn how the engine transmits power. Learn about what makes for a smooth ride. Study the automotive electrical system. Determine how to operate your car efficiently. Learn how to make your community a safer place to drive. Participate in group activities. Investigate career opportunities.	Complete 7 or more lessons in the Unit I workbook, including worksheets and related activities. Participate in local or county safe drivers contest. (If a licensed driver.) Make an educational display, either on a group or individual basis, illustrating what has been learned. (Poster, drawing, cut-away, display of parts, etc.) Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Children, Youth, Adults in Family Living

Objectives:

That young people will:

Gain knowledge about how young children grow in order to better enjoy them and live with them.

Gain understanding of young children in order to better understand oneself and be able to live more effectively as a person.

Develop increased interest in other people.

Improve in ability to get along with others.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
10-12 Year Olds		
LIVING WITH CHILDREN HOW A CHILD GROWS For Members: <i>Record Book, 124A</i> <i>How A Child Grows, 124B</i> Report 224	Know some of the characteristics of the 2 year-olds, 3 year-olds, and 4 and 5 year-olds and how children of the same age may differ.	Make an observation of a young child. (Try to select a child who is not in your own family.) What did you see the child do? Did he seem to "act his age" according to what has been learned? Member evaluation with leader.
STORY TELLING AND MUSIC For Members: <i>Story Telling and Music, 124C</i> Report 224	Learn how to choose stories for young children, how to read to them, tell a story to them or make up a story. Learn how to help children enjoy music at different ages.	Tell or read a story to a child during play or at bed-time. Select a short record or play parts of a long record for a young child. Note: 1) how long the child is willing to just listen, 2) how long he will listen if the record contains some action in which he can take part. Member evaluation with leader.
CHILD SAFETY For Members: <i>Safety Practices, 124D</i> Report 224	Gain knowledge about child safety and appreciate the importance of preventing childhood accidents.	Help an adult take care of a child for 2 or 3 hours. Note how many times safety practices are used. Make up your own child safety formula. Member evaluation with leader.
12-14 Year Olds		
HELPING CHILDREN TEACHING A SKILL For Members: <i>Teaching a Skill, 124E</i> Report 224	Understand some of the ways in which young children can learn to help themselves.	Demonstration and discussion, 2 or more: <i>Teaching A Skill:</i> Teaching A Child How To Remove and Hang Up His Clothing Teaching Tying His Shoes Teaching A Child To Ride A Tricycle Teaching A Child How To Drink From A Glass and Eat With Silverware
TOYS AND PLAY For Members: <i>Toys and Play, 124F</i> Report 224	Understand the part that toys play in the growth and development of children. Gain ideas for making home-made toys.	Include what ages he might be able to do the skill and why, techniques for helping him learn, and what tasks would be the most difficult for him. Make a list of the activities a 2, 4, 6, 8 year old might do during a day. Teach one or more finger plays to a young child. Plan and carry out a children's party. Make a collection of games suitable for children of a certain age. Collect suitable activities that you and brothers and sisters would enjoy together: —when riding in a car —when on a family picnic —during a rainy evening at home Exhibit and discuss the main kinds of toys. What kinds of learning are available from toys? What causes a child to like a certain toy? What are the safety rules that pertain to toys? Make one or more home-made toys for a particular child. Display and discuss the toys you have made before giving them to the child. Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Children, Youth, Adults in Family Living (Continued)

Division	Learning Plan	Learning Activities*
	14-18 Year Olds	
UNDERSTANDING MYSELF AND OTHERS	Gain knowledge and understanding on how to live more effectively as a person.	Plan your own project using the suggested list of bulletins in the member-leaders' guide as a beginning.

NOTE: Members select one or more of the leaflets listed below according to member's interest and project plan; additional references are listed in the *Leader's-Member's Guide 524A*. The references listed in the guide are ordered directly from the source indicated.

FOR MEMBERS - LEADERS:		
For Members - Leaders: <i>Personality, What Is it?</i> , 124G1 <i>Improving Your Personality</i> , 124G2 <i>To Your Good Health</i> , 124G3	<i>Looking Your Best</i> , 124G4 <i>Making Friends</i> , 124G5 <i>Keeping Friends</i> , 124G6 Member evaluation with leader. <i>How Do You Do;</i> <i>Manners — at home and abroad</i> , 124G7	<i>Developing a Philosophy of Life in the Teen Years</i> , 124G8 Report 224 <i>Understanding Ourselves and Others: Member's-Leader's Reference Guide</i> , 524A

Clothing

Objectives:

The clothing project encourages young people in learning:

Knowledge and skills of appropriate and suitable dress in relation to self and society.

Skills which give satisfaction from clothing made and purchased.

Judgment in planning, making, and buying clothing and accessories.

Management of time, energy and money in relation to clothing that will result in maximum satisfaction.

Ability and willingness to share knowledge and skills with others.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	10-12 Year Olds	
YOUNG MISS For Members: <i>You Learn to Sew</i> , 127A <i>You Make a Dress</i> , 127B Report 227 For Leaders: <i>Leader's Guide:</i> <i>You Learn to Sew</i> 327A <i>Leader's Guide:</i> <i>You Make a Dress</i> , 327B <i>Guidelines for Clothing Evaluation</i> , 527A	Learn to select, use and care for some sewing tools. Learn to use the sewing machine. Develop skill in simple construction techniques. Become acquainted with the principles of pattern and fabric selection. Develop skill in handling cotton fabrics. Develop interest in personal appearance. Learn about purchasing blouses. Learn to work and play with other members. Have new learning experiences in each project in an amount that the individual member can accomplish with satisfaction.	Choose one or more of the following: Make using cotton fabric Beach or Pajama Bag Head Scarf Apron Cotton Skirt Simple over-blouse Gift item—like pot holder, or tea towel Dress Skirt and blouse Make a cotton skirt and buy a coordinating blouse or sweater Member evaluation with leader.
	12-14 Year Olds	
JUNIOR MISS For Members: <i>A Junior Miss Sews</i> , 127C <i>Selecting Patterns and Fabrics</i> , 127D Report 227 For Leader: <i>Guidelines for Clothing Evaluation</i> , 527A	Learn to buy and create wearable garments that will yield greatest satisfaction. Learn more about color and design selection. Broaden knowledge of fabrics. Learn to plan coordinates for school wear. Further develop sewing skills. Continue the development of a neat attractive appearance. Learn to share ideas and work together more effectively.	Choose one or more of the following: Make using a cotton or cotton blend fabric— <i>Schoolwear</i> (dress, skirt and blouse, jumper, etc.) <i>Sportswear</i> (skirt and blouse, coordinates, beachrobe, etc.) <i>Sleepwear</i> (pajamas, house coat, etc.) <i>General wear</i> . Shop for a skirt of cotton or cotton blend fabric and a coordinating blouse or sweater. Learning activities could include tours of clothing stores, visits with clothing buyers, comparison shopping of catalogs, studying of consumer information, and demonstrations. Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Clothing (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>14-18 Year Olds</i>	
SENIOR MISS For Member: <i>Selecting Patterns and Fabrics, 127D</i> <i>Let's Sew with Wool, 127E</i> Report 227 For Leader: <i>Guidelines for Clothing Evaluation, 527A</i>	Develop skill in planning, selecting and buying clothing. Learn to plan wardrobe selections with suitability to individual appropriateness for intended use and care required in mind. Continue to learn about fabrics and their use and care. Continue to develop sewing skills. Learn to utilize clothing and grooming to make the most of personal appearance. Learn to use clothing and personal appearance as a tool for creative expression. Learn about career opportunities in the clothing field. Learn to share knowledge and skills with others.	Choose one or more of the following: Make a garment or garments that fits the member's wardrobe needs and assemble any appropriate accessories. Suggestions are: A costume for general wear A costume for best wear A costume for sports wear A costume for rain wear Study wardrobe needs, purchase a garment or garments that coordinate with existing wardrobe, and assemble any appropriate accessories. Suggestions for purchase are: Coat Dress Sports wear Simple suit Rain wear Learning activities could include a wardrobe inventory, a wardrobe plan, tours, visits with buyers, comparison shopping, a study of consumer information, etc. A combination of items 1 and 2 whereby the member makes one or more garments and purchases one or more coordinating garments for her wardrobe. A creative project planned by the leader and member designed to give the older member new learning experiences in the clothing field. Some suggestions are: Exploration of the career opportunities in clothing and related fields. Construction of garments for other family members. A study of clothing care including laundry, dry cleaning, etc. A wardrobe plan for work or college. A study of some phase of textiles. Member evaluation with leader.

Knitting

Objectives: (See Clothing)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>10-12 Year Olds</i>	
YOUNG KNITTER For Members: <i>You Learn to Knit, 171</i> Report 271 For Leaders: Materials will be prepared and introduced via your County Extension Agent.	Learn to recognize and use some knitting tools. Learn to recognize and use woolen, worsted yarn. Learn about winding yarn for knitting. Learn these basic knitting techniques: to cast on stitches to knit to purl to find off stitches to increase and decrease stitches	Choose one or more of the following: Make a sampler showing three or more of the basic knitting techniques and three or more simple knitting stitches. Make one or more articles using three or more of the basic knitting techniques and simple knitting stitches. Make one or more knitted articles or garments following a simple pattern. Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Knitting (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	10-12 Year Olds	
	<p>Learn to pick up dropped stitches.</p> <p>Learn to recognize and make these simple knitting stitches:</p> <ul style="list-style-type: none"> garter stitch stockinette stitch ribbing <p>Learn to follow a simple pattern.</p> <p>Learn to wash and block simple knitted articles.</p> <p>Have new learning experiences in each project in an amount that the individual member can accomplish with satisfaction.</p>	
	12-14 Year Olds	
<p>JUNIOR KNITTER</p> <p>Materials will be prepared and introduced via your County Extension Agent. Report 271</p>	<p>Learn about selecting, using, and caring for knitting equipment.</p> <p>Learn to work with yarns of different weight, texture, and fiber content.</p> <p>Learn to select colors and designs that will be useful and appropriate for the individual and the wardrobe.</p> <p>Learn additional knitting and finishing techniques such as:</p> <ul style="list-style-type: none"> —knitting gauge —joining yarns —buttonholes and eyelets —joining seams —and other <p>Learn to use knitting abbreviation and how to use a pattern.</p> <p>Learn to knit using a pattern stitch.</p> <p>Learn about correcting errors.</p> <p>Learn about caring for knitted garments.</p>	<p>Choose one or more of the following:</p> <ul style="list-style-type: none"> Make one or more garments using a pattern stitch and/or a combination of a pattern stitch with simple stitches. Make one or more garments using one or more knitting or finishing techniques the member has not used before. Make one or more garments using a yarn the member has not used before. <p>Member evaluation with leader.</p>
	14-18 Year Olds	
<p>SENIOR KNITTER</p> <p>Materials will be prepared and introduced via your county extension office. Report 271</p>	<p>Continue to develop knitting skills and to learn new techniques.</p> <p>Learn to knit designs in garments with two or more colors of yarn or two or more types of stitches.</p> <p>Learn to transpose (re-gauge) pattern directions for different body sizes or for different needle or yarn sizes.</p> <p>Learn to block knitted garments.</p> <p>Learn to care for and to store knitted garments.</p> <p>Learn to use knitting as an outlet for creative expression.</p>	<p>Choose one or more of the following:</p> <ul style="list-style-type: none"> Make one or more garments with a design using two or more colors of yarn or two or more types of stitches. Knit one or more garments that the member has not had experience making before. (Examples: a knitted dress, suit, or coat) Knit a garment from a transposed pattern. A creative project planned by the leader and member to give the older member new learning experiences. <p>Some suggestions are:</p> <ul style="list-style-type: none"> Combining knitting and sewing to make coordinates or an ensemble. A study at purchasing and caring for knit wear. Design an original pattern and knit a garment from this pattern. Study present wardrobe and knit and/or buy garments to fill wardrobe needs. <p>Member evaluation with leader.</p>

For other suggestions on teaching tools, please turn to pages 4 to 11.

"Basic" Conservation Series

Objectives:

To learn about natural resources and their relationship to people.

To learn how the management of soil, water, forests, and wildlife affects our every day lives.

The "Basic" Series is designed to give an understanding and appreciation of these resources, and afford outdoor experiences and activities.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	10-12 Year Olds	
"BASIC" CONSERVATION ACTIVITIES AND YOUTH For Members: <i>Basic Conservation: Act. and Youth, 130A</i> Report 230 For Leaders: <i>Leaders' (Kit)</i> <i>Basic Conservation: Act. and Youth, 330A</i> <i>Conservation Chart 430</i> (one chart for each 5 members)	Become familiar with our natural resources and their importance in our daily lives. Learn about the interrelationship of one natural resource to another. Develop the conservation story of muddy river valley and clear river valley.	Complete the Conservation Chart and discuss it as a group. Carry out 4 outdoor conservation activities, one in each phase of conservation: soil, water, forests and wildlife. Assemble a scrapbook consisting of your workbook, added pages for a record of activities, pictures, etc., and report. Member evaluation with leader. Exhibit the completed project materials.
"BASIC" CONSERVATION AND WATER For Members: <i>Basic Conservation and Water, 130B</i> Report 230 For Leaders: <i>Leaders' (Kit)</i> <i>Basic Conservation and Water, 330B</i>	Learn about the importance of water. Appreciate the many uses made of water. Get acquainted with what is meant by pollution. Find out the causes of so-called water shortages. Understand the water cycle.	Complete 8 activities in workbook. Make a water sanitation check of the home well, or, as a club, of the city water supply. Assemble a scrapbook consisting of the workbook, pictures, report, etc. Member evaluation with leader. Exhibit the completed project materials.
"BASIC" CONSERVATION AND LAND For Members: <i>Basic Conservation and Land, 130C</i> Report 230 For Leaders: <i>Leaders' (Kit)</i> <i>Basic Conservation and Land, 330C</i>	Learn about the importance of land and appreciate its many uses. Get acquainted with what is meant by erosion and find out the causes of so-called "wearing out" of the land. Learn that the quantity and quality of our land depends upon how we use and develop it.	Take part in a soil conservation field trip. Discuss how soil is formed, studying soil samples. List the foods which come from the land. Assemble a scrapbook consisting of the workbook, pictures, charts and report. Member evaluation with leader. Exhibit the project materials completed.
"BASIC" CONSERVATION AND FORESTS For Members: <i>Basic Conservation and Forest, 130D</i> Report 230 For Leaders: <i>Leaders' (Kit)</i> <i>Basic Conservation and Forest, 330D</i>	Learn about the products of the forests and their relationship to other resources. Learn how to identify trees. Understand why we must manage forests and plant trees for the future.	Complete 8 activities in the workbook. Participate in tree planting, tree identification, and "fun in the forest" (picnic) activities. Assemble a scrapbook consisting of the workbook, additional record sheets, leaf collections and report. Member evaluation with leader. Exhibit the project materials.
"BASIC" CONSERVATION AND WILDLIFE For Members: <i>Basic Conservation and Wildlife, 130E</i> Report 230 For Leaders: <i>Leaders' (Kit)</i> <i>Basic Conservation and Wildlife, 330E</i>	Learn about the importance of fish, birds, and mammals and appreciate their many values. Learn about "harvesting the surplus crop" and find out ways of helping wildlife. Understand the needs of wildlife.	Complete activities in the workbook: —wildlife values —food and cover for wildlife —how to help wildlife —game laws Make an inventory of the wildlife in your community. Assemble a scrapbook consisting of the workbook, added record sheets, pictures, etc., and report. Member evaluation with leader. Exhibit the project materials.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Forest Conservation

Objectives:

To learn about our forest resources and develop an understanding of forest management, use and development.
To develop an appreciation for the many uses of our forest resources, and learn about "multiple-use".
Through field activities, learn to identify forest trees and recognize their relationship to the other natural resources.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	12-14 Year Olds	
I — FOREST TREES AND HOW THEY GROW For Members: <i>Forest Trees and How They Grow, 132.1A</i> Report 232	Learn: —how a tree grows —to identify 15 or more trees and the scientific name —to mount leaves Become aware of the enemies of the forest. Understand multiple-use of forests.	Complete 8 activities in members' bulletin. Identify 15 or more trees by their <i>leaves</i> , seed and bark. Plant forest tree seeds and check germination under various conditions (light, water, heat). Member evaluation with leader. Exhibit project materials.
II — TREE PLANTING For Members: <i>Tree Planting, 132.1B</i> Report 232	Learn about forest plantations; what trees to plant, where and when. Care of planting stock. Why plant forest trees. Early care of forest plantations.	Complete 7 activities in bulletin (must include activities 1, 2, 3, 4, and 9). Choose two activities from activities 5, 6, 7 and 8. Tree planting, for: —timber —Christmas trees —windbreaks —reforesting blow-sand areas Help plant a shade tree. Member evaluation with leader. Exhibit project materials.
	14-18 Year Olds	
III — FOREST MANAGEMENT For Members: <i>Forest Management, 132.1C</i> Report 232	Learn about: —forest management —timber estimating —care of forests —value of forest products	Make: —tree calipers —tally —hypometer Estimate either number of cords or board feet on $\frac{1}{4}$ acre of woodland. Scale at least 6 logs. (or) Conduct a special study relative to forest management. Develop own project outline and get approval of your leader. Member evaluation with leader. Exhibit project material.
ADVANCED — FOREST MANAGEMENT For Members: <i>Forest Management, 132.1C</i> Report 232	Advance the interest and understanding of management already learned. Apply principle of forest management to a specific situation—i.e. your planting. Develop own project outline.	Member to develop own project outline and get approval of leader. Complete this project. Record outline and activities in 8½" x 11" folder. (or) Conduct a study of some aspect of the technology or science of forestry. Member evaluation with leader. Exhibit project materials.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Soil and Water Conservation

Objectives:

To develop an appreciation for soil and water resources, through an understanding of the characteristics of the resources and the problems of management.

To learn, through field experiences, about the interrelationship of soil and water and their effect on other natural resources.

To learn what can be done to practice soil and water conservation.

To recognize the value of soil and water to our 'everyday lives.'

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
12-14 Year Olds		
I — LAND CARE For Members: <i>Land Care — Soil and Water Conservation, 133A</i> Report 233 <i>Jr. Land Judging Cards, 533A</i> <i>Slope Finder, 533A1</i> For Leaders: <i>Soil and Water Conservation Projects and Activities (PA-377) 333-A1</i>	Learn about the care of land: —Power of the raindrops and run-off plots —Soil fertility and organic matter. Learn about a watershed. Learn about who can help with soil conservation.	Complete 8 activities as outlined in the member's bulletin. Make a watershed survey of your community. Demonstrate soil erosion and water run-off. Member evaluation with leader. Exhibit project material.
II — LAND JUDGING For Members: <i>A Guide for Land Judging in Michigan, (E-326) 133B</i> Report 233 For Leaders: <i>Soil and Water Conservation Projects and Activities, (PA-377) 333A1</i>	Learn about: —physical character of soil —problems in soil management —land capability —land use —practice in soil conservation	Judge land on three different 10 acre fields and give oral reasons. Participate in at least two club, community or county land judging events. Demonstrate land judging at a 4-H Club, school or community program. Member evaluation with leader. Exhibit project material.
14-18 Year Olds		
III — LAND MANAGEMENT For Members: <i>Soil and Water Conservation III: Land Management, 133C</i> Report 233	Learn about farm planning. Learn about crop rotations and conservation practices. Decide on conservation management needs. Apply understanding to a specific farm situation.	Complete a base map of a farm and at least one overlay to show one of the following: lime needs; fertilizer needs; land slopes; soil changes; crop rotation; needed conservation practices; land use. Continue Land Judging. Member evaluation with leader. Exhibit project material.
ADVANCED — LAND MANAGEMENT For Members: <i>Soil and Water Conservation III, 133C.</i> Report 233	Advance the interests and understanding of management concepts already learned. Develop own project outline.	Continue Unit III, developing and applying a soil and water conservation plan plus: Develop your project outline and get the approval of your leader. Complete this project. Record your outline and activities in a 8½" x 11" folder. Continue Land Judging. Member evaluation with leader. Exhibit project material.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Wildlife Conservation

Objectives:

To develop an appreciation of our wildlife resources and become aware of their importance to people.
To understand the intricate interrelationship of one species of wildlife to another, and to all other natural resources.
To become aware of the value of wildlife to recreation and the need for management.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
12-14 Year Olds		
I— BIRDS For Members: <i>Wildlife Conservation,</i> 134.1A Report 234	Develop an appreciation of birds by learning about them. Know their characteristics and habits. Learn about wildlife habitat.	Obtain colored pictures of birds. Complete 15 bird study sheets. Take at least 1 bird hike of at least 2 hours or longer. Establish and maintain 2 bird houses: for small bird (i.e. wren) and for another bird. Put out bird bath or winter roosting shelter. Become familiar with the Jr. Audubon Society. Member evaluation with leader. Exhibit project materials.
I — MAMMALS For Members: <i>Wildlife Conservation,</i> 134.1A Report 234	Know the common mammals in Michigan. Learn about wildlife habitat. Help wildlife.	Obtain pictures of mammals. Complete 2 of the following activities: —plant or leave grain patches as wildlife food. —construct or maintain winter feeding stations. —construct artificial dens for cottontail rabbits. —construct nesting boxes for fox squirrel, raccoons or wood duck. —photograph wild animal life and their homes. Member evaluation with leader. Exhibit.
I — FISH For Members: <i>Wildlife Conservation and Fish, 134.3A</i> Report 234 For Leaders: <i>"Fish Fundamentals",</i> 334.3A	Learn about fish conservation. Learn to identify 6 common fishes. Understand how fish live.	Complete 6 activities in workbook. Conduct fishing survey. Member evaluation with leader. Exhibit. Exhibit project materials.
II — BIRDS For Members: <i>Wildlife Conservation,</i> 134.1A Report 234	Learning more about birds, their habits and value. (Emphasis is on song birds.) Learn about the principles of bird behavior.	Complete 15 additional bird study sheets. Manage feeding stations and record activity for period of 30 days. Ex. Record type of feed preferred. Study behavior of 5 birds; food, nesting, mating, etc. Make a map or drawing of your bird observation area. Member evaluation with leader. Exhibit project materials.
II — MAMMALS For Members: <i>Wildlife Conservation,</i> 134.1A Report 234	Study the habits of wildlife. Develop special projects for helping wildlife.	Select two animals that are present in your area. Observe and study their habitats. Make a planting to provide food and cover, or provide food. Record activities for period of 30 days. Member evaluation with leader. Exhibit.
II — FISH AND FISHING For Members: <i>Wildlife Conservation and Fishing, 134.3B</i> Report 234 For Leaders: <i>"Land, Water and Fishing", 334.3B</i>	Develop an understanding of fish habitat. Learn how to fish. Recognize values of fishing to recreation.	Keep a fishing "log". Learn to identify important fish foods. Become acquainted with Michigan fishing laws and regulations. Member evaluation with leader. Exhibit. Exhibit project materials.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Wildlife Conservation (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>14-18 Year Olds</i>	
III — GAME BIRD MANAGEMENT For Members: <i>Wildlife Management for Birds and Mammals, 134.1B</i> Report 234	Learn about game birds and their value to recreation. Understand the 'harvest' concept. Learn about habitat development.	Make an inventory of the game birds in your area. Plant food and cover for birds and other wildlife. Make a map of the area. Member evaluation with leader. Exhibit project materials.
III — SMALL GAME MANAGEMENT For Members: <i>Wildlife Management for Birds and Mammals, 134.1B</i> Report 234	Learn principles of wildlife and habitat management. Understand farm (habitat) plantings.	Plant a minimum of 500 trees and shrubs. Make two maps of farm or area. (Note: You may receive special assistance from the Michigan Department of Conservation if you live south of Highway M-20.) Member evaluation with leader. Exhibit project materials.
III — FISH POND MANAGEMENT For Members: <i>Wildlife Management and Fishponds, 134.3C</i> Report 234	Learn principle of fish pond management, including stocking the pond and harvest survey.	Help construct or maintain a farm pond. Make plantings of trees and shrubs along shore line. Assist in planting and maintaining fish in the pond. Member evaluation with leader. Exhibit project materials.
III — DEER MANAGEMENT For Members: <i>Deer Management, 134.1C</i> Report 234	Learn about the needs of deer: —what they eat and how much. Understand the need for deer herd management.	Complete activities for the following: —a study of present deer herd and deer populations. —deer hunting in your locality. —a study of a winter deer yard. —winter and summer range management. —spring deer yard conditions. Member evaluation with leader. Exhibit project materials.
ADVANCED WILDLIFE MANAGEMENT (BIRDS, MAMMALS, FISH) Report 234	Advance the interests and understandings of wildlife management. Apply these management principles to a specific situation. Develop own project outline.	Member to develop own project outline and get the approval of leader. Complete this project. Record the outline and activities in 8½" x 11" folder. Member evaluation with leader. Exhibit project materials.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Conservation Appreciation

Objectives:

To develop an appreciation and understanding of nature and outdoor recreation through activities dealing with specific recreational and nature study projects.

- Gun Safety Series
- Archery Series
- Wildflower Series
- Rocks and Minerals Series

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
12-14 Year Olds		
GUN SAFETY SERIES I — GUN SAFETY (.22 rifle) For Members and Leaders: Report 231.1 <i>Conservation Hunting I, 531.1</i>	Develop appreciation for hunting and out-door recreation. Learn how to safely handle a gun (.22 rifle). Know and practice the "Hunter Safety Code". Get experience on the target range.	Obtain written permission from parents or guardian. Learn the following: —how to handle a rifle properly. —how to identify various arms and ammunition. —Michigan laws concerning firearms. —how to aim and fire on the target range. —"Ten Commandments of Gun Safety" or the Michigan "Hunter Safety Code". —Rules of "Safety on the Rifle Range". Demonstrate one phase of gun safety or gun handling before your club. Member evaluation with leader.
II — GUN SAFETY ON THE TARGET RANGE (.22 rifle) For Members: Report 231.1 For Leaders: <i>Leader's Guide: Project II —Hunting 331.1B</i>	Apply conservation concepts for recreation in the out-of-doors. Appreciate the need for safety on the target range.	Build target range or a "model". Make a moving target for rifle. Assist and demonstrate on the firing line. Make poster or scrapbook of 10 different types or makes of rifles and ammunition. Participate in two approved 4-H rifle shoots. (Obtain written permission from parent or guardian.) Member evaluation with leader.
14-18 Year Olds		
III — GUN SAFETY IN THE FIELD (.22 rifle) For Members: Report 231.1 For Leaders: <i>Leader's Guide: Project III—Hunting, 331.1C</i>	Learn to handle a gun safely in the field. Develop appreciation for out-door recreation. Learn the use of compass and "orienteering" in the field.	Qualify as a "4-H Club member who has demonstrated that he or she will be a safe hunter sent afield". Take two field trips in hunting areas with your gun. Demonstrate in the field, before your club, at least one rule of gun safety. Member evaluation with leader.
ADVANCED — FIELD SHOOTING (Shotgun) For Members: <i>Field Shooting, 131.1D</i> Report 231.1	Develop an interest and understanding in hunting and/or skeet and trap shooting. Apply safety to all activities. Understand and know your gun—(OR)— An advanced project with the .22 rifle— Develop own outline.	Learn how to handle a shotgun under field conditions. Complete the requirements for each meeting. Member evaluation with leader.
12-14 Year Olds		
ARCHERY SERIES: I — ARCHERY For Members and Leaders: Report 231.1 <i>4-H Archery Projects, 531.4</i>	Develop appreciation for archery recreation. Learn the parts of the bow. Learn to shoot on the target range.	Obtain written permission from parents. Make arm guard and shooting glove. Learn to shoot your bow and arrow. Construct an archery target. Member evaluation with leader.
II — ARCHERY ON THE TARGET RANGE For Members and Leaders: See Archery I, above	Learn to apply safety rules on the target range. Learn how to score targets in an archery tournament. Learn Michigan laws of hunting with a bow and arrow.	Compete in at least two archery contests. Help to build an archery target range. Demonstrate safety on the target range. Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Conservation Appreciation (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
14-18 Year Olds		
III — ARCHERY For Members and Leaders: See Archery I, above	Learn safety in archery under field conditions. Develop ability to hunt with a bow and arrow.	Take 3 field trips in possible hunting areas with your bow and arrow. Demonstrate in the field before your club the proper way to handle your bow and arrow. Member evaluation with leader.
ADVANCED — ARCHERY For Members and Leaders: See Archery I, above	Develop further the interests and understanding in archery. Apply learned skills to hunting or target situations. Develop own project outline.	Develop own project outline and get approval of leader. Complete this project. Record the outline and activities in 8½" x 11" folder. Member evaluation with leader.
12-14 Year Olds		
WILDFLOWERS SERIES: I — WILDFLOWERS For Members: <i>Wildflower Study Sheets, 431.3</i> Report 231.1 For Leaders: <i>Leaders' Guide: Wildflower Project I and II, 331.3</i>	Become acquainted with at least 20 wildflowers in relation to their habitat. Learn to press wildflowers. Know the wildflowers which are protected by the law and understand why they must be protected.	Complete study sheets for 20 wildflowers. Mount wildflowers from 3 different habitats, and exhibit on a 14" x 22" cardboard. Assemble a wildflower scrapbook. Member evaluation with leader. Exhibit wildflower collection.
II — WILDFLOWERS For Members and Leaders: See Wildflowers I above	Become acquainted with 25 additional wildflowers. Understand the relationship between natural habitat and need for protection. Develop an appreciation of the importance to recreation.	Complete study sheets for 25 wildflowers. Develop an exhibit showing the parts of a complete flower. Name the flower and parts, and enclose in wildflower scrapbook—II. Member evaluation with leader. Exhibit wildflower scrapbook.
14-18 Year Olds		
III — WILDFLOWERS For Members and Leaders: Report 231.1 <i>Wildflowers Project, 531.3</i>	Develop an understanding of the complete plant. Recognize variations in wildflowers.	Collect and press 15 complete plants with roots; with examples of the following: —2 specimens showing each of 3 different types of leaves. —2 specimens showing each of 3 kinds of leaf arrangement. —3 specimens showing different types of flower inflorescences. Identify each specimen and record. Member evaluation with leader. Exhibit project materials.
ADVANCED — WILDFLOWERS For Members and Leaders: See Wildflowers III above.	Develop further the interests in wildflowers, and apply understandings to a special project. Develop own project outline.	Develop own project outline and get approval of leader. Complete this project. Record the outline and activities in an 8½" x 11" folder. Member evaluation with leader. Exhibit project materials.
12-14 Year Olds		
ROCKS & MINERALS SERIES I — ROCKS & MINERALS For Members and Leaders: Report 231.1 <i>4-H Rocks & Minerals, 531.5</i>	Learn to recognize different rocks. Develop appreciation of rocks and minerals. Learn how rocks tell the story of Michigan's age and development.	Discuss rock formation and record in scrapbook. Collect at least 20 specimens. Identify by the "simplex" method (visual characteristics). Member evaluation with leader. Exhibit project materials.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Conservation Appreciation (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>12-14 Year Olds</i>	
II — ROCKS & MINERALS For Members and Leaders: See Rocks and Minerals I above.	Learn how Michigan compares with 2 other states. Understanding value and use of rocks & minerals.	Compare rock formation in Michigan to other states. Collect an additional 20 specimens. (10 samples from other states.) Identify. Member evaluation with leader. Exhibit to show "where found" and "how used".
	<i>14-18 Year Olds</i>	
III — ROCKS & MINERALS For Members and Leaders: See Rocks and Minerals I above.	Learn the importance of Michigan Minerals and their use.	Study industries using minerals. Collect samples of raw mineral and product, (6 samples). Member evaluation with leader. Exhibit project materials.
ADVANCED — ROCKS & MINERALS For Members and Leaders: See Rocks and Minerals I above.	Further the interests and understandings already acquired in Rocks & Minerals. Develop own special project outline.	Develop a project outline and get the approval of leader. Complete this project. Record outline and activities in 8½" x 11" folder. Member evaluation with leader. Exhibit project materials.

Dairy

Objectives:

- To develop a better understanding of the dairy industry and its importance in our total economy.
- To gain sufficient knowledge about dairying to enable a member to be successful in establishing and managing a good dairy herd.
- To learn the role of science in the function of the dairy cow and the production of dairy foods.
- To appreciate the importance of kind treatment of animals and learn that the performance of dairy animals is influenced by the way they are treated by their masters.
- To experience the joy and satisfaction of working with dairy animals to produce a good healthful product for human consumption.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>10-12 Year Olds</i>	
JUNIOR DAIRY HERDSMAN: THE CALF For Members: <i>The Calf in 4-H Dairying, 145A</i> Report 275 <i>Feed Record Card, 475</i> For Leaders: <i>Fitting and Showing, 345A</i> Meeting Outline Plans	Learn how to select a good calf. Learn to feed and care for the registered or grade calf. Learn the feeds, sanitary measures, facilities needed, and the costs involved in raising a dairy animal. Learn the importance of good feed and care and how these influence growth of the calf. Learn how to fit, train, and show a dairy calf.	Obtain a good project animal. Care for the calf for the full project year. Keep appropriate records, including information on name, birth date, dam and sire, three generation pedigree if possible; costs of purchase and care; health information. Fit, train, and exhibit the calf. Complete the project report. Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Dairy (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
10-12 Year Olds		
THE YEARLING HEIFER For Members: <i>The Yearling in a 4-H Dairy Heifer Project, 145B</i> Report 275 <i>Feed Record Card, 475</i> For Leaders: <i>Refer to the Calf Project</i>	If starting with a yearling heifer, the same items as listed above for the calf will apply here. If the yearling is a continuation of the calf project, then learn: —the care and management needed for good growth and development of the heifer —proper age and size of heifer before breeding —sire selection procedures and the use of artificial insemination —care and management of bred heifer and at calving time	Continue the care of project animal as begun in the Calf Project. Keep records of costs and health information. Draw up a three generation pedigree if information is available. Select the sire for breeding. Fit, train and exhibit the heifer. Member evaluation with leader.
JUNIOR DAIRY HERDSMAN: THE COW For Members: <i>The Cow in 4-H Dairying, 145C</i> Report 275 <i>Feed Record Card, 475</i> <i>Production Record Card, 545</i> For Leaders: <i>Refer to the Calf Project</i> (Note: This Project may be continued each year, adding animals through offspring or purchase, if desired, throughout the member's 4-H career.)	Learn how to feed, manage, and milk a dairy cow. Learn the feeds required for body maintenance and milk production. Learn health and sanitation regulations and what procedures are to be followed in producing clean milk. Learn the "whys" of a good milking procedure. Learn the cause and prevention of some of the common diseases of dairy cattle.	Continue care of heifer through calving and care of cow in production. Begin a production testing program for the project cow. Keep accurate records of feed costs, labor time, veterinary and health records, reproduction dates, and income. Show the project animals. Become involved in a dairy breed organization and in breed activities. Member evaluation with leader.
12-14 Year Olds		
JUNIOR DAIRY SCIENTIST For Members: <i>4-H Dairy Science, 145D</i> <i>4-H Dairy Science Workbook, 145D1</i> Report 275	Learn the areas in which science is involved in dairying. Discover some of the "whys" of dairying. Learn the biological processes that go on inside the cow. Become acquainted with the various specialized areas in dairying.	Complete the 4-H Dairy Science Workbook. Conduct a science project in dairying. Member evaluation with leader.
14-18 Year Olds		
ADVANCED DAIRY SCIENTIST Advanced projects will be developed in specialized subject areas of dairying such as genetics, nutrition, dairy farm management, herd health and sanitation, reproduction and milk secretion, and milk marketing. Project materials will be pre-tested and distributed to County Extension offices as they are developed.		

For other suggestions on teaching tools, please turn to pages 4 to 11.

Dog Care and Training

Objectives:

- To experience the pleasure and companionship that a well trained dog provides.
- To acquire a knowledge of the responsibilities of dog ownership in the home and community.
- To demonstrate sound dog care and management practices including feeding, care, handling, grooming and fitting.
- To learn about the more important breeds and their characteristics and to be able to identify them.
- To learn and follow all basic regulations for dog health including first aid and simple treatments for ailments not requiring veterinary attention.
- To train the dog to obey and heed established uniform simple commands.
- To develop an understanding of the values of scientific research and its influence upon dog husbandry.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	10-12 Year Olds	
For Members: <i>You and Your Dog, 141</i> <i>4-H Club Members Record, 241</i> For Leaders: <i>Leader's Guide: 4-H Dog Care and Training Project, 341</i> <i>Leader's Guide For Home Inspection of Dogs in 4-H, 341A</i>	Learn— Responsibilities of dog ownership. The different breeds of dogs. What to feed. Why and how. What goes into a healthy diet. How to groom <i>your</i> dog. Why grooming and care are important. As much of Novice A obedience as you can (all on leash of course) Health precautions. About proper housing for your dog.	Study the ancestry of dogs and their importance to man. Feed, care, and properly house your dog. Practice the Novice A obedience work as described in AKC Novice. Visit a dog show. Start a notebook of information on dog history, breeds, grooming, health, training, etc. Test what you've learned by exhibiting at a dog show. Member evaluation with leader.
	12-14 Year Olds	
For Members and Leaders: See age 10-12.	Learn— Food habits and nutritional needs of other breeds. How to groom <i>other</i> breeds. How to clip toenails and clean ears. How to clip and trim dog for show. Michigan laws related to dogs' registration procedures. Parts and their function. Skills needed in breeding program. Complete Novice A and begin open, tracking or other work classes.	Do comparative studies of various feeds. Continue work on training your dog in work classes. Observe other dogs being trimmed and groomed. Try grooming other dogs. Continue to add to your notebook on dogs. Identify and name parts of the dog's body. Test what you and the dog know by entering a dog show, field trial, etc. Plan an educational exhibit. Member evaluation with leader.
	14-18 Year Olds	
For Members and Leaders: See age 10-12.	Study litter rations. Study rations for different working classes. Understand different methods of feeding. Learn how to groom many breeds. Explore breeding programs. Train a utility or field trial dog or do brace or team training in obedience. Share your knowledge with others through Junior Leadership.	Explore career opportunities (Read chapter 19 in "You and Your Dog"). Experiment with different feeding methods. Practice with your dog in whatever work you've outlined. Groom several dogs of different breeds. Test your skill in grooming and handling by grooming and entering in Junior or open shows. Whelp and raise a litter. Study various breeding programs. Design training aids and programs for younger member. Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Electrical Science

Objectives:

- To become familiar with electricity and its applications.
- To learn about methods and materials for distributing and controlling electricity.
- To develop some skill in making and using electrical equipment.
- To develop the ability to plan electrical systems for the home and farm.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
10-12 Year Olds		
BEGINNING ELECTRICIAN For Members: <i>Beginning Electrician, 148B</i> Report 237 For Leaders: <i>Leader's Manual, 4-H Electrical Projects, 348</i> <i>Leader's Idea Book, 348B</i> <i>Lamps for 4-H Projects, 348C</i> <i>Member's Idea Book, 548</i>	Learn about: —how electricity is conducted —simple circuits and electrical equipment —words used to describe electricity —some skills for using electricity	See Projects listed in Bulletin 148B, "What Did You Learn" and "Show and Tell". Complete 3 or more articles. Invite in an electric power supplier representative to explain uses of electricity. Member evaluation with leader.
ELECTRONICS For Members: <i>4-H Electronics, 148K</i> Report 237	Learn about: —electronic parts and terms —circuits and how to make connections —electronic instruments and devices	Demonstrate soldering and wire stripping. Assemble simple equipment. Member evaluation with leader.
ELECTRICAL SCIENCE For Members: Report 237	Learn about: —why and how of electricity such as magnetism, current flow, how materials conduct electricity.	Assemble a scientific experiment or demonstration. Prepare a club demonstration. Member evaluation with leader.
12-14 Year Olds		
JUNIOR ELECTRICIAN For Members: Use materials listed under Beginning Electrician Report 237	Learn: —how to take care of electrical equipment —more about materials that conduct electricity —more skills in making electrical equipment Become familiar with controls.	Make 2 or more electrical articles. Give a demonstration on an electrical skill or use of electricity. Visit an electrical supply store to become familiar with electric devices and equipment. Member evaluation with leader.
ELECTRONICS For Members: <i>4-H Electronics, 148K</i> Report 237	Learn about operation of more complex equipment. Select a plan or kit and become familiar with parts and circuits. Explain circuit operation to leaders.	Assemble an article such as a radio receiver or record player. Visit a TV radio station, or telephone company. Give a short demonstration on an electronic project. Member evaluation with leader.
ELECTRICAL SCIENCE For Members: Report 237	Learn: —how electricity is conducted through wires, transformers, and salt solutions —how electricity is controlled and measured	Build a science article. Prepare and present a county-level demonstration. Member evaluation with leader.
14-18 Year Olds		
SENIOR ELECTRICIAN For Members: Use materials listed under Beginning Electrician. Report 237	Understand the control of electricity. Know the materials and devices used in electrical circuits. Gain experience in care of appliances. Gain experience and know-how for installing electrical circuits, repairing electrical equipment.	Make an electrical article. Present a county-level demonstration on the use or construction of an electrical circuit. Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Electrical Science (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>14-18 Year Olds</i>	
ELECTRONICS For Members: Report 237	Learn: —to follow complicated circuits —about test equipment and how to use it —uses of electronic equipment	Build an advanced electronic article. Prepare a written paper on the use of electronics in industry. Prepare and present a 15 minute demonstration on electronic equipment. Member evaluation with leader.

Entomology

Objectives:

- To promote better public understanding of the role insects play in relation to man and the world about him.
- To provide an opportunity for youth to learn more about the science of Entomology.
- To encourage scientific training among young people.
- To promote project experiences that will provide training in the use of the scientific method and foster adoption of the scientific attitude among project participants.
- To promote project experiences that will help 4-H members become more aware and appreciative of natural phenomena.
- To provide an opportunity for young people to develop precise work habits, skill in craftsmanship and the ability to see jobs through to their completion.
- To encourage healthful out-door experiences which will prove beneficial to development of body and mind for each participating boy and girl.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>10-12 Year Olds</i>	
BEGINNER ENTOMOLOGIST For Members: <i>4-H Entomology Member's Manual, 131.2A Entomology Record and Report, 231.2 Entomology Identification Labels, 431.2</i> For Leaders: <i>Entomology Leader's Guide and U.S.D.A. 106 (331.2)</i>	Entomology I Learn how to make and display an insect collection. Know harmful and beneficial effects of insects. Be able to classify insects to order and the more common species to common name.	Make or purchase a killing bottle, insect pins, pinning block and insect box. Collect 20 or more adult insects on field trips and other occasions. Include at least four orders, such as Coleoptera, Diptera, Lepidoptera, Orthoptera, etc. Classify, label and mount the insects collected for display purposes. Member evaluation with leader. Exhibit the project material.
For Members: <i>4-H Entomology Member's Manual, 131.2A Entomology Record and Report, 231.2 Entomology Identification Labels, 431.2</i> For Leaders: <i>Entomology Leader's Guide and U.S.D.A. 106 (331.2)</i>	Entomology II Option 1—Insect Collecting Expand one's knowledge of insects and become familiar with new orders and species of insects.	Add a collecting net and spreading board to supplies. Collect 40 or more insects (in addition to those previously collected) representing at least six orders. Member evaluation with leader. Exhibit the project material.
	Option 2—Beekeeping Learn how to work with bees, identify bees in various stages of development and identify parts of the hive. Become familiar with honey plants.	Collect, identify and mount flowers and leaves of at least 10 honey plants. Include data such as plant name, time of peak bloom, habitat, importance to bees, and local abundance. Visit apiaries. Use bee veil and smoker. Open a hive and remove a frame of bees. Member evaluation with leader. Exhibit the project material.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Entomology (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
12-14 Year Olds		
JUNIOR ENTOMOLOGIST For Members: <i>4-H Entomology</i> <i>Member's Manual, 131.2A</i> <i>Entomology Record and Report, 231.2</i> <i>Entomology Identification Labels, 431.2</i> For Leaders: <i>Entomology Leader's Guide and U.S.D.A. 106 (331.2)</i>	Option 1—Insect Collecting Increase understanding of insects and to become familiar with additional kinds of insects.	Collect 60 or more adult labeled insects representing at least 10 orders. Participate in an insect identification contest. Member evaluation with leader. Exhibit the project material.
	Option 2—Intermediate Beekeeping Learn to establish a bee colony and to care for it.	Obtain one or more packages of bees, install in a hive, and take major responsibility in caring for them. Keep hive management and business records. Member evaluation with leader. Obtain liquid plastic and supplies needed. Exhibit project materials.
	Option 3—Plastic Embedments Learn to make plastic embedments of insects.	Embed 15 to 35 insects representing as many orders as possible. Member evaluation with leader. Exhibit project materials.
14-18 Year Olds		
SENIOR ENTOMOLOGIST For Members: <i>4-H Entomology</i> <i>Member's Manual, 131.2A</i> <i>Entomology Record and Report, 231.2</i> <i>Entomology Identification Labels, 431.2</i> For Leaders: <i>Entomology Leader's Guide and (U.S.D.A. PA 106) 331.2</i>	Option 1—Insect Collecting Expand knowledge of Entomology with special emphasis on Insect taxonomy, (classification).	Collect 50 or more adult and/or immature insects suitably labeled and preserved. Participate in an insect identification contest. Member evaluation with leader. Exhibit project materials.
	Option 2—Advanced Beekeeping Develop abilities required in managing an apiary.	Own and care for at least three hives, keeping complete records. Introduce new practices each year such as setting up an observation hive, preparing creamed honey, or increasing the honey plant collection. Member evaluation with leader. Exhibit project materials.
	Option 3— Improve techniques in making plastic embedments and become acquainted with additional insect orders.	Make at least 25 new embedments of insects representing as many orders as possible. Member evaluation with leader. Exhibit project materials.
For Members choosing Option 4: ENTOMOLOGY SCIENCE SERIES <i>Science, What is it?, 131.2B1</i> <i>Scientific Studies with Tomato Horn-worm, 131.2B2</i> <i>Studies with Insect Parasites of Birds, 131.2B3</i> Report 231.2	Option 4— Become familiar with the steps of the scientific method of conducting experiments.	Carry out one or more experiments pertaining to insects—record data—what does it mean? Prepare a display related to the experiment. Member evaluation with leader. Exhibit project materials.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Field Crops

Objectives:

To learn, practice and demonstrate how to:

Manage the soil through the use of fertilizers, lime, tillage and other good practices.

Produce quality crops by use of good seed and controlling insects, disease and weeds.

Use equipment and labor to best advantage.

Harvest, process, store and market high quality crops.

To learn that an important relationship exists between the cropping program and the type of dairy, livestock and poultry operations on the farm.

To provide interesting experiences through demonstrations, exhibits, tours, judging and comparing results.

To become aware of job opportunities on the farm and in related industries through the field crops program by meeting people concerned with crops; successful farmers, college and industrial men, market and sales people, writers and others.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	10-12 Year Olds	
BEGINNER For Members: <i>Beginning 4-H Crops Projects, 142.1A</i> Report 242 <i>Crop Plant and Weed Mounting Sheets (sets of 10), 442</i> <i>Basic Plant Science, 197A1</i> For Leaders: <i>Field Crop Leader's Kit, 342</i>	Understand the reasons for being able to identify crop and weed plants and seeds. Know how to identify crop plants and their seeds from a selected list for both rural and urban youth. Know how to identify weed plants (and their seeds if available) from a selected list for both rural and urban youth. Know the field crops which are grown in the county and what they are used for. Understand how a plant functions and the basic requirements for plant growth.	The following are alternative projects: (It is suggested that a member work on any two of the alternatives in one year.) <i>Identification of Field Crops</i> Collect, identify, and mount at least 10 plant specimens and seeds of these plants. <i>Identification of Weeds</i> Collect, identify, and mount at least 10 weed plant specimens and seeds of these plants. <i>Crops Grown in County</i> Complete a form showing what crops are grown on your farm and in the county including the uses of these crops. Visit with parents and elevator managers to obtain information. Make an exhibit showing several crops with their main uses indicated. <i>Plant Growth</i> Find out the primary needs of a plant. Identify the various parts of a plant, determine what function the parts perform and responses of plants to various factors. Conduct tests for germination of seeds, to show effect of temperature and water on plants. Conduct tests to show the difference in water holding capacity of soils. Member evaluation with leader.
	12-14 Year Olds	
JUNIOR For Members: <i>Corn Production Guide, 142.1</i> <i>plus</i> <i>current extension crops bulletins as suggested by your local leader or county extension agent.</i> Report 242 <i>Crops Record Card, 442</i>	Learn to grow high yields of high quality crops economically, understand plant fertilization, keep accurate records and how to measure crop yields.	The following are alternative projects: (It is suggested that a member work on two of the following alternatives during one year.) <i>Grow one acre or more of a field crop or crops.</i> Demonstrate recommended practices as a trial if not used on your farm. Find out what is in a bag of seed and in a bag of fertilizer. Keep accurate records on a project or on your parents' field. Measure the crop yield accurately.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Field Crops (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>12-14 Year Olds</i>	
<p>For Leaders: <i>Field Crop Leader's Kit,</i> 342</p>	<p>Apply the basic practices for managing a home lawn.</p> <p>Learn to identify crops, plants and their seeds from a selected list—for both rural and urban youth.</p> <p>Learn to identify weed plants (and their seeds when available) from a selected list—for both rural and urban youth.</p> <p>Learn the field crops grown in the State of Michigan and crop adaptation.</p> <p>Understand factors influencing crop quality, the importance of keeping good records, and the relationships between crop programs and type of farming.</p> <p>Learn about plant growth, physiology and soil science.</p>	<p><i>Manage the home lawn or a neighbor's lawn.</i> Find out which plants make the best lawn and some of the plant pests in lawns. Use recommended mowing, fertilizing, and watering practices.</p> <p><i>Field crop identification.</i> Collect, identify, and mount at least 20 crop plant specimens and seeds of these plants. Prepare an exhibit of collected plants and seeds along with their description.</p> <p><i>Weed identification.</i> Collect, identify, and mount at least 20 weed plant specimens (and seeds if available). Prepare an exhibit of the collected weed plants and seeds.</p> <p><i>Michigan crops and their adaptation.</i> Make a list of the crops grown in Michigan; where, production, value, and uses. Develop an exhibit. Find which crops do best under the temperature, soil, and moisture conditions in Michigan. Find out how climate affects our crops; winds, hail, temperature during the growing season, length of growing season.</p> <p><i>Farm and Market Management and Utilization.</i> Find out things which affect crop quality. Study the reasons for keeping accurate records, how to do this and how to use records. Participate in judging clinics. Find out things which affect seed quality. Find out how the type of farming affects crop production.</p> <p><i>Plant Growth:</i> Find out the different parts of a flower and the purpose each part serves. List the parts of a plant and their functions. Take a soil sample and have it tested. Conduct tests to show the effects of plant nutrients, light, temperature, and moisture on plant growth. Inoculate legume seed with proper inoculant and observe what happens. Member evaluation with leader.</p>
	<i>14-18 Year Olds</i>	
<p>SENIOR For Members: Visit the county extension office to obtain copies of current adult Extension bulletins related to crops, lawns, seed certification, and the control of weeds, insects, and diseases. Report 242 <i>Crops Record Card, 442</i></p>	<p>Grow high yields of high quality crops.</p>	<p>The following are alternative projects: (It is suggested that members work on two of the following alternatives during one year.)</p> <p><i>Grow one (1) acre or more of a field crop or crops.</i> Demonstrate recommended practices not used on your farm or in the locality. Keep accurate records on your project or other fields. Find out how to measure yields accurately. Find out why crop rotations and soils are important. Find out the nutrient needs of crops. Investigate seed quality. Find out how to use, care for, and adjust equipment.</p>

For other suggestions on teaching tools, please turn to pages 4 to 11.

Field Crops (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>14-18 Year Olds</i>	
For Leaders: <i>Field Crop Leader's Kit,</i> 342	<p>Learn how to care for and improve a lawn.</p> <p>Learn how to control weeds, insects, and diseases affecting field crops.</p> <p>Understand the place of seed and crop improvement in efficient agricultural production. Learn about crop quality, grain grades and grain storage.</p> <p>Learn how markets operate, factors affecting price, labor, and transportation. Understand crop financing, crop insurance, farm investment, and government programs.</p> <p>Gain increased knowledge of plant growth, physiology, and soil science.</p> <p>Learn about careers in agriculture.</p>	<p><i>Manage the home lawn and/or other lawns:</i> Use recommended fertilization, mowing, and watering practices. Find out how to control weeds, insects, and diseases.</p> <p><i>Control weeds, insects, and diseases in your crop project or on a field of crops at home.</i> Find out the ways to control weeds in lawns and field crops. Study the main diseases of the main crops and the methods of control. Discuss the primary insects and methods of control. Find out why chemicals are used for pest control and the safety factors involved in their use.</p> <p><i>Crop and seed improvement:</i> Find out what part plant breeding plays in crop improvement. Study and discuss the things involved in seed certification. Demonstrate hybrid vigor in crops. Conduct variety tests with one or more crops.</p> <p><i>Crop and Market Management and Utilization:</i> Discuss the influence of crop varieties in marketing and use. Study crop quality and the factors which affect it. Study the place of crop financing, insurance, and governmental programs in crop production. Trace the marketing of grain through the various market channels and find why these differ between communities. Compete in crop judging and identification. Find out why farm records are valuable. Discuss grain storage, handling, and sanitation. Establish a farm-business records center in your home.</p> <p><i>Plant Growth:</i> Develop a series of small experiments to show the effect of physical and chemical factors.</p> <p><i>Extra curricular activities:</i> Have your county agricultural agent discuss Careers in Agriculture at a club meeting. Utilize other available people to cover this topic. (Managers of agriculturally related business, for example.) Member evaluation with leader.</p>

For other suggestions on teaching tools, please turn to pages 4 to 11.

Foods and Nutrition

Objectives:

Recognize the opportunities which preparing and sharing family meals offers to mutual enjoyment and social development.

Learn how nutrition affects good health, physical fitness and an attractive appearance.

Know how to plan, purchase, prepare, serve and enjoy appetizing nutritious meals.

Understand the principles of preparing and preserving food.

Understand the cause and extent of malnutrition in the world, and its remedies.

Know what job opportunities exist in the field of Foods and Nutrition.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	10-12 Year Olds	
LET'S LEARN TO COOK For Members: <i>Let's Learn to Cook, 155A</i> Report 255 For Leaders: <i>Let's Learn to Cook, 355A</i> <i>Your Meals and Your Manners, (E-337), 355A1</i> <i>Home Freezing of Prepared Foods (F-270), 355A2</i> <i>Once Upon a Time, 355A3</i>	Develop interest in preparing and serving simple foods—including milk drinks, cookies, sandwiches, fruits and vegetables. Know what foods are important to eat. Know why it is important to select a good recipe and to follow directions carefully—measuring ingredients accurately. Know the importance of safety and cleanliness when preparing and serving food.	Check your own food habits and make plans for improvement. Practice sanitation and safety in the kitchen. Choose a recipe and measure accurately. Make and serve a variety of cookies. Clean and store vegetables. Collect recipes and ideas for serving cookies, beverages, vegetable relishes and fruit dishes. Prepare and serve sandwiches, cookies, beverages, vegetables and fruits in a variety of ways and evaluate. Plan and prepare refreshments for a party. Show by demonstration or exhibit how to prepare foods suggested in bulletin. See additional suggestions in Leaders' Guide and Members' Bulletin. Member evaluation with leader.
EVERYDAY TREATS For Members: <i>Everyday Treats, 155B</i> Report 255 For Leaders: <i>Leader's Guide: Everyday Treats, 355B</i> <i>Pack A Punch In Every Lunch, 355B1</i> <i>How To Prepare and Serve Vegetables, (E-350), 355B2</i> <i>Versatile Salads, (E-368), 355B3</i>	Learn— To check your day's food for good nutrition. To enjoy eating different kinds of foods. To enjoy preparing and serving foods. Advanced skill in preparing and handling foods and equipment. To prepare and serve simple fruit drinks and dishes, biscuits, cakes, salads, vegetables, and sandwiches. To plan, prepare and pack a picnic lunch.	Check your meals using a daily food guide. Prepare and enjoy different kinds of foods. Prepare and handle foods and equipment correctly. Plan and prepare foods for different occasions and evaluate. Show by demonstration how to prepare foods suggested in bulletin. Member evaluation with leader.
	12-14 Year Olds	
TODAY'S GIRL — HER FOOD AND FUTURE For Members: <i>Today's Girl — Her Food and Future, 155C</i> TODAY'S BOY — HIS FOOD AND FUTURE <i>"A Boy and His Physique", 155C1</i> <i>"Who Me?", 155C2</i> Report 255 For Leaders: <i>Counting Calories (F-113), 355C1</i> <i>Food and Your Weight, (USDA, G-74), 355C2</i> <i>A Girl and Her Figure, 355C3</i>	Learn— How food affects the way you look, feel and act. Reasons why certain practices are recommended for handling, storing, and cooking foods. To appreciate the beauty, texture and taste of many kinds of food. How to plan and prepare menus for simple meals and snacks. How to get all parts of a meal ready on time. How to make complete plans and arrangements for a party or meal including planning, buying, preparing, serving and clean-up.	For a peppier you, check your own health and nutrition. Examine food and discuss appearance, taste, texture. Experiment with "science whys" listed in members' bulletin. Make complete plans for a special occasion or a meal and evaluate. Show by demonstration or exhibit how to prepare foods suggested in bulletin. Emphasize "science whys". Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Foods and Nutrition (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
<i>12-14 Year Olds</i>		
<p>TODAY'S GIRL — TOMORROW'S HOMEMAKER For Members: (Boys and Girls) <i>Today's Girl — Tomorrow's Homemaker</i>, 155D Report 255 For Leaders: <i>Nutrition For You</i> (CE-26), 355D1 <i>Meals With Meaning</i> (CE-27), 355D2 <i>Breakfast Bonus</i>, (F-248), 355D3 <i>Home Freezing of Prepared Foods</i>, (F-270), 355A2</p>	<p>Learn— What foods help maintain good health and why they are important. How foods may be combined into well balanced appetizing meals. The scientific principles of preparing foods. How breakfast affects the way you feel and act. Know why you need vitamin C and protein and what foods supply it. How to prepare, store and freeze cakes. How to plan, prepare, and serve meals easily and graciously.</p>	<p>Experiment with "science whys" listed in Members' Bulletin. Prepare and enjoy a variety of breakfasts, lunches and dinners for your family. Collect recipes and ideas for additional meals. Show by demonstration how to prepare foods suggested in Members' Bulletin. Emphasize "science whys". Prepare quick breads, yeast rolls, cakes and pastry. Cook vegetables and fruits in a variety of ways and evaluate. Buy, store and prepare cereals and eggs correctly. Prepare and freeze cakes and evaluate. Buy, store, prepare, refrigerate and freeze meat, fruits and vegetables. Plan, prepare, and serve a variety of appetizing meals for your family or friends. Member evaluation with leader.</p>
<i>14-18 Year Olds</i>		
<p>LET'S EAT For Members: <i>Let's Eat</i>, 155E Report 255 For Leaders: <i>Nutrition For You</i>, (CE-26), 355D1 <i>Meals With Meaning</i>, (CE-27), 355D2 <i>Home Freezing of Prepared Foods</i>, (F-270), 355A2 <i>Your Meals and Your Manners</i>, (E-337), 355A1</p>	<p>Learn— How to plan, prepare and serve a variety of meals, making best use of equipment. How to make best use of time, energy, and equipment when preparing meals. What foods may be frozen satisfactorily. How to prepare and serve family meals, using various types of equipment, and know how to care for the equipment.</p>	<p>Plan and prepare meals suggested in Members' Bulletin. Collect additional recipes and ideas. Check meals prepared for good nutrition. Discuss meals planned and make suggestions for improvements and variations to fit your family. Use and care for your equipment and utensils as manufacturer suggests. Member evaluation with leader.</p>
<p>ENTERTAINING For Members: <i>Entertaining, Buffets, Teas, and Parties</i>. (E-343), 155G</p>	<p>Learn how to plan, prepare and serve informal buffet meals, teas and refreshments.</p>	<p>Follow suggestions in Members' Bulletin, (E-343), 155G. Plan menus to fit your needs. Member evaluation with leader.</p>
<p>FOOD AND PEOPLE For Members: <i>Food and People — Discussion Guide</i>, 155H Topics in Guide include: Project Outline Food and Hunger World Food Problems Solving World Food Problems Report 255 For Leaders: <i>The World Must Eat</i>, 355H <i>Food and People — Discussion Guide</i>, 155H</p>	<p>Focus public attention on the nutritional state of the world. To promote understanding of the causes and meaning of hunger and its remedies. Inform and educate the public regarding the extent of undernutrition that exists in the world, the threat this poses to peaceful and orderly progress, and the need for renewed effort to speed up economic development in the developing countries. A project designed to stimulate public discussion of the ways and means in which government, people, and international and national organizations can cooperate to assist developing nations.</p>	<p>Follow suggestions in Members' Bulletin 155H, <i>Foods and People</i>, Discussion Guide. Member evaluation with leader.</p>

For other suggestions on teaching tools, please turn to pages 4 to 11.

Foods and Nutrition (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
14-18 Year Olds		
EXPLORING FOODS AND NUTRITION SPECIAL NOTE: Members must have plan approved by 4-H Leader and County Extension Agent. For Members: <i>Exploring Foods and Nutrition, 155K</i> For Leaders: <i>Leader's Guide: Exploring Foods and Nutrition, 355K</i>	A project designed to— Give members experience in planning and completing an independent project in Foods and Nutrition. Encourage originality, curiosity, and initiative. Introduce members to careers and techniques used in sciences of Foods and Nutrition, such as: —Experimental Foods —Food Science —Nutrition To develop greater understanding of problems related to food and agribusiness. To develop greater understanding of foods and customs of other peoples, their cultures and traditions.	<i>Suggested Marketing—Consumer Educ. Projects:</i> —Investigate career and job opportunities in marketing. Make results available to interested friends and school counselors. —Buy food for your family for an extended period of time. —Study of world food marketing. —Food protection, labeling. —Combating Food Misinformation. (Refer to "Believe It Or Not", M.S.U. Ext. Bulletin, F-313.) —Impact of Food Merchandising and Advertising. —Comparative Shopping based on taste, quality, nutritive value, time of preparation, and cost! —Trace origin of one or more foods. Show nutritive value, areas of production, distribution, marketing pattern, parts of world where it is eaten, varieties available, method of cooking, etc. Examples: potato, rice, tapioca. <i>Suggested Food Preparation and Food Management Projects.</i> —Plan and prepare and cost meals at various levels of spending. —Plan and prepare several meals that may be frozen for later use. —Discuss how these might be improved to make better use of time, equipment, and to improve quality. —Take part in community service (for example, shop regularly for shut-in.) —Show why food spoils and how food poisoning can be avoided. —Investigate job opportunities in food preparation. Make this material available to local library and school counselors. <i>Suggested Projects in Foods, Travel Too.</i> —Study foods, customs, and traditions of other countries. —Gourmet cookery. —Use of herbs and spices. —Plan and prepare a meal for family or friends highlighting foods from one country or a group of countries. Member evaluation with leader.
Learning Activities* Members can select a problem from one of five broad areas: —Experimental Foods —Nutrition —Marketing—Consumer Education —Food Preparation and Food Management —Foods Travel Too Specific suggestions listed below: <i>Suggested Experimental Food Projects:</i> —Recipe testing and adapting. —Substitution of ingredients. —Study what happens to food under various conditions—for example, when it is cooked or frozen and thawed. —Study development of a new food or processed food. —Investigate "Foods of the Future". —Investigate career opportunities in Experimental Foods or Food Science. Make results available to interested friends and school counselors. <i>Suggested Nutrition Projects:</i> —Conduct an informal survey of food habits of group of friends, club members, or family. Analyze and interpret results and make suggestions for improvements. —Prepare and display a nutrition education. —Plan and carry out a self-improvement project. If underweight or overweight, analyze your own	food habits and activities. With the cooperation of your family physician, try to correct and control your weight intelligently. —Study what happens to the food you eat. Refer to "The Wonder of You" and "Food and You" which are available from: American Institute of Baking 400 East Ontario Street Chicago 11, Illinois Refer also to "How Your Body Uses Food" by Albert Piltz, available from: National Dairy Council 111 North Canal Street Chicago 6, Illinois (20 cents) —Study the various meanings given to foods. How does this affect nutrition? Food Habits? —Select deficiency disease—show its occurrence in history, cause, world distribution, and successful elimination. Who was responsible for its eradication? —Develop project to show role of food in exploration—world and space. —Investigate career opportunities in the field of nutrition. Make results available to interested friends and school counselors. —Develop awareness of malnutrition occurring in own community, state and nation, and the need for assistance.	
10-12 Year Olds		
FOOD PRESERVATION FREEZING For Members: <i>Freezing for Family and Friends, (10B), 156.2</i> Report 256	Learn— How to keep Michigan fruits with fine color, flavor, and texture by freezing them for winter use. What Michigan fruits can do to improve health. Why frozen fruits keep. Importance of quality and variety in fruits chosen for freezing.	Freeze at least two kinds of fruit. Freeze a fruit puree for ice cream sundaes or make an uncooked jam and store in freezer or in refrigerator. Science Plan: —Freeze a package of fruit (not in glass), leaving no head space. Open after one month. Report to club what happened.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Foods and Nutrition (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	10-12 Year Olds	
For Leaders: Use Members' Bulletin and <i>Freezing Foods For Fun</i> , 356.2A	Necessity for cleanliness and for following directions exactly. Kinds of containers, packs, and locations in freezer. Reasons for spoilage, loss of flavor and color, and change in texture. To serve frozen fruits and uncooked jams.	—Freeze a package of strawberries with sugar and one without. Keep them until October or November, then open and compare them, with leader present. —Freeze a package of peaches using ascorbic acid and one without it. Keep them until fall, open the packages and compare them after air strikes the peaches. Invite mothers to a club meeting. Serve frozen fruits and/or uncooked jams. Wrap uncooked jams for gifts and deliver in a hurry on a cold day. Protect a package of frozen fruit with many layers of paper and take to a shut-in person. Member evaluation with leader.
	12-14 Year Olds	
FOOD PRESERVATION — CANNING & FREEZING For Members: <i>Freezing Foods for Family and Friends (10-B)</i> , 156.2 <i>Home Canning of Fruits and Vegetables, (USDA, HG 8)</i> , 156.2A Report 256 <i>Home Freezing of Prepared Foods, (F-270)</i> , 355A2 For Leaders: Same as listed for members — and <i>Food Preservation Canning and Freezing</i> , 356.2B	Learn— To can fruits and tomatoes safely. How to freeze vegetables and prepared foods of high quality. About the nutritive values of products preserved and how values are affected by preservation methods. How to plan the family's food supply for the year around. To compare costs of home-preserved foods and purchased ones. How to store canned foods. How to serve the products preserved. Principles of canning fruits and tomatoes. Nutritive value of products canned or frozen. Preferred methods, equipment and directions for canning. Comparative costs of freezing and canning. Principles of freezing vegetables and factors that influence quality and nutritive value of frozen products. Safeguards necessary in freezing prepared foods. How to keep inventories. About storage of canned foods. How to prepare canned and frozen foods for the table. What to do if the freezer stops.	Can tomatoes and one kind of fruit. Freeze two kinds of vegetables. Can two kinds of fruit. Keep an inventory of family supply of canned and frozen foods. Freeze two prepared foods and demonstrate method to club. Can tomato juice, other fruit juice or fruit puree and demonstrate method to club. As a club, entertain mothers and friends and serve canned and frozen foods. Estimate cost of preserved foods, compare with store price of same amounts. (Compare appearance and flavor also.) <i>Science Plan</i> Can tomatoes by both hot pack and cold pack methods and compare. Freeze two packages of <i>exactly</i> the same kind and size of corn. Blanch corn for one package and not for the other. Label, freeze and store 6 months, then open, cook and compare color, flavor, and texture. Wrap a package of vegetables correctly and one in ordinary wax paper, very loosely. Label, freeze and compare quality after 4 to 6 months. Member evaluation with leader.
	14-18 Year Olds	
FOOD PRESERVATION For Members: <i>Freezing Foods for Family and Friends, (10B)</i> , 156.2 <i>Home Canning of Meat (USDA-HG6)</i> , 156.2B <i>How to Make Jellies, Jams and Preserves at Home, (USDA, HG-56)</i> , 156.2C <i>Making Pickles and Relishes at Home, (USDA)</i> , 156.2D Report 256	Learn— Principles of canning vegetables and meat. Principles of making jellies and jams. Principles of making pickles and relishes. How to freeze meat and poultry. How to freeze prepared foods, entire meals, and baked products.	It would be desirable if each member choose a different line of preservation, worked out her own plan and choose foods available to her family. Have plan approved by leader and/or county extension agent. Samples of preserved foods might be served to club members and friends. Questions on techniques could be answered at this meeting. Cost of products might be estimated and fair trades of individual products arranged between members. Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Foods and Nutrition (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>14-18 Year Olds</i>	
<p><i>Home Freezing of Prepared Foods, (F-270), 356.2B</i></p> <p><i>Home Canning of Fruits and Vegetables, (USDA, G-8), 156.2A</i></p> <p>For Leaders: Same as listed for members above.</p>		
	<i>All Ages</i>	
<p>OUTDOOR MEALS AWAY FROM HOME</p> <p>For Members: <i>Outdoor Meals I, (155-F1)</i> Report 255</p> <p>For Leaders: <i>Leader's Guide: Outdoor Meals I, (355-F1)</i></p>	<p>Learn to cooperate in planning and preparing well balanced, appetizing out-of-door meals.</p> <p>Learn how to build, use and extinguish camp fires.</p>	<p>Prepare and eat a meal out-of-doors.</p> <p>Prepare and pack a sack lunch to eat on a hike.</p> <p>Choose a suitable picnic site.</p> <p>Prepare and pack a picnic basket for a trip.</p> <p>Work together in planning, buying, preparing, serving, eating and cleaning up for an outdoor meal.</p> <p>Plan outdoor meals that complete the day's food needs. Select suitable foods that involve little home preparation and dish washing.</p> <p>Member evaluation with leader.</p>
<p>OUTDOOR MEALS AWAY FROM HOME</p> <p>For Members: <i>Outdoor Meals II, (155-F2)</i> Report 255</p> <p>For Leaders: <i>Leader's Guide: Outdoor Meals II, (355-F2)</i></p>	<p>Learn to plan nutritious, attractive outdoor meals.</p> <p>Learn the limitations of outdoor cookery away from home.</p> <p>Learn to make and use various kinds of equipment in preparing outdoor meals away from home.</p> <p>Learn how to build, use, and extinguish camp fires.</p>	<p>Prepare a meal cooking main dish out-of-doors.</p> <p>Prepare a meal (a) on a stick, (b) in foil, (c) in a tin can, (d) on the coals, (e) in a reflector oven.</p> <p>Build and use camp fires for various kinds of meals. Practice fire safety.</p> <p>Evaluate each meal with other members and leader. Make suggestions for improving.</p> <p>Member evaluation with leader.</p>
<p>OUTDOOR MEALS AWAY FROM HOME</p> <p>For Members: <i>Outdoor Meals III, (155-F3)</i> Report 255</p> <p>For Leaders: <i>Leader's Guide: Outdoor Meals III, (355-F3)</i></p>	<p>Know how to plan to serve meals out-of-doors.</p> <p>Know how to plan simple nutritious out-of-door meals, which complete your day's requirements.</p> <p>Know how to plan well balanced meals, suited to the cooking facilities, easy to pack and carry—easy to clean up after the meal.</p> <p>Know how to dress suitably.</p> <p>Learn how to let everyone share in tasks of planning and preparing outdoor meals away from home.</p>	<p>Prepare a meal on a plank, in foil, in the coals, and for a reflector oven.</p> <p>Evaluate meals with other members.</p> <p>Discuss and practice camp etiquette.</p> <p>Entertain guests at an outdoor meal.</p> <p>Member evaluation with leader.</p>
<p>OUTDOOR MEALS AT HOME</p> <p>For Members and Leaders: <i>Outdoor Cookery for the Family, (E-354), 155-F4</i></p>	<p>Learn to cooperate with others in planning and preparing meals out of doors at home.</p> <p>Learn to entertain in the back yard.</p> <p>Learn to prevent food spoilage when eating out of doors.</p> <p>Learn to buy foods to cook out of doors.</p> <p>Plan well balanced menus to serve in the back yard.</p> <p>Learn terms used in preparing foods for the back yard.</p> <p>Learn to choose equipment for backyard food preparation.</p> <p>Learn how to build a wood or charcoal fire in barbecue equipment.</p> <p>Learn to follow safety rules in back yard cookery.</p> <p>Learn how to buy meat for back yard cooking.</p> <p>Learn to use a grill.</p> <p>Learn to clean the back yard cooking equipment.</p>	<p>Read and talk about the bulletin "Outdoor Cookery for the Family."</p> <p>Plan and prepare well balanced outdoor meals to be served in the back yard.</p> <p>Plan, buy, prepare, and serve meals including (a) chop or steaks, (b) meat prepared with a sauce, (c) meat or vegetables prepared on skewers, (d) meat prepared on a rotisserie.</p> <p>Evaluate each meal with members and leaders.</p> <p>How might it have been improved?</p> <p>Collect ideas and recipes for additional meals suitable for out-of-door barbecuing.</p> <p>Use equipment according to procedures recommended by manufacturer.</p> <p>Build a wood or charcoal fire in grill. Prepare food following safety rules in back yard cookery.</p> <p>Buy meat suitable for grilling out-of-doors on grill or rotisserie.</p> <p>After using, clean and store cooking equipment properly.</p> <p>Member evaluation with leader.</p>

For other suggestions on teaching tools, please turn to pages 4 to 11.

Home Design

Objectives:

- To develop an understanding of the basis for selection and use of furnishings appropriate for positive individual development and good family relationships.
- To become a better family member through sharing the responsibility of maintenance of the home and the selection and use of furnishings to meet family needs.
- To provide a climate for self expression and creativity.
- To develop an awareness of enduring or meaningful design and craftsmanship.
- To enrich life by becoming more conscious of our environment and by developing a sensitive appreciation for the world around us.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	10-12 Year Olds	
<p>For Members: <i>Fun With Home Furnishings, 162A</i> Report 262</p> <p>For Leaders: <i>Home Design: Leader's Kit, 362A</i></p>	<p>Learn a meaning for color hue, value and intensity, and how color can express ideas and emotions.</p> <p>Learn how space, form, texture and color are used in design, and how they can be combined to gain various effects.</p> <p>Learn how to make decisions in design techniques, principles of composition and value of orderliness.</p> <p>Develop understanding of the cultural and historical value of design, and how it expresses living patterns of the past.</p>	<p>Color</p> <p>Experiment with:</p> <ul style="list-style-type: none"> —mixing colors using red, yellow, blue, green, orange and violet —mixing colors to match fabric, wall paper or book —color paper to form 3 color harmonies for a specific purpose <p>Make something using color</p> <ul style="list-style-type: none"> —gift wrap—finger paints —notebook cover—block print —cover waste basket —cover boxes or drawer dividers —sampler—stitchery —color blends—weaving —collage —tie dying <p>Collect a variety of objects in your favorite color.</p> <p>Design</p> <p>Organizing and arranging collections (mounting and legend)</p> <ul style="list-style-type: none"> —scrapbook —bulletin board —file or other storage <p>Select—Mount—Frame—Hang pictures</p> <p>Decorative arrangements</p> <p>Identify oldest items in your home that belonged to a member of your family—record its' history and use (if any).</p> <p>Member evaluation with leader.</p>
	12-14 Year Olds	
<p>For Members: <i>Your Home: Activity Centers, 162B</i> Report 262</p> <p>For Leaders: <i>Home Design: Leader's Kit, 362A</i></p>	<p>Learn how to plan and develop activity centers for work space, storage and lighting.</p> <p>Develop advanced skills and knowledge in the use of color and design, and how these contribute to effective home environment.</p> <p>Learn about design and how it varies from place to place in the United States.</p> <p>Learn more about how design affects human behavior.</p>	<p>Members choose one or more activities from the following suggestions:</p> <p>Plan and design an activity area for study, work, hobby, etc. Make color and lighting plan, and select or make accessories for the activity area.</p> <p>Collect pictures of furniture, table arrangements, household furnishings and analyze their good and poor use of color and design principles.</p> <p>Experiment with easy to get things like newsprint, leaves, torn paper, string, matches, wire, fabric and clay as components of design.</p> <p>Experiment with color to express various moods such as anger, fear, happiness, spring, youth, etc.</p> <p>Study homes and furnishings or artifacts of ethnic groups or areas in the U.S.</p> <p>Member evaluation with leader.</p>

For other suggestions on teaching tools, please turn to pages 4 to 11.

Home Design (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	14-18 Year Olds	
<p>For Members: <i>Home Design:</i> <i>Background Unit, 162C</i> <i>Home Improvement</i> <i>Suggestions: Arranging</i> <i>Furniture, 162D</i> <i>Home Improvement Sug-</i> <i>gestions: Color Schemes</i> <i>For Your Rooms, 162E</i></p> <p>For Leaders: <i>Home Design:</i> <i>Leader's Kit, 362A</i></p>	<p>Learn advanced skills in color and design techniques, and increase level of knowledge of basic principles learned in previous projects.</p> <p>Learn basic relationship between light and color.</p> <p>Learn how color and design expresses cultural and living patterns in countries other than the United States.</p>	<p>Member choose one or more activities from the suggestions below or from those suggested for 12-14 age group:</p> <p>Experiment with:</p> <ul style="list-style-type: none"> —Arranging furniture in a room to fit the family pattern of living. —Painting pictures, drawings, print or collage. —Various wood finishes. —Light, and its effect on color and texture. <p>Study and plan a room or house considering the family's needs.</p> <p>Select color for above room or house.</p> <p>Design lighting plan, both natural and artificial for above.</p> <p>Plan storage for room above.</p> <p>Additional suggestions:</p> <ul style="list-style-type: none"> Reseat a chair. Refinish a piece of furniture. Recondition walls and paper and paint a room. Slip cover a chair. Choose and frame pictures. Choose and make draperies or curtains. Choose or make a lamp or other light fixture. <p>Continue study of home and art of other cultures.</p> <p>Member evaluation with leader.</p>

Horticulture

Objectives:

Learn more about plants and to develop a better understanding of the basic principles of science relating to plant growth.

Develop a greater interest in growing, using, and marketing vegetables, flowers, fruits, and ornamentals.

Learn the principles involved in planning a garden or fruit project and then putting a plan into effect.

Learn the fundamentals of gardening — soil preparation; fertilizing; selecting recommended varieties; planting; thinning; transplanting; irrigating; insect, disease, and weed control, etc.

Learn to identify the common kinds and varieties of horticultural crops that pertain to the member's project and the common seeds, insects, diseases, and weeds which pertain to the project.

Learn how horticultural commodities are marketed.

Learn where to find accurate and up-to-date information on gardening and how to keep accurate and useful records.

Become acquainted with the scientific method and to conduct experiments with plants.

It is suggested that all Beginner members in Horticulture enroll in and complete a Basic Plant Science Project before they enroll in another horticulture project. This means that a Beginner member who plans to take a flower, vegetable garden, or commercial project in the summer should enroll in the Plant Science Project the previous winter.

Junior and Senior members should do the same as soon as Junior and Senior Basic Plant Science bulletins become available.

Basic Plant Science

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	10-12 Year Olds	
<p>BEGINNER</p> <p>For Members: <i>Basic Plant Science, 197A1</i> <i>Report 297</i></p>	<p>Learn how to conduct scientific experiments with seeds.</p> <p>Learn about the parts of seeds, germination requirements, and other environmental conditions as they affect seeds and seedlings.</p>	<p>Perform simple experiments using seeds, keep a record on each experiment and compare results with other members.</p> <p>Members repeating this project may do experiments that they did not do previously. They may also repeat experiments if they vary some of the conditions involved.</p> <p>Member evaluation with leader.</p> <p>Exhibit showing results of an experiment.</p>

For other suggestions on teaching tools, please turn to pages 4 to 11.

Horticulture (Continued)

Flower Garden

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	10-12 Year Olds	
BEGINNER For Members: <i>4-H Flower Gardening, 153</i> Report 253 For Leaders: <i>Leader's Guide: Flower Garden, 353</i> <i>4-H Leader Horticultural Guide, 597</i> <i>Growing Annual Flowering Plants, (USDA, FB-1171), 353A</i>	Learn how to grow annuals and a few gardening fundamentals—soil preparation, fertilizing, planting, thinning, and transplanting. Learn to identify common flowers, especially annuals. Learn plant parts and their role in the life of a plant.	Make a simple plan of a flower garden. Grow 4 to 7 different kinds of annual flowers, keeping records on all flowers grown. Tour other member's gardens (leader and member to evaluate progress.) Collect pictures or specimens of common garden flowers. Second year members may start growing perennials and bulbs. Members may repeat this project using different flowers in succeeding years. Member evaluation with leader.
	12-14 Year Olds	
JUNIOR For Members: Report 253 For Leaders: <i>Leaflet 439</i> <i>Spring-Flowering Bulbs, (USDA, L-439), 353B</i> <i>Growing Chrysanthemums In the Home Garden, (USDA, G65), 353C</i>	Learn how to grow perennials and bulbs. Learn additional gardening fundamentals—irrigating; and insect, disease and weed control. Learn some of the basic principles of plant growth. Learn to identify additional flowers, especially perennials and bulbs; also weeds, insects and diseases. Learn uses of flowers such as flower borders, window box, cut flowers garden or planter. Learn how to propagate perennials and bulbs.	Plan a garden using annuals and bulbs. Grow 2 or more perennials and at least one bulb (bulb, corm, tuber or rhizome) in addition to 7 or more annuals. Plants may be purchased or transplanted. Keep a record on all flowers grown. Exchange plants with members and others. Tour other member's gardens (leader and member to evaluate progress.) Collect and mount specimens of flowers, weeds, insects, and diseases. Participate in a flower identification contest. Conduct simple experiments. Members may repeat this project if they grow at least two new perennials and at least one new bulb in each succeeding year. Member evaluation with leader.
	14-18 Year Olds	
SENIOR For Members: Report 253 For Leaders: <i>Leader's Guide: Flower Garden, 353</i> <i>4-H Leader Horticultural Guide, 597</i> <i>Growing Annual Flowering Plants, (USDA, FB-1171), 353A</i>	Learn how to plan a combination garden using annuals, bulbs and perennials. Continue learning about the principles of plant growth. Learn about careers in horticulture.	Plan a combination garden using annuals, bulbs, and perennials. Plant and care for a combination garden, adding new flowers each year. This garden should include at least 7 annuals, 3 bulbs, and 6 perennials. Keep a record on all flowers grown. Continue activities started in previous years. Build and use a coldframe, hotbed, or greenhouse in order to start plants early. Use flowers in different ways such as in window boxes or planters. Continue activities started in previous years. Participate in the National Junior Vegetable Growers Association program (the Demonstration Contest is open to flower garden members). Members may repeat this project if they grow at least two new perennials and at least one new bulb in each succeeding year. Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Horticulture (Continued)

Fruit

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
<i>Members of All Ages</i>		
<p>For Members and Leaders:</p> <p><i>Grapes in the Home Fruit Garden, (F-71) 597F1</i></p> <p><i>Hints on Strawberry Growing in Home Gardens, (F-176) 597F2</i></p> <p><i>Practical Hints on Raspberry Growing, (F-74) 597F3</i></p> <p><i>Dwarfed Fruit Trees, (F-136) 597F4</i></p> <p><i>Dwarfed Apple Trees, (F-321) 597F5</i></p>	<p>Learn how to grow one or more kinds of fruits.</p> <p>Learn to identify common varieties of fruits, insects, diseases, weeds, and nutrient deficiencies.</p> <p>Learn the principles of plant growth.</p> <p>Learn about careers in horticulture.</p> <p>Learn how to propagate the fruit or fruits used in the project.</p>	<p>Care for a fruit project. Member may set out plants or take over and care for existing plants. The size of project is not definite. A new member might set out and care for 12-15 grapes as a project. A strawberry project might involve 100 or more plants. A raspberry project might involve 10-25 plants. Tree fruit projects are feasible if dwarf fruit trees are used or if a member takes over and cares for a certain number of trees in an existing orchard. Two to 6 dwarf fruit trees could make a worthwhile project. Other fruits can also be used for a project.</p> <p>Keep a record on the fruits grown.</p> <p>Collect pictures or specimens of fruit varieties, insects, diseases, weeds, and nutrient deficiencies.</p> <p>Members 14 years old and older participate in the National Junior Vegetable Growers Association program. Members are eligible to enroll in the Production and Marketing Contest and the Demonstration Contest.</p> <p>Member evaluation with leader.</p>

Production and Marketing

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
<i>12 year olds and over or have had at least one year of experience in growing a commercial horticultural crop.</i>		
<p>JUNIOR AND SENIOR</p> <p>For Members and Leaders:</p> <p>Existing extension publications should be used for commercial projects. They can be obtained from your county Cooperative Extension Service office.</p> <p>Report 297</p>	<p>Learn how to grow and market one or more horticultural commodities.</p> <p>Learn how horticultural commodities are marketed.</p> <p>Learn about careers in horticulture.</p>	<p>Plan the project.</p> <p>Grow and market one or more horticultural crops on a commercial basis. In general, if the major portion of the commodity grown is sold instead of used at home, the project can be called a commercial project.</p> <p>Participate in the National Junior Vegetable Growers Association program. All members are eligible to enroll in the Demonstration, Fresh Market Section, or Canning and Processing Section. Members should also participate in either the NJVGA Judging, Grading, and Identification Contest (vegetables and fruits) or the Flower Identification Contest.</p> <p>Members repeating this project should try to increase the size or scope of the project, improve records, and do a better job of marketing.</p> <p>Visit or tour several of the following: Good roadside market, wholesale produce company, retail store, greenhouse, nursery, garden center, food distribution center, wholesale flower market, cold storage plant, processing plant, Horticulture Department at Michigan State University or one of the horticultural farms or experiment stations, farmers' market, trial garden, etc.</p> <p>Member evaluation with leader.</p>

For other suggestions on teaching tools, please turn to pages 4 to 11.

Horticulture (Continued)

Vegetable Garden

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>10-12 Year Olds</i>	
BEGINNER For Members: <i>The Home Garden, 197</i> Report 297 For Leaders: <i>The Home Vegetable Garden, (E-4) 397A</i> <i>How to Select Vegetables for Exhibit, 397</i> <i>4-H Leader Horticultural Guide, 597</i>	Learn how to grow some easy-to-grow vegetables and a few gardening fundamentals—soil preparation, fertilizing, planting, thinning, and transplanting. Learn to identify common kinds and varieties of vegetables. Learn plant parts and their role in the life of a plant.	Make a simple plan of a vegetable garden. Grow at least 6 different kinds of vegetables and keep a record on the vegetables grown. Name the plant parts that are harvested from the garden. Tour other member's gardens (leader and member to evaluate progress). Collect pictures or specimens of common garden vegetables. Members repeating this project should grow a few different vegetables each year. Member evaluation with leader.
	<i>12-14 Year Olds</i>	
JUNIOR For Members: <i>The Home Garden, 197</i> Report 297 For Leaders: <i>The Home Vegetable Garden, (E-4) 397A</i> <i>How to Select Vegetables for Exhibit, 397</i> <i>4-H Leader Horticultural Guide, 597</i>	Learn how to grow more difficult vegetables. Learn additional gardening fundamentals—irrigating; and insect, disease, and weed control. Learn to identify additional kinds and varieties of vegetables; also weeds, insects, diseases, and vegetable seeds. Learn to select vegetables at the proper stage of maturity for home use, market, and exhibits. Learn some of the basic principles of plant growth.	Plan a garden. Grow at least 8 different kinds of vegetables and keep a record on the vegetables grown. Continue with activities conducted in previous years. Collect pictures or specimens of vegetables, weeds, insects, diseases and vegetable seeds. Participate in a vegetable identification contest. Conduct simple experiments. Members repeating this project should grow a few different vegetables each year. Member evaluation with leader.
	<i>14-18 Year Olds</i>	
SENIOR For Members: <i>The Home Garden, (E-4) 397A</i> Report 297 For Leaders: <i>The Home Vegetable Garden, (E-4) 397A</i> <i>How to Select Vegetables for Exhibit, 397</i> <i>4-H Leader Horticultural Guide, 597</i>	Learn how to grow a wider selection of vegetables. Continue learning about the principles of plant growth. Learn about careers in horticulture.	Plan a garden. Grow at least 10 different kinds of vegetables and keep records on the vegetables grown. Continue with activities conducted in previous years. Participate in the National Junior Vegetable Growers Association program. Members are eligible to enroll in the Production and Marketing Contest; the Demonstration Contest; and the Judging, Grading and Identification Contest. Build and use a coldframe, hotbed, or greenhouse in order to start plants early. Participate in a vegetable judging, grading, and identification contest. Members repeating this project should grow a few different vegetables each year. Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Landscape

Objectives:

- To understand what constitutes a desirable landscape for a family home.
- To learn what a family may do to achieve a desirable landscape for the home property.
- To experience the satisfaction of planning and carrying out plans for a practical home landscape.
- To learn the basic principles of landscape design as they apply to new or existing landscapes.
- To learn by doing some of the common jobs of landscape development and maintenance.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>10-12 Year Olds</i>	
For Members: <i>Working With My Landscape, 173</i> Report 273 For Leaders: <i>Leader's Kit: Landscape, 373</i>	Learn the importance of neatness around the home landscape. Understand the value of planning and improvement of home grounds. How to have fun in the home landscape. Learn what may be accomplished by 4-Her and parents working together.	Conduct a home neatness campaign. Make a drawing and photographs of home area needing improvement. Develop a landscape feature needed at 4-Her's home grounds. Member evaluation with leader.
	<i>12-14 Year Olds</i>	
For Members: <i>Working With My Landscape, 173</i> Report 273 For Leaders: <i>Leader's Kit: Landscape, 373</i>	Learn to put emphasis upon home grounds neatness and care of landscape materials already existing in the home landscape. Know about landscape materials such as grass, trees, shrubs, evergreens and flowers. Develop the skills involved with the upkeep of the home landscape.	Develop a home landscape plan reflecting progress or proposals. Make photographs of home area being developed (before and after). Continue the home neatness campaign. Tour local nurseries. Make a leaf and twig collection with proper identification. Present plant culture demonstrations to include pruning, planting, mulching, spraying and mowing of lawns. Member evaluation with leader.
	<i>14-18 Year Olds</i>	
For Members: <i>Working With My Landscape, 173</i> Report 273 For Leaders: <i>Leader's Kit: Landscape, 373</i>	Understand the parallel between any worthy undertaking and the necessity for planning in terms of long-range goals. Learn the principles of design and practical logic (i.e. unity, balance, variety, etc.) also working from the known to unknown. Appreciate the benefits of practical, inspiring, and pleasing home grounds and other landscapes.	Complete the landscape development plan for the 4-H home property. Make progress and result photographs of the 4-H project. Prepare demonstrations showing the use of landscape principles. Complete an original idea to solve a problem within the home landscape. Operate and keep records on maintenance of lawns for profit in the neighborhood. Member evaluation with leader.

Leathercraft

Objectives:

- The leathercraft project is designed to help boys and girls appreciate leathercraft as a practical art, and learn how to select leather, lacing, and tools. Members will develop skills in tooling, assembling and finishing leather articles of many designs and uses.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>10-12 Year Olds</i>	
THE APPRENTICE For Members: Report 237 For Leaders: <i>Leader's Guide: Leathercraft, 338</i>	Learn how to lace, assemble, stamp, model and finish leathercraft articles. Learn simple carving and lining techniques.	Construct three or more articles that require beginning skill as suggested under learning plan. Kits and precut items may be used to teach certain skills to the beginners. Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Leathercraft (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>12-14 Year Olds</i>	
THE HANDYMAN For Members: Report 237 For Leaders: <i>Leader's Guide:</i> <i>Leathercraft, 338</i>	Learn advanced skills for each of the areas listed under the Apprentice project. Learn how to select leather and cut out their articles. Learn elementary sketching and design.	Construct 2 or more articles that require intermediate skills as suggested under learning plan. Draw original design for one or more articles. Member evaluation with leader.
	<i>14-18 Year Olds</i>	
THE CRAFTSMAN For Members: Report 237 For Leaders: <i>Leader's Guide:</i> <i>Leathercraft, 338</i>	Continue to learn more advanced skill in the areas listed under the Apprentice and Handyman. Learn how to draw patterns and original design. Learn basic principles of composition.	Construct one or more articles that require advanced skill in several of the areas suggested under the Apprentice, Handyman, and Craftsman learning plan. Draw one or more patterns using an original design. Member evaluation with leader.

Woodworking

Objectives:

To develop an appreciation for woodworking as a practical art or vocation.

To understand how to use tools, wood and related items, and develop skills needed to safely use woodworking tools and materials to construct useful articles.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>10-12 Year Olds</i>	
THE APPRENTICE For Members: <i>The Apprentice, 137A</i> Report 237 For Leaders: <i>Leader's Guide:</i> <i>The Apprentice, 337A</i> <i>Woodworking Plans, 537</i> <i>Woodworking Projects, 537A</i> (A promotional Brochure to use with potential members).	Learn how to use hand tools including most of the following: tri-square, hand saws, hammer, brace and bit, plane, screwdrivers, chisel and sandpaper. Learn how to select wood, lay out a project and prepare wood surface for finishing. Learn how to make and use simple joints.	Construct three or more articles using most of the hand tools listed under learning plan. Member evaluation with leader.
	<i>12-14 Year Olds</i>	
THE HANDYMAN For Members: <i>The Handyman, 137B</i> Report 237 For Leaders: <i>Leader's Guide:</i> <i>The Handyman, 337B</i> <i>Woodworking Plans, 537</i> <i>Woodworking Projects, 537A</i> (A promotional Brochure to use with potential members).	Learn how to make and use complex joints, wood fasteners, and draw working sketches. Learn basic tool conditioning and more advanced skills in wood selection and finishing. Learn how to use the bevel square and the following power tools: Sabre saw, jig saw, portable electric drill, and sander.	Construct two or more articles requiring most of the skills suggested under learning plan. Draw a working sketch and make a bill of materials. Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Woodworking (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>14-18 Year Olds</i>	
THE CRAFTSMAN For Members: <i>The Craftsman, 137C</i> Report 237 For Leaders: <i>Leader's Guide:</i> <i>The Craftsman, 337C</i> <i>Woodworking Plans, 537</i>	Learn more advanced skills in use of tools, construction techniques, wood selection and finishing, introduced in the Apprentice and Handyman project plans above. Learn how to select and use hardboard, resin-bonded particle boards, veneers, surfacing materials and hardware. Learn how to use the power circular saw, jointer, drill press, and band saw.	Construct one or more complex articles using woodworking skills suggested in the Apprentice, Handyman and Craftsman learning plans. Construct one or more articles from a working sketch drawn by the member, and representing original design. Construction may include remodeling or major improvement of one or more useful home, farm, yard, recreational or personal articles. Member evaluation with leader.

Junior Leadership

Objectives:

To develop a broad concept of leadership.

To develop a concern for every individual and a concern for the group, recognizing that each individual is of personal worth.

To acquire skills and understanding in working with groups.

To instill in the minds of Junior Leaders the importance of involving everyone concerned as a means of developing leadership in others.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>14-18 Year Olds</i>	
For Members: <i>4-H Junior Leadership Guide, 168</i> Report 286 For Leaders: <i>Leader's Guide:</i> <i>Adult Advisor in Jr. Leadership, 386</i>	Gain experience in a leadership role. Study and practice methods of significantly involving others in a way that will develop leadership in them. Learn the basic needs of various age groups with special emphasis on 10-12 year olds. Utilize this information when working with others. Learn to work effectively with adults. Work with members and leaders in developing a local club program for the year. Share responsibilities in various local club tasks, such as helping with records, visiting members, assisting with club tours, etc. Acquaint experienced Junior Leaders with the opportunities for leadership at the county level, in addition to the local level.	Select specific responsibilities in your local club in consultation with adult advisor. Submit a plan to County Extension Office by December 1 for winter, and June 1 for summer. Help members develop goals and assist in evaluation periodically during the project year as well as at the end. Participate in County Junior Leadership Training programs. Attend adult leader training where appropriate. Assist in local club program, county activities and community service activities. Counsel periodically with adult advisor. Participate in interview at end of project. Encourage experienced Junior Leaders to participate actively in some county, as well as local club activities.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Livestock

Objectives:

- To acquire information and an understanding of sound livestock production and management practices and acquire skill in executing them through the experiences of owning and caring for and keeping records of livestock.
- To provide a business experience and an insight into ethical values and principles of purchasing, marketing, record keeping, and securing credit which will provide an income sufficient to permit savings.
- To encourage integrity, sportsmanship, cooperation and ability to speak in public through participation in related activities, such as demonstrations, talks, judging events, tours and exhibits.
- To learn and employ the efficient procedures and methods in the marketing of livestock and their products.
- To develop a clear understanding and appreciation of the livestock-meat industry and its role in the agricultural and commercial economy of the country.

Beef

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
10-12 Year Olds		
FEEDING STEER CALVES For Members: <i>Member's Manual:</i> <i>Steer Calves, 175.1A</i> Report 275 <i>Feed Record Card, 475</i> <i>Meat Animal</i> <i>Showmanship, 575T</i>	Learn: —purposes of feeding steer calves —feeder calf grades —how to buy feeder calves —how to feed, manage, house and train feed calves —about the market channels and current situation	Obtain a beef steer calf of good to choice grade. Feed this calf for market. Keep feed, weight, health and cost records. Visit commercial feedlot operations. Complete the project record. Fit and show the project steer. Member evaluation with leader.
BREEDING HEIFER(S) For Members: Report 275 <i>Feed Record Card, 475</i> <i>Meat Animal</i> <i>Showmanship, 575T</i>	Become familiar with the beef breeds and their characteristics. Learn how to select beef heifers. Learn to feed and manage beef heifers, including control of external parasites. Learn how to fit and show heifers. Learn the parts and terms used in describing a heifer.	Obtain one or more beef heifers. Feed, fit, manage and care for a heifer throughout the year. Keep health, feed, and cost records. Complete the project record book. Participate in a beef judging event. Member evaluation with leader.
12-14 Year Olds		
FEEDING STEER CALVES For Members: <i>Member's Manual:</i> <i>Steer Calves, 175.1B</i> Report 275 <i>Feed Record Card, 475</i> <i>Meat Animal</i> <i>Showmanship, 575T</i>	Learn: —how to judge beef cattle —market grades of beef cattle —carcass wholesale cuts of beef —how to start newly purchased feeder calves —sound management practices in beef feeding —principles in animal health —control of parasites —nutrient requirements of steers	Feed steer calves of Fancy, Choice, and Good grade for market. Participate in beef judging programs. Tour local livestock marketing facilities, including retail meat outlets. Participate in dressed beef evaluation programs. Maintain and complete project record book. Member evaluation with leader. Fit and show the project animal.
FEEDING COMMERCIAL STEERS AND HEIFERS For Members: Report 275 <i>Feed Record Card, 475</i> <i>Meat Animal</i> <i>Showmanship, 575T</i>	Learn about: —various beef feeding programs and feed requirements for heifers and steers —types of market outlets —composition of feeds —importance of accurate records —efficient management practices —safety and its importance	Feed steers or heifers on a practical basis for market. Conduct beef cattle demonstrations. Visit commercial feedlot operations. Tour feeder cattle markets. Member evaluation with leader. Exhibit the project animal.
BREEDING PUREBRED COW AND CALF For Members: Report 275 <i>Feed Record Card, 475</i> <i>Meat Animal</i> <i>Showmanship, 575T</i>	Learn about: —importance of accurate records —feeding the cow and calf —judging beef cattle, including purpose and principles —sound management practices —how to identify and register animals —registration papers and their importance	Feed and manage a purebred cow and her calf. Attend county livestock tour. Participate in livestock judging. Attend a breed association show and sale. Observe judging of beef breeds at local fair and state events. Complete application for registry. Member evaluation with leader. Exhibit project animal.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Livestock (Continued)

Beef

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>12-14 Year Olds</i>	
BREEDING COMMERCIAL COW AND CALF For Members: <i>Member's Manual:</i> <i>Commercial Cow, 175.1C</i> Report 275 <i>Feed Record Card, 475</i>	Feeding the cow and calf. What are sound management practices. Learn to judge beef cattle. Why maintain accurate project records. What are market possibilities.	Feed and manage commercial cow and her calf. Attend county livestock tour. Participate in livestock judging. Observe marketing of feeder calves. Maintain and complete project record book. Assist father with care of farm herd. Member evaluation with leader. Exhibit.
	<i>14 Years and Older</i>	
FEEDING COMMERCIAL FEEDLOT For Members: Report 275 <i>Feed Record Card, 475</i>	Ways to reduce operating expenses. Keep young producers informed of latest developments in meat industry. What are efficient marketing practices. Learn to establish a credit rating. Why and when to feed steers or heifers for slaughter markets. What are economic differences in feeder cattle.	Feed and manage steers or heifers for slaughter market. Attend county beef feedlot tour. Observe various types of feeder markets. Participate in carcass evaluation programs. Assist father with farm feedlot operation. Participate in livestock judging. Member evaluation with leader. Exhibit.
	<i>14-18 Year Olds</i>	
BREEDING PUREBRED COW HERD For Members: Report 275 <i>Feed Record Card, 475</i>	Learn about: —performance testing programs —developing a breeding program —how to feed and manage the purebred herd —how to market purebred cattle —when to fit and exhibit beef cattle —credit and its use	Feed, breed, and manage a purebred cow herd. Participate in livestock judging. Attend breed association shows and sales and field days. Participate in carcass evaluation programs. Member evaluation with leader. Exhibit project animal.
BREEDING COMMERCIAL COW HERD For Members: <i>Member's Manual:</i> <i>Commercial Cow, 175.1C</i> Report 275 <i>Feed Record Card, 475</i>	Learn about: —how to feed and manage the cow and calf herd —selection of a purebred bull —employing efficient procedures and methods in marketing calves —evaluating records and their use as a basis for selection —how to earn money, understand credit and manage these resources effectively.	Feed, breed, and manage a commercial cow herd. Participate in livestock judging. Attend feeder calf sales of various types. Take part in carcass evaluation programs. Member evaluation with leader. Exhibit project animal.

Light Horse and Pony

Objectives:

To experience the pride and responsibility of owning a horse or pony and receive training in its care, feeding, management and related costs.

To learn safety precautions to prevent injuries to themselves, others, and their mounts.

To prepare for citizenship responsibilities by working together in groups and supporting community horse projects and activities.

To appreciate horseback riding as a healthy and wholesome form of recreation as well as an understanding in handling horses and ponies.

4-H members are strongly urged to own their horses, but it is not required. All members with second year or advanced horse projects are requested to keep year-around records including all project animals owned by them and complete the project report form. It is suggested that older members taking the project for the first time should take an appropriate age group project, however, they should also be taken through the initial projects at their own pace.

Livestock (Continued)

Horses

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
10-12 Year Olds		
UNIT I, LIGHT HORSE OR PONY For Members: <i>4-H Light Horse Projects, 175.2</i> Report 275 <i>Feed Record Card, 475</i> For Leaders: <i>Leader's Guide: 4-H Light Horse Projects, 375.2</i>	Learn about: —safety precautions —how to properly tie and handle an animal —identification of common feeds —proper grooming —use of bridle and its parts —care and use of equipment —care for overheated horse —showing a horse at halter —terms and some parts of horse	Learning Activities* Obtain a horse or pony for the project. Care for the project animal for the year, including fitting and showing. Keep records of health, feed, and other costs. Attend club farm tour. Participate in judging at club level. Member evaluation with leader. Exhibit project animal.
UNIT II, LIGHT HORSE OR PONY For Members: <i>4-H Light Horse Projects, 175.2</i> Report 275 <i>Feed Record Card, 475</i> For Leaders: <i>Leader's Guide: 4-H Light Horse Projects, 375.2</i> <i>Leader's Guide: Exhibition Judging, Evaluation, 375.2C</i> <i>The Sound Horse, Ext. Bulletin, (E-330) 375.2A</i> <i>Light Horses, (U.S.D.A., F-2127) 375.2D</i>	Learn: —several unsoundnesses in horses —sound rations for horses —identification of 20 parts of the horse —all important safety precautions —to bridle, saddle, mount and dismount —proper care and use of equipment —proper care of the feet Understand parts and adjustment of saddle.	Continue care of project animal. Attend club farm tour. Judge at club and county level. Visit local grain elevator to study feeds. Keep project records. Member evaluation with leader. Exhibit project animal.
UNIT III, LIGHT HORSE OR PONY For Members: <i>4-H Light Horse Projects, 175.2</i> Report 275 <i>Feed Record Card, 475</i> For Leaders: <i>Leader's Guide: 4-H Light Horse Projects, 375.2</i> <i>The Sound Horse, (E-330) 375.2A</i> <i>Leader's Guide: Exhibition Judging, Evaluation, 375.2C</i> <i>Light Horses, (U.S.D.A., F-2127) 375.2D</i>	Learn: —common unsoundnesses and blemishes —characteristics of 2 breeds and 3 gaits —about horsemanship (3 gaits) —maintaining horse health —colors and markings —all parts of the hoof —all parts of horse —principles of fitting and showmanship	Continue care of project animal. Judge at club and county level. Keep project records. Participate in junior horse shows. Attend breed association clinics. Attend county project tour. Member evaluation with leader. Exhibit project animal.
12-14 Year Olds		
UNIT IV, LIGHT HORSE For Members: <i>Leader's Guide: 4-H Light Horse Projects, 175.2</i> Report 275 <i>Feed Record Card, 475</i>	Learn characteristics of 2 new breeds. Learn principles of pony judging, how to give reasons. Learn about care and trimming the hoof. Understand horse gaits. Learn types and treatment of external parasites. Study feeds and feeding.	Same as Unit III plus— Assist in planning club events. Assist in developing club library. Attend state breed association show and sale. Member evaluation with leader. Exhibit project animal.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Livestock (Continued)

Horses

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
12-14 Year Olds		
<p>For Leaders:</p> <p><i>Leader's Guide:</i> <i>4-H Light Horse Projects, 375.2</i> <i>The Sound Horse, (E-330) 375.2A</i></p> <p><i>Leader's Guide:</i> <i>Exhibition Judging, Evaluation, 375.2C</i> <i>Light Horses, (U.S.D.A., F-2127) 375.2D</i></p>		
<p>BROOD MARE</p> <p>For Members:</p> <p><i>Leader's Guide:</i> <i>4-H Light Horse Projects, 175.2</i></p> <p>Report 275 <i>Feed Record Card, 475</i></p> <p>For Leaders:</p> <p><i>Leader's Guide:</i> <i>4-H Light Horse 375.2</i> <i>The Sound Horse, Ext. Bulletin, (E-330) 375.2A</i></p> <p><i>Leader's Guide:</i> <i>Exhibition Judging, Evaluation, 375.2C</i> <i>Light Horses, (U.S.D.A., F-2127) 375.2D</i></p>	<p>Learn about:</p> <ul style="list-style-type: none"> —feeding and management of mare —selection of brood mare —horse breeding <p>Learn:</p> <ul style="list-style-type: none"> —to maintain proper records —types, prevention and control of internal parasites —care and feeding of foal 	<p>Same as above plus—</p> <p>Visit farm with mare herd. Give club report on parasite control. Member evaluation with leader. Exhibit project animal.</p>
14-18 Year Olds		
<p>UNIT V, LIGHT HORSE</p> <p>For Members:</p> <p><i>Leader's Guide:</i> <i>4-H Light Horse Projects 175.2</i></p> <p>Report 275 <i>Feed Record Card, 475</i></p> <p>For Leaders:</p> <p><i>Leader's Guide:</i> <i>4-H Trail Horse, 375.2B</i></p>	<p>Learn thoroughly aids and gaits. Learn trail horse riding and maintenance. Study horse transportation. Learn care and feeding of mare and foal. Develop understanding of stable plans. Study horse show classification. Learn characteristics of 3 new breeds.</p>	<p>Continue care of project animal. Participate in club trail rides. Visit horse trailer sales. Visit several horse farms and study stable plans. Participate in horse judging. Keep project records. Member evaluation with leader. Exhibit project animal.</p>
<p>UNIT VI, LIGHT HORSE</p> <p>For Members:</p> <p><i>Leader's Guide:</i> <i>4-H Light Horse Projects, 175.2</i></p> <p>Report 275 <i>Feed Record Card, 475</i></p> <p>For Leaders:</p> <p><i>Leader's Guide:</i> <i>4-H Trail Horse, 375.2B</i></p>	<p>Learn to plan and conduct horse show. Learn basic anatomy of horse. Study basic physiology of horse. Learn types, prevention and control of external parasites. Learn basic horse breeding. Learn how to train a horse.</p>	<p>Serve as Junior Leader in Horse project. Help plan and conduct a horse show. Assist in developing a club library. Participate in horse judging activities. Member evaluation with leader. Exhibit project animal.</p>

For other suggestions on teaching tools, please turn to pages 4 to 11.

Livestock (Continued)

Horses

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>14-18 Year Olds</i>	
COLT RAISING AND TRAINING For Members: <i>Leader's Guide:</i> <i>4-H Light Horse Projects, 175.2</i> Report 275 <i>Feed Record Card, 475</i> For Leaders: <i>Leader's Guide:</i> <i>4-H Trail Horse, 375.2B</i>	Learn to care for and feed colt. Learn training of colt to lead. Learn to train horse under saddle. Study equitation. Use of longe line. Know how to use various training devices.	Same as above plus— Visit large horse farm. Train a colt to lead and work under saddle. Break colt to handle each foot. Member evaluation with leader. Exhibit project animal.

Sheep

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>10-12 Year Olds</i>	
FEEDING LAMBS For Members: <i>Member's Manual:</i> <i>Sheep Production, 175.3A</i> Report 275 <i>Feed Record Card, 475</i> <i>Meat Animal</i> <i>Showmanship, 575T</i>	Learn about: —ways to start the project —selecting and buying feeder lambs —type of housing and equipment needed —what and how to feed market lambs —parts and terms used in judging lambs —market lamb grades —efficient procedures and methods in marketing —fitting and exhibiting market lambs	Feed one or more lambs for exhibition and/or slaughter. Visit local grain elevator and study feeds. Attend county lamb feedlot tour. Tour local livestock auction. Keep project records on feed, health, and costs. Member evaluation with leader. Exhibit project animal.
BREEDING EWE AND/OR LAMB(S), PUREBRED OR GRADE For Members: Report 275 <i>Feed Record Card, 475</i> <i>Meat Animal</i> <i>Showmanship, 575T</i>	Learn about: —breeds and their characteristics —selection of breeding ewes —feeding and management of ewe and lambs —fitting and exhibiting sheep	Feed and manage one ewe and her lamb(s). Visit local grain elevator to study feed. Tour local livestock auction. Keep records of feed, health, and costs. Member evaluation with leader. Exhibit project animal.
	<i>12-14 Year Olds</i>	
FEEDING MARKET LAMBS For Members: <i>Member's Manual:</i> <i>Sheep Production, 175.3A</i> Report 275 <i>Feed Record Card, 475</i> <i>Meat Animal</i> <i>Showmanship, 575T</i>	Learn to judge market lambs. Learn efficient management practices. Study composition of feeds. Learn important factors in lamb feeding. Keep accurate project records. Learn to block and exhibit lambs.	Feed and manage a pen of 3 or a commercial pen of 8 or more lambs. Complete the project records. Participate in livestock judging activity and lamb carcass evaluation programs. Observe lamb marketing practices. Member evaluation with leader. Exhibit project animal.
BREEDING PUREBRED EWE OR GRADE EWE For Members: Report 275 <i>Feed Record Card, 475</i>	Learn important factors in feeding the ewe. Study the prevention of common sheep diseases. Learn about shearing sheep. Learn sound management practices. Know and identify grades of wool. Learn principle of sheep judging.	Feed and manage a purebred ewe and her lamb(s). Tour large purebred sheep operation. Participate in livestock judging programs. Maintain and complete project record book. Attend purebred ewe sales. Member evaluation with leader. Exhibit project animal.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Livestock (Continued)

Sheep

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>14-18 Year Olds</i>	
FEEDING COMMERCIAL LAMBS For Members: <i>Member's Manual:</i> <i>Sheep Production, 175.3A</i> Report 275 <i>Feed Record Card, 475</i>	Learn about: —financing lambs to be fed for market —costs and profit comparison when producing lambs on commercial basis —purchasing lambs for the commercial feed lot —developing feeding and management programs and evaluating the results —using home grown feeds efficiently —markets and their operations —importance of finishing lambs properly —value of accurate records in practical buying, feeding, and marketing	Feed, manage, and market 9 or more lambs. Take part in livestock judging. Tour commercial feedlot operations. Participate in lamb carcass evaluation programs. Sell lambs at local market, lamb pool, or terminal market. Member evaluation with leader. Exhibit project animal.
BREEDING PUREBRED FLOCK For Members: Report 275 <i>Feed Record Card, 475</i> <i>Meat Animal</i> <i>Showmanship, 575T</i>	Learn about: —progeny-test rams for meat production and carcass quality —selection and handling of wool —feeding of ewes and rams during breeding season —sound breeding practices —current management problems and suggestions —evaluating records as basis for selection of breeding flock —sheep shearing	Feed, breed, and manage purebred flock. Take part in livestock judging. Attend bred ewe exhibits and sales. Participate in carcass evaluation programs. Join the breed association and learn about its activities. Complete application for breed association registry. Take part in sheep shearing schools for youth. Member evaluation with leader. Exhibit project animal.
BREEDING COMMERCIAL FLOCK For Members: <i>Member's Manual:</i> <i>Sheep Production, 175.3A</i> Report 275 <i>Feed Record Card, 475</i>	Learn about: —feeding and managing the flock and their lambs —selection of purebred ram —efficient procedures and methods in marketing lambs —evaluating records as basis for selection of replacement ewes —latest marketing developments, from producer to consumer —management skills designed to increase the breeding efficiency of flock —current management problems and suggestions	Feed, breed, and manage commercial flock. Take part in livestock judging. Attend state purebred ram sales. Participate in carcass evaluation programs. Attend sheep shearing schools for youth. Sell lambs at local market, lamb pool or terminal market. Member evaluation with leader. Exhibit project animal.

Swine

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>10-12 Year Olds</i>	
FEEDING FEEDER PIG(S) For Members: <i>Member Manual:</i> <i>Swine Production, 175.4</i> Report 275 <i>Feed Record Card, 475</i> <i>Meat Animal</i> <i>Showmanship, 575T</i>	Learn: —why feed pigs for slaughter —principles in selecting and buying feeder pigs —to feed, fit, and exhibit market pigs —parts of the pig and terms swine producers use —efficient management practices —housing and equipment needs —efficient procedures and methods in marketing	Feed and manage one or more pigs for exhibition and/or slaughter. Keep project record. Visit local grain elevator to study feed. Club tour of retail meat market. Attend a swine show. Tour of one type of market outlet, such as an auction. Member evaluation with leader. Exhibit project animal.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Livestock (Continued)

Swine

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
10-12 Year Olds		
BREEDING GILT(S) For Members: <i>Member Manual:</i> <i>Swine Production, 175.4</i> Report 275 <i>Feed Record Card, 475</i> <i>Meat Animal</i> <i>Showmanship, 575T</i>	Acquire a working knowledge of breeds and their characteristics. Learn parts of the gilt and terms swine producers use. Learn to feed, fit, and exhibit a gilt. Learn efficient management practices. Develop an understanding of housing and equipment needed. Study approved farrowing practices. Maintain accurate project records.	Feed and manage one or more gilts for production. Keep project record. Visit a purebred breeder's farm. Visit local grain elevator to study feeds. Tour retail meat market to study pork cuts. Attend swine show. Member evaluation with leader. Exhibit project animal.
12-14 Year Olds		
FEEDING FEEDER PIGS For Members: <i>Member Manual:</i> <i>Swine Production, 175.4</i> Report 275 <i>Feed Record Card, 475</i>	Learn to judge swine. Study slaughter and carcass grades and use of these grades. Learn why consumers prefer pork from meat-type hogs. Learn composition of feeds. Study important factors in swine feeding. Learn about financing and credit. Develop an understanding of markets and their operations.	Feed a pen of 3 or more market hogs for exhibition and/or slaughter. Keep project records. Participate in carcass evaluation programs. Take part in livestock judging. Tour a commercial swine farm. Member evaluation with leader. Exhibit project animal.
BREEDING PUREBRED OR GRADE SOW For Members: <i>Member Manual:</i> <i>Swine Production, 175.4</i> Report 275 <i>Feed Record Card, 475</i> <i>Meat Animal</i> <i>Showmanship, 575T</i>	Learn important factors in feeding sow and litter. Learn principles in swine judging. Increase knowledge on fitting and exhibiting swine. Study management of a sow and litter. Learn wholesale and retail cuts of pork. Learn about markets and their operations.	Feed and manage a sow and litter. Keep project records. Participate in carcass evaluation programs. Take part in livestock judging. Tour of one or more types of market outlets. Visit a purebred swine farm. Member evaluation with leader. Exhibit project animal.
14-18 Year Olds		
FEEDING COMMERCIAL GROWING—FINISHING FEEDLOT For Members: <i>Member Manual:</i> <i>Swine Production, 175.4</i> Report 275 <i>Feed Record Card, 475</i>	Study market and outlook information and use in adjusting production and marketing. Develop a feeding and management program and evaluate the results. Learn the importance of finishing hogs correctly. Understand value of accurate records in practical buying, feeding, and marketing. Learn wholesale and retail cuts of pork. Learn efficient procedures and methods in marketing hogs.	Feed, manage and market a lot of hogs. Keep project records. Participate in carcass evaluation programs. Take part in livestock judging. Tour large commercial feedlot operation. Tour various marketing agencies. Tour a slaughter plant, observing carcasses. Member evaluation with leader. Exhibit project animal.
BREEDING PUREBRED OR GRADE SWINE HERD For Members: <i>Member Manual:</i> <i>Swine Production, 175.4</i> Report 275 <i>Feed Record Card, 475</i>	Select breeding stock of accepted type. Develop a health and vaccination program for your swine herd. Study use of feed additives. Introduction to principles of genetics. Study digestive system of the pig. Study efficient procedures and methods of marketing. How to feed and manage the swine herd.	Feed, manage, and market hogs from a purebred or grade swine herd. Attend state bred gilt shows and sales. Attend swine field days. Take part in livestock judging. Participate in carcass evaluation programs. Tour a slaughter plant, observing carcasses. Member evaluation with leader. Exhibit project animal.
BREEDING PRODUCING FEEDER PIGS FOR MARKET For Members: <i>Member Manual:</i> <i>Swine Production, 175.4</i> Report 275 <i>Feed Record Card, 475</i>	Learn about: —opportunities in feeder pig production —a health and vaccination program for swine herd —starting the breeding herd —pasture rations for bred gilts —creep feeding baby pigs —economics of feeder pig production —marketing feeder pigs	Produce one or more litters for market as feeder pigs. Visit a feeder pig market. Tour a farm where feeder pigs are produced. Take part in livestock judging. Visit a large commercial feedlot. Attend state bred gilt show and sale. Member evaluation with leader. Exhibit project animal.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Management for You in Your Family

Objective:

Boys and girls to gain an understanding of management as a means of reaching individual and family goals.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
GETTING ACQUAINTED WITH MANAGEMENT	This project is being designed for high school age 4-H boys and girls to help them understand values, resources, and decision-making as a means of reaching individual and family goals. After pilot testing in several counties, materials will be prepared and made available through your County Extension office.	
	<i>14-18 Year Olds</i>	
MONEY IN YOUR LIFE For Members: <i>Money In Your Life, 182A</i> Report 282 For Leaders: <i>Leader's Guide: Money In Your Life, 382A</i>	Learn to set one's own financial goals. See how the individual's money problems are closely related to those of the whole family. Realize the many means available for reaching one's own goals. Learn the guides to follow in making and using a financial plan. Through training and experience improve money management ability.	Decide what money problems are the most important to solve. Make a time table for solving them. Study money problems of the individual as a part of the whole financial picture of the family. Use knowledge, skills, and imagination to increase the means available for reaching one's goals. Make a financial plan, using record-keeping as a tool. Try out plan and adjust it as necessary. Member evaluation with leader.

Personal Improvement

Objectives:

To develop desirable personal health practices and attitudes.

To learn that happy living (physical and mental fitness, attractive appearance and a pleasing personality) depends upon health conservation and improvement.

To share in the responsibility for improving the health of the family and of the community.

To develop poise and confidence.

To develop a desire to look well groomed.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>10-12 Year Olds</i>	
For Members: <i>Your Choppers, 181A</i> Report 281 For Leaders: <i>Leader's Guide: Your Choppers, 381A</i>	Learn how proper care of teeth affects personality and general health. Understand how proper foods and oral dental hygiene are used to help keep teeth healthy and free from decay.	Learn the principles of proper dental hygiene by having each member carry out oral dental practices for at least 3 months or more. Have each member visit a dentist for a regular check up during the project, if this has not been done within the last 6 months. Member evaluation with leader.
For Members: <i>Your Topper, 181B</i> Report 281 For Leaders: <i>Leader's Guide: Your Topper, 381B</i>	Learn how proper diet and good health habits help one have bright shiny hair. Understand how to care for one's hair, and how proper care leads to a well-groomed and attractive appearance.	Have each member carry out a planned hair care program for at least 3 months. Have members develop different hair styles and explain what they like about them. Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Personal Improvement (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>10-12 Year Olds</i>	
For Members: <i>Your Wrappers, 181C</i> Report 281 For Leaders: <i>Leader's Guide:</i> <i>Your Wrappers, 381C</i> For Members: <i>Your Clappers, 181D</i> Report 281 For Leaders: <i>Leader's Guide:</i> <i>Your Clappers, 381D</i>	Members will learn how the "well-scrubbed" look leads to a happier, healthier you. Understand how perspiration originates and is controlled through daily baths and proper use of deodorants. Learn the four rules for well-groomed hands and how proper care for one's hands is important. Learn the skills needed to use the tools and materials used in proper hand care.	Members will plan and carry out a daily grooming program to include the practices suggested in their bulletin. Member evaluation with leader. Members will plan and carry out a good hand care program designed to demonstrate skills and practices suggested in their bulletin. Member evaluation with leader.
	<i>12-14 Year Olds</i>	
For Members: <i>Your Mask, 181E</i> Report 281 For Leaders: <i>Leader's Guide:</i> <i>Your Mask, 381E</i> For Members: <i>Your Design, 181F</i> Report 281 For Leaders: <i>Leader's Guide:</i> <i>Your Design, 381F</i>	Learn how diet, rest, and proper skin care leads to clear, smooth skin. Girls learn proper make-up techniques, and how to apply them. Learn the principles of good posture and how posture leads to good health. Specifically learn how to walk, sit, stand and lift weight properly and gracefully.	Members will plan and carry out a "skin care" program for at least 3 months, demonstrating the skin care practices suggested in their bulletin. Member evaluation with leader. Each member will practice the suggested good posture habits and demonstrate that they understand why and how these practices are important. Member evaluation with leader.

Photography

Objectives:

Provide an interesting activity or project for boys and girls of all ages.

Introduce 4-H members to a practical art or vocation.

Give educational guidance and help members develop skills in taking and using pictures.

Help members gain an appreciation of photography as an art, as a science, and as a communication tool.

Help members to observe and appreciate their surroundings.

Provide experience in recording events, ideas, and situations in picture form for study or reference.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>10-12 Year Olds</i>	
ADVENTURES WITH YOUR CAMERA For Members: <i>Adventures With Your Camera, Unit I, 185A</i> Report 285 For Leaders: <i>Leader's Guide:</i> <i>Adventures With Your Camera, Unit I, 385A</i>	Learn— How a camera takes pictures. How to care for your camera. How to hold and aim your camera. How to choose the place from which to take pictures. How to spot and correct your mistakes. How to handle your negatives. How to mount your pictures.	Take 25 or more photographs in black and white showing buildings, landscapes, people as individuals or groups and animals or birds. Take one or more series of photographs showing a sequence or step-by-step procedure. Mount photographs in suitable album.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Photography (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
10-12 Year Olds		
CHALLENGES IN PICTURE TAKING For Members: <i>Challenges in Picture Taking, Unit II, 185B</i> Report 285 For Leaders: <i>Leader's Guide: Challenges in Picture Taking, Unit II, 385B</i>	Learn how to take documentary, story telling and action photographs. Learn basic principles of composition, flash and natural lighting. Learn how to focus adjustable cameras, read f numbers and shutter speeds for different types of photographs.	Start a file of negatives. Member evaluation with leader.
12-14 Year Olds		
EXPLORING PHOTOGRAPHY For Members and Leaders: Report 285 Appropriate materials will be introduced via your local county extension office.	Learn more advanced principles of lighting and camera operation, including adjustable and meter controlled lens. Learn about films and their uses including basic color and black and white. Learn advance composition principles, flash and flood lighting. Learn skills needed in contact printing.	Take 25 or more photographs in black and white or color as interest and skill of the member allows. Photographs should be of a wide variety of scenes to demonstrate composition, lighting, and camera skills under a variety of situations. Take a series of step-by-step photographs to illustrate sequence or step-by-step procedure.
MASTERING PHOTOGRAPHY For Members and Leaders: Report 285 Appropriate materials will be introduced via your local county extension office.	Develop special close up camera techniques and skills. Learn about the use of photography as a communication tool. Learn elementary enlarging skills, and film development. Learn how to mount enlargements.	Mount a series of photographs with different materials to demonstrate the advantages and disadvantages. Continue to build a negative file for both black and white and color film. Expose and develop one or more contact prints. Member evaluation with leader.
14-18 Year Olds		
PHOTOGRAPHY CAREER SERIES For Members and Leaders: Report 285 Appropriate materials will be introduced via your local county extension office.	Learn how to take and use color slides in a commentary. Learn how to take and edit movie film. Learn how to develop and enlarge black and white film. Learn how the type of film, amount of light and type of printing paper affect the enlargement. Learn about the darkroom equipment and how it is used. Learn how to process reversal type color transparency film. Learn highly skilled camera techniques and advanced printing techniques. Learn about the many careers associated with photography and allied industry, business, research and education.	Complete a 12 or more slide set with appropriate commentary. Write a plan and shoot a 25 foot or longer movie film according to the plan. Write a commentary to accompany film. Develop and enlarge several black and white films to show a variety of darkroom techniques. Process 6 or more rolls of reversal type transparency films. Select one or more of the alternatives suggested in members' bulletin 185F5, Advanced and Specialized Photography. Visit several places where photography and photography related careers or occupations can be observed. Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Poultry

Objectives:

Appreciate and use scientific information in poultry production and marketing.
 Acquire information and skill in the efficient production of poultry and poultry products.
 Improve knowledge of grading, marketing, and merchandising of poultry and poultry products.
 Increase knowledge of the nutritive value of poultry meat and eggs and how these contribute toward health.
 Learn the importance of the poultry industry in the local and national economy.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
10-12 Year Olds		
PULLET RAISING I For Members: Report 287 <i>Record Card 487</i> For Leaders: <i>Leader's Guide, 4-H Poultry Project Plans, 387</i> <i>You, Youth and Poultry, (U.S.D.A., PA464), 387A</i>	Learn the care, feed, and housing requirements of pullets from day old to 20 weeks of age. Learn to distinguish between broiler and egg producing chicks	Operate a brooder. Select proper strain of birds. Feed, water and care for the pullets. Keep records of feed cost and health. Exhibit a pen of three pullets. Member evaluation with leader.
EGG PRODUCTION I For Members and Leaders: See Pullet Raising I	Learn the needs of a laying flock. Learn the feed requirements for egg production. Become familiar with egg producing breeds.	Care for a laying flock of hens. Keep dairy feed consumption, egg production, mortality and health records. Exhibit eggs or birds. Member evaluation with leader.
EGG MARKETING I For Members: Report 287 For Leaders: See Pullet Raising I	Become familiar with egg grades for quality and size. Learn about the channels for marketing eggs.	Establish an egg marketing route. Market eggs according to the egg marketing prices quoted on the market. Keep financial records of income and expenses. Member evaluation with leader.
EFFICIENT MEAT PRODUCTION I For Members and Leaders: See Pullet Raising I	Study the needs of broiler chicks from day old to market age. Study the growth pattern of broilers from day old to market age. Learn to distinguish between broilers and egg production chicks.	Select a proper strain of birds for meat production. Operate a chick brooder. Feed, water and care for the broiler chicks. Keep records of costs, feed, and health. Exhibit a pen of birds or dressed birds. Member evaluation with leader.
12-14 Year Olds		
PULLET RAISING II For Members and Leaders: See Pullet Raising I	Learn the requirements of birds from day old to 20 weeks. Learn to recognize well grown pullets. Study the effect of light on sexual development.	Select a producing strain of birds. Operate a brooder. Feed, water and care for the pullets. Operate a changing light (day electric) schedule. Exhibit a pen of pullets. Member evaluation with leader.
EGG PRODUCTION II For Members and Leaders: See Pullet Raising I	Study many production factors, such as the pounds of feed per dozen eggs, number of eggs per hen per month, and cost per dozen eggs produced, mortality, etc. Study desirable strains for egg production.	Select well grown pullets of egg production strain. Care for a laying flock of hens. Keep records and analyze feed consumption, mortality, and egg production. Member evaluation with leader.
EGG MARKETING II For Members: <i>Egg Marketing II, 187.2A</i> Report 287 <i>Record Card</i> For Leaders: See Pullet Raising I	Become familiar with egg grades for quality and size. Become familiar with egg marketing procedures and pricing. Study money management.	Establish egg marketing route. Candle and grade eggs for quality and size. Market according to egg marketing prices quoted on the markets. Keep financial record of income and expense. Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Poultry (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>12-14 Year Olds</i>	
EFFICIENT MEAT PRODUCTION II For Members and Leaders: See Pullet Raising I	Study the needs of broiler chicks from day old to market age. Study the growth pattern of broilers from day old to market age. Learn to distinguish between broilers and egg production chicks. Learn to market broilers from live to ready-to-cook.	Select the proper strain of birds. Operate a chick brooder. Feed, water and manage a flock of broiler chicks. Keep feed, mortality and weight gain records. Kill, dress, eviscerate and sell the birds. Exhibit live or dressed birds. Member evaluation with leader.
	<i>14-18 Year Olds</i>	
PULLET RAISING III For Members and Leaders: See Pullet Raising I	Raise day old pullets to 20 weeks of age. Learn the requirements of birds from day old to 20 weeks. Learn to recognize well grown pullets. Determine the vaccination, debeaking and decombing program needed to insure well grown pullets.	Select proper strain of birds. Operate a brooder. Feed, water, and care for the pullets. Vaccinate, debeak and decomb birds as is necessary to grow healthy pullets. Exhibit 3 pullets. Member evaluation with leader.
EGG PRODUCTION III For Members and Leaders: See Pullet Raising I	Study many production factors, such as the pounds of feed per dozen eggs, number of eggs per hen per month, and cost per dozen eggs produced, mortality, etc. Determine desirable strains for egg production. Study the effect of the environment and physiology changes in chickens. Study changing energy requirements of laying hens.	Select well grown pullets of egg production strain. Keep record of feed consumption, mortality, egg production, etc. Keep a record of temperature changes for comparison with egg production results. Keep a flock record to measure results based on mortality, eggs per bird, pounds per dozen and a comparison of income and expense per dozen. Exhibit birds or eggs. Member evaluation with leader.
EGG MARKETING III For Members: <i>Egg Marketing III, 187.2B</i> Report 287 For Leaders: See Pullet Raising I	Became familiar with egg grades for quality and size. Become familiar with egg marketing procedures and prices. Study money management. Develop use of promotional materials and study their effect on consumer buying habits.	Establish an egg marketing route. Candle and grade eggs for size and inferior quality. Keep financial records to determine whether mark-ups are adequate for sound business practices. Use carton inserts and consumer information material in promotions. Member evaluation with leader.
EFFICIENT MEAT PRODUCTION III For Members and Leaders: See Pullet Raising I	Study the needs of broiler chicks from day old to market age. Study the growth pattern of broilers from day old to market age. Learn to market broilers from live to ready-to-cook. Learn to charcoal broil chicken. Study the profitability of the broiler business.	Select the proper strain of birds. Operate a chick brooder. Feed, water, and manage broiler chicks. Keep, feed, mortality and weight gain records. Kill, dress, eviscerate and market the birds. Keep records on expense and income items for comparison as to profitability. Member evaluation with leader.
POULTRY SCIENCE Poultry Science: <i>A Project in Poultry Incubation, 587</i>	A series of poultry science projects will be developed. Advance projects specializing in the subject areas of poultry science such as genetics, breeding, nutrition or feeding, sanitation, reproduction (including incubation), and behavior project materials will be pretested in pilot counties and then distributed to county extension offices as they are completed. Interested members and leaders are encouraged to proceed in developing their own poultry science experiments.	

For other suggestions on teaching tools, please turn to pages 4 to 11.

Rabbits

Objectives:

Acquire information and skill in the efficient raising of rabbits.
 Improve knowledge of judging, marketing and utilizing rabbits.
 Increase knowledge of the nutritive value of rabbit meat.
 Appreciate new scientific information in rabbit production.
 Learn the important breeds in rabbits and their characteristics.
 To have the responsibility and enjoy the satisfaction of caring for a live animal project.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
10-12 Year Olds		
DOE AND LITTER For Members: <i>Rabbit Project, 189</i> Report 275 <i>Feed Record Card 475</i>	Learn the requirements for raising a litter of rabbits. Learn the breeds and their characteristics. Learn the nutritional requirements for rabbit production.	Feed and care for one or more rabbit does. Produce at least one litter to market age during the minimum six-month period. Keep records of feed, costs, and health. Exhibit the project animals. Member evaluation with leader.
12-14 Year Olds		
COMMERCIAL RABBIT PRODUCTION For Members: <i>Rabbit Project, 189</i> Report 275 <i>Feed Record Card 475</i>	Learn the principles of efficient rabbit meat production. Learn to analyze production records and management. Learn the principles of marketing rabbits.	Feed and care for two or more does and a buck. Produce at least two litters to market age. Keep and analyze feed cost and production records. Member evaluation with leader.
14 Years and Older		
RABBIT PRODUCTION AND MARKETING For Members: <i>Rabbit Project, 189</i> Report 275 <i>Feed Record Card 475</i>	Study the potential commercial opportunities in rabbit production. Analyze the efficiency of various production practices. Learn to dress rabbits and package the meat for sale.	Produce and market at least 3 litters of rabbits. Keep accurate cost records and analyze the efficiency of production. Prepare an income expense statement for the project. Exhibit the market animals. Member evaluation with leader.

Safety and Fire Prevention

All 4-H clubs should make safety a part of their yearly program. Each leader should have 4-H Bulletin 591-B, "Leaders 4-H Safety Activity Guide" for use in helping develop activities.

Safety and Fire Prevention projects are for those members who want to carry out a more intensive program than that carried out by the activity program.

Objectives:

To help boys and girls learn citizenship fundamentals through an action program that contributes to the safety and welfare of others and helps the entire family become more safety conscious.

To develop ability to recognize hazards and how to correct them, or learn to live with them safely.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
10-12 Year Olds		
4-H SAFETY EXPLORER (Select one of the following five areas of interest). FIRE PREVENTION For Members: <i>Fire Prevention, 191G</i> <i>*Farm Fire Checklist, (F308) 491A</i> <i>*Fire Safety Demonstrations, (CE13) 591</i> Report 291 For Leaders: <i>Leader's Guide: Safety Project, 391</i>	Develop an awareness of fire hazards. Learn to conduct an inspection for fire hazards. Help a community improve fire safety. Learn how to reduce or remove existing fire hazards.	Use fire inspection blanks or checklist to check fire hazards in more than three homes or farmsteads. Remove more than five fire hazards or hazardous practices. See Members' Bulletin for further activities to be conducted. Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Safety and Fire Prevention (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
<i>10-12 Year Olds</i>		
SAFETY IN THE HOME For Members: <i>Home Safety, 191C</i> <i>Be Safe at Home</i> <i>Checklist, (F-314) 491B</i> Report 291 For Leaders: <i>Leader's Guide:</i> <i>Safety Project, 391</i>	Develop an awareness of home safety. Learn to conduct an inspection for home hazards. Help the community improve safety in the home. Learn how to reduce or remove existing hazards.	Use home safety check list to inspect for accident hazards in four or more homes. Remove six or more home hazards or hazardous practices. See Members' Bulletin for further activities to be conducted. Member evaluation with leader.
BICYCLE SAFETY For Members: <i>Bicycle Safety, Step</i> <i>By Step, 191A</i> Report 291 For Leaders: <i>Leader's Guide:</i> <i>Bicycle Safety, Step</i> <i>By Step, 391A</i>	<i>(Recommended for first year members only)</i> Learn— The importance of safe bicycling. The various parts of a bicycle. Principles of bicycle maintenance. How to make basic adjustments on a bicycle. Traffic laws that apply to bicycle riders.	Use the "programmed learning" approach presented in the Members' Bulletin to learn about bicycle maintenance, care, and traffic laws. Participate in eight or more field riding skill exercises including balance, control, maneuvering and proper signaling. See leaders' Guide for additional activities to be conducted. Member evaluation with leader.
SAFETY ON THE FARM For Members: <i>Farm Safety, 191F</i> Report 291 For Leaders: <i>Leader's Guide:</i> <i>Safety Project, 391</i>	Develop an awareness of hazards and hazardous practices in farming. Learn how to check a farm for hazards and hazardous practices. Help neighboring farms to recognize and correct hazards and hazardous practices. Learn how to correct existing hazards on the home farm.	Develop a farm safety checklist for use in your community. Use the checklist to check four or more farmsteads. Remove or correct six or more hazards or hazardous practices on your farm. See Members' Bulletin for further activities to be conducted. Member evaluation with leader.
FIRST AID For Members: <i>First Aid Emergency Kit,</i> <i>Preparation for Action,</i> <i>(L-12) 191B</i> Report 291 For Leaders: Leaders of this project are strongly encouraged to participate in American Red Cross Standard First Aid Training programs. Call your local American Red Cross chapter for information on how to enroll in the training courses offered locally.	Recognize need for first aid. Learn how to dress wounds and apply simple bandages. Develop ability to give first aid for bleeding. Learn to apply mouth to mouth artificial respiration.	Prepare a practical first aid kit for your home or car. Give demonstrations to club members on bandaging, artificial respiration, or other first aid technique. Discuss accidents and how they might be prevented. Prepare an educational exhibit. Member evaluation with leader.
<i>12-14 Year Olds</i>		
4-H SAFETY ENGINEER For Members: <i>Safety Explorer Projects</i> <i>Bulletins</i> Report 291 For Leaders: <i>Leader's Guide:</i> <i>Safety Project, 391</i>	Learn beginning leadership experience in your club and community. Improve ability to make safety inspections. Determine how much improvement results from safety inspections. Take action to remove accident or fire hazards.	Prepare and present safety information for your club through talks, demonstrations and/or exhibits. Select either fire prevention, home safety, or farm safety as a major area of safety inspections. Make six or more inspections using the appropriate inspection blank. Make follow-up visits after inspections to determine the number of hazards that were removed. Remove or correct six or more safety hazards around your home or farm. Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Safety and Fire Prevention (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>14-18 Year Olds</i>	
4-H SAFETEEN For Members: <i>4-H Junior Leadership Guide, 168</i> Report 291 For Leaders: <i>Leader's Guide: Adult Advisor in Jr. Leadership, 386</i> <i>Leader's Guide: Safety Project, 391</i>	Learn how to provide safety leadership in your club and community. Explore career opportunities related to safety or fire prevention or fire protection. Make a direct contribution to improving the safety in your community.	Provide Junior Leadership for activities carried out by members enrolled in the Safety Explorer group. Talk with doctors, nurses, driver education teachers, judges, lawyers, state police, sheriff, insurance company officials, fire chiefs or others in safety related occupations. Make six or more safety inspections and remove 10 or more fire and/or accident hazards from your home, farm or community. Prepare a Junior Leadership project report to evaluate your progress. Member evaluation with leader.

Town and Country Business Program

Objectives:

To provide greater understanding of business as it operates through firms closely associated with agriculture.

To teach basic economic facts that will help participants better fit themselves into the modern social and economic structure.

To explore employment opportunities in business closely related to agriculture.

To give youth who will go into farming a better appreciation of problems of agricultural marketing.

To point to the needs and benefits of training and education for youth who anticipate employment with agricultural business firms.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>15 Years Old and Over</i>	
For Members: <i>Advertising, PA492</i> <i>Sales and Service, PA442</i> <i>Processing Improves Living, PA443</i> <i>What Marketing Means to You, PA444</i> <i>How is Money Obtained for Marketing, PA445</i> <i>Wholesaling, PA446</i> <i>Assembly and Storage, PA447</i> <i>Wrapping it Up to Sell, PA448</i> <i>Retailing is Everywhere, PA449</i> <i>Transportation: Link from Producer to Consumer, PA450</i> <i>Standards and Grades, PA451</i> <i>The Food Service Industry, PA452</i> For Leaders: <i>Leader's Guide: Town and Country Business, PA440</i> <i>Management's Guide Book, PA440A</i>	To study the functions of marketing and the motives of the businessmen who see that the functions are performed.	Select any number of the Business Leaflets suggested for members in column one and carry out the visit to the representative firm as suggested in the Leader's Guide — PA440. See that a copy of the Management's Guide book, PA440A, is given to the representative firm in advance of the visit. Contact your local extension office for more details and samples of the literature available for members and leaders.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Tractor Care and Safety

Objectives:

- To learn proper attitudes and principles of safety in the operation of tractors and farm machinery.
- To gain fundamental knowledge of motors and machinery.
- To learn to analyze and understand the significance of service and cost records.
- To learn the fundamentals of preventive maintenance.

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	10-12 Year Olds	
For Members: <i>Jr. Tractor Project, 194</i> For Leaders: <i>Leader's Kit:</i> <i>Tractor Project, 394A</i>	Become familiar with Operator's Manual, and learn to identify parts of tractor. Learn safe tractor operating principles. Learn safe tractor and fuel storage practices. Learn to conduct tractor safety inspection. Learn principles of safe tractor starting and driving. Become aware of the number of farm machinery accidents in the community.	Complete 5 or more lessons in the Junior Workbook. Conduct a safety inspection tour of members' tractors. Conduct a community machinery accident survey. Participate in a supervised Junior Tractor Driving Event in local club. Make a display on group or individual basis, illustrating what you have learned. (Poster, drawing, display of parts, cut-away, etc.) Member evaluation with leader.
	12 Years Old and Over	
For Members: <i>Getting Acquainted With Your Tractor, 194A</i> For Leaders: <i>Leader's Kit:</i> <i>Tractor Project, 394A</i>	Create a proper attitude toward tractor safety. Understand what makes an engine run, and become familiar with the operator's manual. Become familiar with the proper use of hand tools. Learn to make daily safety and maintenance inspections. Become familiar with the tractor instrument panel. Learn the purpose and function of control levers. Learn to start and stop a tractor properly. Learn about the proper care of tires. Become familiar with basic service and cost records.	Complete 7 or more lessons in First Year Tractor Workbook, including work sheet and related activities. Participate in tour to tractor or machinery manufacturing plant. Participate in local or county tractor operators' contest. Make a display on group or individual basis, illustrating what you have learned. (Poster, drawing, display of parts, cut-away, etc.) Member evaluation with leader.
For Members: <i>Assuring Safe Efficient Tractor Operation, 194B</i> For Leaders: <i>Leader's Kit:</i> <i>Tractor Project 394A</i>	Acquire full knowledge of safety practices for operating the tractor. Learn the importance of clean air for the tractor engine. Learn the basic principles of engine ignition. Learn the principles of power transmission through the clutch and gearshift mechanism. Obtain first-hand knowledge of the principles of mixing fuel and air. Learn the principles of lubrication, and become familiar with the different types of lubricants. Learn how to make proper connections to implements, including hydraulic controls. Learn the functions and operation of the cooling system. Learn details of maintaining good service and cost record data.	Complete 7 or more lessons in Second Year Tractor Workbook, including worksheets and related activities. Participate in tour to tractor or machinery manufacturing plant. Participate in local or county Tractor Contest. Make a display on group or individual basis, illustrating what you have learned. (Poster, drawing, display of parts, cut-away, etc.) Member evaluation with leader.
For Members: <i>Improving Your Tractor Skills, 194C</i> For Leaders: <i>Leader's Kit:</i> <i>Tractor Project, 394A</i>	Learn Highway Safety Rules for farm tractors and machinery. Learn about oils for engines and hydraulic systems. Become familiar with valves and valve operation. Study steering mechanisms and front wheel care. Learn about winter care of tractors. Become familiar with organized procedures for engine trouble-shooting. Learn about the different methods of transmitting tractor power. Learn to test the skills you have acquired in the 4-H Tractor Project. Learn to maintain and interpret service and cost records.	Complete 7 or more lessons in Third Year Tractor Workbook. Participate in tour to tractor or machinery manufacturing plant. Participate in local or county Tractor Contest. Make a display on group or individual basis, illustrating what you have learned. (Poster, drawing, display of parts, cut-away, etc.) Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

Tractor Care and Safety (Continued)

SUGGESTED PROJECT PLAN

Division	Learning Plan	Learning Activities*
	<i>14-18 Year Olds</i>	
For Members: <i>Acquiring Machinery Care and Safety Skills, 194D</i> For Leaders: <i>Leader's Kit: Tractor Project, 394A</i>	Learn why farm machinery can be dangerous, and how to operate it safely. Become familiar with primary tillage tools used to break the soil. Learn about tillage tools used for seed bed preparation. Learn how to hitch a plow to a tractor. Learn how to calibrate and operate seed planters. Learn about cutters for crops. Become familiar with seed harvesting machines. Learn about machinery management, and become familiar with the factors used in determining the cost of operation.	Complete 6 or more lessons in Fourth Year Machinery Workbook. Participate in tour to tractor or machinery manufacturing plant. Participate in local or county Tractor Contest. Make a display on group or individual basis, illustrating what you have learned. (Poster, drawing, display of parts, cut-away, etc.) Member evaluation with leader.

For other suggestions on teaching tools, please turn to pages 4 to 11.

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