



## 2017 Harris County 4-H Roundup Newsletter

### General Information and Rules for County 4-H Contest

1. Junior (age 8 & in the 3<sup>rd</sup> grade- 5<sup>th</sup> grade) may participate ONLY in county and district contests. (\*\*note: *Healthy lifestyles* is only open to intermediate and senior members at the district and state level)
  - Clover Kids may only compete on the county level in Food Show, Healthy Lifestyles and Share the Fun.
2. Intermediates (6<sup>th</sup>-8<sup>th</sup> grade) may participate at county and district levels and at the state level with invitational contests.
3. Senior members (9<sup>th</sup>-12<sup>th</sup> grade) may participate in county, district and state contests.
4. There will be a \$5/person entry fee for all contests with the exception of Food Challenge, which will be \$10/person to help cover the cost of materials for the contest. Please make checks or money orders payable to "**Harris 4-H Fund**".
5. **The County contest dates are as follows:**
  - **Round Up #1:** February 25<sup>th</sup>, 9am – Harris Co. Extension Office
    - Food Challenge, Food Show, Ag ID, Healthy Lifestyles, Consumer Decision Making
  - **Round Up #2:** February 25<sup>th</sup>, 1pm – Harris Co. Extension Office
    - Share the Fun events, Discovery Science Method Poster, Public Speaking events
  - **Fashion Review Round Up:** March 30<sup>th</sup>, 4pm – Harris Co. Extension Office
    - Duds-to-Dazzle, Fashion Story Board, Fashion Show
  - **Photography Contest: Email all pictures to [Harristx4h@gmail.com](mailto:Harristx4h@gmail.com)**
    - *Deadline:* 4:00pm March 3, 2017
    - Fee is \$5/PARTICIPANT, not per picture
    - In your email, please include your name and category you are entering
    - You may enter 1 picture per category. No duplicates.
6. You MUST pre-register for ALL county 4-H contests. To pre-register, complete the online registration form and submit payment to the Harris Co. office by the deadline.

**\*\*Participation in county round-up competition is REQUIRED in order to participate at the district level \*\***  
(Exception for Invitational Competitions: Ag ID, Healthy Lifestyles, Discover Science Method.)

# **On-line Registration for 2017 Harris Co. Round Up**

**Food Challenge:** <https://goo.gl/forms/LIt3X27stNayHA9T2>

**Food Show:** <https://goo.gl/forms/8iPdmV38PHhFewFB2>

**Consumer Decision Making:** <https://goo.gl/forms/r2xZKkV4wXlgK44Q2>

**Healthy Lifestyles:** <https://goo.gl/forms/hF1OK8BRUtIXBRLJ3>

**Ag ID:** <https://goo.gl/forms/DNRm7M4kdAO73PZl2>

**Public Speaking:** <https://goo.gl/forms/2lR1FJVbAR8ZM2KJ3>

**Share the Fun:** <https://goo.gl/forms/mbh9p63Xnxt72yZE3>

**Educational Presentation/Illustrated Talk:** <https://goo.gl/forms/YGxnpRKrpRIGQvQB3>

## **NOTE:**

If you are entering a contest as a team, you only need to fill out one entry form per team but include all team members' names on the entry form.

Please remember all entry fees are **per member**, not per team.



# 2016-2017 District 9 4-H PHOTOGRAPHY CONTEST

**PURPOSE** The Texas 4-H Photography Contest encourages self-expression and allows youth to demonstrate skills learned in the area of photography, including the use of photographic equipment and process of photographs.

## OBJECTIVES

- To develop life skills in composition, light, story line, posing, and awareness.
- To encourage 4-H members to use photography as a meaningful communication tool in their lives.
- To provide photography project showcase opportunity for senior 4-H members.
- To continue to share the message of 4-H.
- To utilize photographs which can promote and strengthen the 4-H program.

## CONTEST RULES

**1. Participation Age:** The District 9 4-H and Youth Development Photography contest is open to all 4-H members.

**Age Division.** This contest is open to all age divisions. There will be three age divisions: Junior, Intermediate and Senior. Age is determined as of August 31, 2016.

<u>Division</u>	<u>Ages</u>
Junior	(3 <sup>rd</sup> - 5 <sup>th</sup> grade)
Intermediate	(6 <sup>th</sup> - 8 <sup>th</sup> grade)
Senior	(9 <sup>th</sup> - 12 <sup>th</sup> grade)

**2. Eligibility of Photos:** All photographs must have been taken by 4-H members between the dates of January 1, 2016 and the time of entry. Photos may be submitted only one time to the District 9 4-H Photography Contest. A single photo cannot be entered in multiple divisions or classes (ie: the same original cannot be entered in multiple divisions).

**3. Number of Entries:** A 4-Her can enter up to 15 photographs (One picture per category). A photo can only be entered in the contest one time.

**4. Entry Fee:** A fee of \$5.00 per photograph must be paid for each entry.

**5. Entry Deadline:** By midnight on **Sunday, April 16, 2017** all registrations must be submitted on 4-H CONNECT.

**6. Copyright and Content:** Photos that are deemed obscene, vulgar, sexually-oriented, hateful, threatening, or otherwise violate any laws are strictly prohibited. The Texas 4-H and Youth Development Program respects the rights related to copyright laws and intellectual property. All photos should be based on a 4-H members original photograph taken by

the 4-H member. Use of a photo from other sources/people without permission is not allowed and will lead to disqualification of the photo and a possibility all entries by the 4-H member. The Texas 4-H and Youth Development Program reserves the right to refuse inappropriate or unsuitable entries.

**7. Disqualification of an Entry:** An entry that does not follow the rules or category guidelines will automatically be disqualified. Disqualifications forfeit all entry fees. Reasons for disqualification:

- Photo does not meet category criteria or entered in incorrect category.
- Photograph incorrectly sized and file not labeled correctly to ensure identification.
- Same photo entered into multiple categories.
- Inappropriate or unsuitable photograph.
- Photo was NOT entered into the 4-H CONNECT system with payment.

**8. Release of Liability:** The Texas 4-H and Youth Development Program, Texas AgriLife Extension, the Texas 4-H Youth Development Foundation and/or its employees/agents involved in the contest will not be held liable for missing, mislabeled, or non-displayed photographs. By entry the 4-H member accepts this release.

**9. Awards** All pictures are judged on an individual basis of quality. The Danish system of ribbon awards is a quality award and not a placing award. Blue, Red, and White quality awards will be given to entries based on the score card criteria.

**10. Judges:** The judges will determine the placings. Their decision on all entries is final. Score sheets can be downloaded from <http://texas4-h.tamu.edu/projects/photography-video/scoresheet1/>

**11. Announcement of Results:** Results will be posted during District 9 4-H Roundup, May 11-13 at Lone Star College-Montgomery Campus, Conroe, TX.

## RESOURCES FOR THE PHOTOGRAPHY CONTEST:

- Adventures With Your Camera – B (Grades 6 to 9) (Available from National 4-H Council Supply)
- 4-H Guide to Digital Photography by Daniel Johnson. (Available from Amazon.com)
- Texas 4-H and Youth Development Photography & Video Project Resource Page located on the 4-H website under the project section. (<http://texas4-h.tamu.edu/projects/photography-video/>) *Any reference to a product or company is not to endorse or support them and their causes. Links to companies are provided for their educational resources only.*

## 2017 DESCRIPTIONS OF CATEGORIES

### ANIMALS - DOMESTIC

Photos focusing on the various animals that have been tamed and made fit for a human environment. To be considered domesticated, the animal must have their behavior, life cycle, or physiology systemically altered as a result of being under human control for many generations. *Examples include: Dog, Sheep, Pig, Goat, Cow, Cat, Chicken, Horse, Camel, Goose, Duck, Hamsters*

### ANIMALS - WILDLIFE

Category focuses on animals not tamed or domesticated and commonly found in the wild throughout the country and world. Photos can be of wildlife in nature, zoos, and/or petting zoos. *Examples include: Deer, snakes, insects, rodents, elephants, etc.*

### CATCH-ALL

Category for photos that do not fit into one of the other categories. This includes such photos as still-life, motion-blur, Polaroid transfers, SX-70 images, hand colored photos. *Examples include: Polaroid image & emulsion transfers, still-life, long exposure zoomed images, and painting with light.*

### DETAILS & MACRO

Getting in close is the name of the game for this category. We welcome pictures of small details that suggest a larger story. This is also the place for macro photographs (although a macro image of a flower might equally go into the Flowers category). *Examples include: detail of a knot, a lock, or an abstract close-up - anything as long as it is a tight composition of a detail. Macro examples: flowers, insects, stamps, ice crystals, etc*

### DIGITAL DARKROOM

Photos are for digital art - images created or drastically altered in software like Adobe Photoshop®. Although digitally manipulated images are also allowed in the other categories, this is a category exclusively showcasing such art. If the digital darkroom work is the main attraction of the photo, or plays a big part, enter it here. *Examples include: Photoshop® composites and creations, images greatly manipulated with a variety of filters, photos with artistic borders, photos stitched into a panoramic.*

### DOMINANT COLOR

Photos with a dominant color. The dominant element in the image must be a specific color, such as red, yellow, blue, white, black, white, green, etc. *Black & White photos, duotones, are excluded from this category.*

### ELEMENTS OF DESIGN

Images use of graphic elements of design. Photos that showcase line, shape, pattern, form, texture, perspective, etc. Photo can consist of any subject matter. Category is not for graphic illustrations made in commercial programs (i.e. Adobe Illustrator®) nor for extreme digital creations. *Examples include: Perspective, Line, Pattern*

### FOOD

Category is a still life specialization of photography, aimed at producing attractive photographs of food for use in such items of advertisements, packaging, menus and/or cookbooks. **NO PHOTOS OF ALCOHOL BEVERAGES ARE ALLOWED** *Examples: Thanksgiving dinner, cakes/pies, fruits and place settings, Easter eggs, sandwiches, ingredients, etc.*

### MARINE/AQUATIC

Photos of any living organism in bodies of either fresh or ocean (salt) water. *Examples include: Fish, stingrays, whales, starfish, etc.*

### NATURE & LANDSCAPE

The focus of this category includes landscapes, outdoor scenes, nature images, sunsets, urban landscapes, seascapes, cityscapes, and farms. Images focus on the beauty of the outdoors. *Examples include: Landscapes, Scenes, Outdoors*

### NIGHT PHOTOGRAPHY

Photos taken outdoors between dusk and dawn. Generally these photos are achieved by using artificial light or using a long exposure. This category can include any subject as the focus should be on the skill and technique used to acquire the photograph *Examples include: buildings/structures, animals, plant/flora, people, etc.*

### PEOPLE

Photos focus from all walks of life, parenting and family, children, babies, models/ fashion, sports, and couples. **See Rule #8.** *Examples include: Kids & Family, Models/Fashion, Sports*

### PLANT/FLORA

Photos of interesting, unique, and beautiful flowers, and flora. Photography can occur outdoors or indoors. Photo subject should be that of a single flower, plant, bush, tree, etc. Large collections of plant/flora should be considered for entry into the Nature & Landscape category. *Examples include: a rose, an upward shot of a tree, a flower bouquet, etc.*

### STORYBOARD

A storyboard is one digital entry that contains three photos and minimal text that tells a story. The story should be easily understood by the viewer. *Examples include: Three images depicting the blooming of a rose bud at different stages, with the title of "Beginning of Beauty".*

### THEME

Theme photo focuses on a subject announced and outlined in the contest rules and guidelines. **For 2016-2017 the theme is "Reflections". A photo shot off any natural or artificial reflective surface. A well-executed shot can show perfect symmetry or a slightly distorted shot.**

## PROCESS FOR SUBMITTING PHOTOGRAPHS

All entries and photos for the 2017 District 9 4-H Photography Contest will be completed using the 4-H CONNECT system by midnight **Sunday, April 16, 2017**. Please read these submission rules very carefully to prevent disqualification of entries!

### ENTRY STEPS:

**1. Formatting your Photograph:** Each photograph must be formatted in a jpg file to where it can be printed at 300 dots per inch (dpi) at a 3 inch X 5 inch size. File must not be over 1.5 MB in size to upload.

**2. Labeling/Naming your Photograph:** Each photograph will need to be clearly labeled with the category (see category names below), county, age division, last name, and first name. File name should include a “\_” between each of the items, category\_county\_age division\_last\_first.jpg.

*Example: John Smith from Dallas County entering the Details & Macro category would upload a file labeled: “Details\_Dallas\_Senior\_Smith\_John.jpg”*

Please use the following labels for the categories:

CATEGORY	FILE LABEL NAME
ANIMALS-DOMESTIC	Domestic
ANIMALS – WILDLIFE	Wildlife
CATCH ALL	All
DETAILS & MACROS	Details
DIGITAL DARKROOM	Darkroom
DOMINANT COLOR	Dominant
ELEMENTS OF DESIGN	Elements
FOOD	Food
MARINE/AQUATICS	Marine
NATURE/LANDSCAPE	Nature
NIGHT PHOTOGRAPHY	Night
PEOPLE	People
PLANT/FLORA	Plant
STORY BOARD	Story
THEME	Theme

## JUDGING CRITERIA AND POINT VALUE

Each photograph will be judged against the following set of judging criteria, and not against photographs of your peers.

Based on total points awarded for each photograph, the participant will be awarded either a blue, red, white, or a participation ribbon. The elements for judging the photographs will be:

IMPACT (Max Points: 15)	Impact is the sense one gets upon viewing an image for the first time. Compelling images evoke laughter, sadness, anger, pride, wonder or another intense emotion. There can be impact in any of these twelve elements.
CREATIVITY (Max Points: 15)	Creativity is the original, fresh, and external expression of the imagination of the maker by using the medium to convey an idea, message or thought.
TECHNICAL (Max Points: 25)	Technical is the quality of the image itself as it is presented for viewing, which includes the following aspects: <ul style="list-style-type: none"> <li>• Allowable amounts of retouching and adjustments (removal of red eye, cropping, minor straightening)</li> <li>• Sharpness and correct color balance</li> <li>• Lighting, which includes the use and control of light. The use of lighting whether natural or man-made and its proper use to enhance the image.</li> <li>• Posing and capturing of the image.</li> </ul>
COMPOSITION (Max Points: 20)	Composition is important to the design of an image, bringing all of the visual elements together in concert to express the purpose of the image. Proper composition holds the viewer in the image and prompts the viewer to look where the creator intends. Effective composition can be pleasing or disturbing, depending on the intent of the image maker.
SUBJECT MATTER (Max Points: 15)	Subject Matter should always be appropriate to the story being told (i.e. category the photo is entered into) in an image. Subject matter also includes the center of interest for the photograph or where the maker wants the viewer to stop and they view the image
STORY TELLING (Max Points: 10)	Story Telling refers to the image’s ability to evoke imagination. One beautiful thing about art is that each viewer might collect his own message or read her own story in an image.



TEXAS A&M  
AGRI LIFE  
EXTENSION

# What is an Educational Presentation?

Have you ever watched a movie where the people are all dressed in business suits, sitting around a table, and someone is giving a presentation? Some of the presenters may be using media presentation, posters, and some may be using models or props, while others may only be delivering words to relay their point. If you have seen this, then you know what an educational presentation is!

A 4-H educational presentation is a demonstration of your knowledge and skills in a certain project area. This presentation is done in a way that is most comfortable to you. It can be accomplished using props (method demonstration), posters or media presentations (illustrated talk), or it can be you just speaking and convincing, or simply educating, with words alone (public speaking).

## Why Should I Do An Educational Presentation?

An educational presentation is a great way to increase your public speaking skills. It provides 4-H members with the opportunity to get up in front of a group of other 4-H members or adults and showcase your knowledge. Along with helping develop great public speaking skills, it provides you with self-confidence, organizational skills, and the ability to successfully relay a message.

The great thing about an educational presentation is that it is FUN! Educational presentations can be done as an individual, by yourself, or with one to four of your 4-H friends. What better way to team-up with your friends in the same 4-H project group or club, and show off to everyone else what you have learned in your project?

## In What Areas Can I Do An Educational Presentation?

Wow! An educational presentation can be done in so many different areas. The best way to see all the categories is to refer to the current Texas 4-H Roundup Participant Guidelines. Texas 4-H Roundup is the event where all educational presentations are given for competition. The Texas 4-H Roundup Guide provides the updated categories and detailed rules related to each category.

Educational presentations can be presented in subjects, such as beef, food & nutrition, clothing & textiles, companion animal, shooting sports, and family life, to name just a few. There is also a category that allows for “open” presentation to be entered which may not fit in other categories.

## How Is An Educational Presentation Judged?

The common factor in all educational presentations is speaking. Therefore, the judging, or evaluation, of the presentation will be based on your (and your fellow members') ability to effectively deliver a message through your presentation. Other factors, including the most appropriate method, will also be judged. For example, if your topic is "building a banana split," then just speaking about the process would not be as effective as demonstrating the process of making a banana split by using the banana, ice cream and various toppings. Other judging factors include the organization of the presentation, how current and correct your information is, and from what resources the information came.

For more information on the judging of an educational presentation, refer to the educational score sheet under the publication page of the Texas 4-H Youth Development website (<http://texas4-h.tamu.edu>), publication number 4-H 3-5.041.

## How Do I Develop An Educational Presentation?

Developing an educational presentation should be fun! First, select a topic within a 4-H project in which you are participating. Your topic needs to be something in which you are interested. After all, you are going to be researching, writing, rehearsing, and presenting this topic to a lot of people. Choose a topic that can grow; as you increase your knowledge and involvement in the 4-H project, you can also expand your presentation focus.

Is your topic one that is an important issue in our world today? Well, it should be! Examples of a current topic may be "developing a hurricane survival kit," not an "atomic bomb survival kit."

Once you have selected a topic, start researching! Your topic should include ONLY scientific research-based facts. Outstanding resources for acquiring such resources include local, state, and federal government websites/publications, firms that conduct unbiased research, and other organizations and associations' websites/publications that provide research based information (i.e. American Heart Association, American Cancer Society).

Decide if you (and your friends) would like to present this presentation as a speech, a method demonstration, or an illustrated talk. Factors that help you decide the method to

use include the resources you have (i.e. a computer with a presentation program), whether or not your topic is a subject that can be presented through a demonstration process, or is more informational/ persuasive and should be delivered through a speech.

After you decide your presentation style, you should prepare an outline using the resources you have collected. Younger 4-H members may have to write out their entire speech, while older 4-H members that have been involved in public speaking may just have to prepare a detailed outline. Regardless, practice is the success to having a great educational presentation!

## Where Can I Get More Resources For Helping Me Develop An Educational Presentation?

The Texas 4-H Youth Development Program has many outstanding resources that provide information on how to develop a method demonstration, illustrated talk, and/or speech. Printed materials can be found on the Texas 4-H Youth Development website.

Publications currently available online are:

Public Speaking – 4-H Style

4-H Public Presentation Guide: Method Demonstrations and Illustrated Talks

Resources for your presentation can be found at the library, on the Internet, in your county Extension office, or from teachers, parents, and other professionals in your community. It is very important that you can defend the information presented in your presentation. It must be factual and from reliable resources.

For more information on developing an educational presentation, contact your local county Extension office.

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## Categories (*See Roundup Guide for more detail regarding specific topics*)

Beef  
Clothing & Textiles  
Companion Animal  
Health  
Horse

Open  
Open Ag & Natural Resources Open Family,  
Consumer Sciences Promote 4-H  
Safety & Injury Prevention Sheet & Goat

## Participation Guidelines

**TOPIC SUBJECT:** Subjects in the educational presentations should address emerging or current issues in each of the contest areas. Some contests provide a suggested list of topics that the educational presentation may cover along with a resource list. Senior contestants are encouraged to research these emerging and/or current issues to develop presentations.

**ACCURACY OF INFORMATION/RESOURCES:** With the computer and internet being used heavily in educational presentations, 4-H members must know the difference between research and non-research based information.

Contestants are required to use information that is factual and can be supported through adequate documentation. Examples of such websites are federal, state, and local governments, independent research sites, and Texas A&M AgriLife Extension Service websites. Internet information that is questionable includes personal documentation sites, chat rooms, message boards, etc. 4-H members must prepare a list of references (i.e. bibliography, works cited) for their presentation.

**SUBJECT MATTER:** The skills and knowledge used in any 4-H contest should be the result of experiences in a project in which the member has participated. A presentation must relate to the contest entered, contain current information, and not be better suited for another contest. It should also be appropriate for the member's age and experience. Appropriate credit must be given for references used.

**TIME LIMITS:** A time limit of 12 minutes will be allowed for each educational presentation. An additional nine minutes will be provided for on-stage arrangements and cleanup in connection with the presentation. A penalty of two points per minute or partial minute overtime will be deducted from the final score.

**VISUALS:** The use of charts, photographs, computer graphics/programs, and other visual materials are permitted. Visuals should contribute to the presentation. Each presentation is an example of the participant's ability to communicate an idea.

**JUDGES' QUESTIONS:** Judges and/or superintendents may ask contestants questions at the end of their presentation. This will be done on the judge's time. Only official judges and superintendents may ask questions of the contestants.



**SCORE SHEETS:** 4-H Educational Presentation Score Sheet, version 9/2016 will be used by contest judges in scoring educational presentations regardless of presentation style (method demonstration, illustrated talk, or speech). Separate score sheets are used in public speaking and Share-the-Fun. All score sheets are available on the Texas 4-H Youth Development publication website.

**JUDGES GIFTS/HANDOUTS:** Gifts of any kind may not be presented to the judges in any contest. Handouts may be made available to the entire audience.

**VIDEO, AUDIO, AND DISPLAY EQUIPMENT:** The contest officials will provide laptops, screens, extension cords and projectors. Youth should have all presentations in some form of Microsoft Office (PowerPoint, Word, or Excel). All fonts used must be true type. These fonts specifically include Arial and Times New Roman. If contestants decide to use any other program or fonts, they will be responsible for bringing *all* equipment that is compatible with their presentation.

# SCORE SHEET FOR EDUCATIONAL PRESENTATIONS

TEXAS A&M  
AGRI LIFE  
EXTENSION



Name: \_\_\_\_\_ County: \_\_\_\_\_

Age Division: \_\_\_\_\_ Junior \_\_\_\_\_ Intermediate \_\_\_\_\_ Senior

Educational Presentation Category: \_\_\_\_\_

Presentation Title: \_\_\_\_\_

Time (Max 12 min) Start Time: \_\_\_\_\_ End Time: \_\_\_\_\_ Elapsed Time: \_\_\_\_\_

Scores will be  
cut off before  
being returned

Judges' Comments

Factors for Scoring

Poor Fair Good Excellent Superior

**I. The 4-H Member (20 points)**

A. Appearance (5 pts)	1	2	3	4	5
B. Voice (5 pts)	1	2	3	4	5
C. Poise (5 pts)	1	2	3	4	5
D. Grammar (5 pts)	1	2	3	4	5

**II. Presentation (35 points)**

A. Introduction (5 pts)	1	2	3	4	5
B. Method (5 pts)	1	2	3	4	5
C. Verbal Presentation (5 pts)	1	2	3	4	5
D. Teaching Aids (5 pts)	1	2	3	4	5
E. Organization (5 pts)	1	2	3	4	5
F. Audience Appeal (5 pts)	1	2	3	4	5
G. Summary (5 pts)	1	2	3	4	5

**III. Subject Matter (45 points)**

A. Selection of Subject					
1. Reason for Choice (5 pts)	1	2	3	4	5
2. One Basic Theme (5 pts)	1	2	3	4	5
3. Practical (5 pts)	1	2	3	4	5
B. Information Presented					
4. Accurate (5 pts)	1	2	3	4	5
5. Up-to-Date (5 pts)	1	2	3	4	5
6. Complete (5 pts)	1	2	3	4	5
7. Appropriate for Experience (5 pts)	1	2	3	4	5
C. Knowledge of Subject					
8. Principles (3 pts)	1	2	3		
9. Application (2 pts)	1	2			
10. Judges' Questions (5 pts)	1	2	3	4	5

**Total Score (Max 100 points)**

**Overtime Penalty (2 points per 1 minute)**

**FINAL SCORE**

Judge's Initials

# POINTS TO CONSIDER IN SCORING

## I. The 4-H Member (20 points)

- A. Appearance - Neat, appropriate dress, good posture. Is the 4-H'er well groomed? (5 points)
- B. Voice - Distinct, forceful, yet natural. Does the 4-H'er have a clear, reasonably strong voice with distinct enunciation? Is he/she enthusiastic? (5 points)
- C. Poise - Calm, pleasant, confident. Does the 4-H'er keep his/ her composure even when something appears to go wrong or does go wrong? Does he/she have self-assurance, yet a pleasant manner? (5 points)
- D. Grammar - Correct, well-chosen words. Does he/she use correct grammar and choose words that make the meaning clear? (5 points)

## II. Presentation (35 points)

- A. Introduction - Effective, interesting. This is an explanation of the presentation, not an introduction of the 4-H'er. Does it get the attention of the audience? (5 points)
- B. Method - Did the 4-H'er demonstrate when the illustrated talk would have enabled him/her to do a better job or vice versa? (5 points)
- C. Verbal Presentation – Is the presentation well-coordinated? Has the 4-H organized the presentation to create a smooth flow of information? If the 4-H member is doing a demonstration, does the explanation match the process? If information is given is it to fill time during the process; is it related to what is being shown? (5 points)
- D. Teaching Aids - Posters, Equipment, illustrative aids, and supplies effective and well arranged. Did the 4-H'er choose the teaching aids that would best tell the story? Were they neat, concise and appropriate? (5 points)
- E. Organization - Presentation well organized, clear and logical, not memorized. Is evidence shown that the 4-H'er has planned the presentation? (5 points)
- F. Audience Appeal – Did the 4-H'er maintain the attention of the audience? If using visuals were they readable throughout the room? If they gave a speech, did they interact with the audience, use voice inflection, etc. to keep interest. Was it something of interest? (5 points)
- G. Summary - Are key points summarized? (5 points)

## III. Subject Matter (45 points)

- A. Selection of Subject (15 points)
  - 1. Reason for Choice - Why did the 4-H'er choose this particular subject? This can be implied in talk. (5 points)
  - 2. One Basic Theme - Is the presentation confined to one theme or is it so broad in scope that it cannot be covered in the allotted time? (5 points)
  - 3. Practical - Is the subject important to the project area and to the 4-H'er? (5 points)
- B. Information Presented (20 points)
  - 1. Accurate - Is it the information correct? (5 points)
  - 2. Up-to-Date - Is it the most current information to which the 4-H'er would have access or is obsolete information given? (5 points)
  - 3. Complete - Are all the steps in the process shown? Is given information adequate to cover the topic? (5 points)
  - 4. Appropriate for Experience - Is the presentation appropriate to the experience of the 4-H'er? (5 points)
- C. Knowledge of the Subject (10 points)
  - 1. Principles - Did the 4-H'er understand principles and practices presented? (3 points)
  - 2. Application - Did the 4-H'er understand application of information presented? (2 points)
  - 3. Judges' Questions - Did the 4-H'er understand and answer questions correctly (5 points)

*Acceptable forms of presentations - (1) Illustrated Talk, (2) Method Demonstration, or (3) Speech with no props or illustrations.*



# 4-H Public Presentation Guide

## Educational Presentations and Talks

Matt Tarpley, Extension Program Specialist–4-H  
The Texas A&M University System

**E**ducational presentations are planned talks in which one or more 4-H members teach others about a project or activity. The talks are ways of sharing useful information and of showing and telling others how to make or do something.

Two types of 4-H educational presentations are demonstrations and illustrated talks. These types of talks are effective because people learn faster and remember longer if they see as well as hear.

The greatest value of demonstrations and illustrated talks, however, is to the 4-H members who plan, prepare, and present them. Every 4-H member profits in some way from planning and presenting an educational presentation. Through these presentations, 4-H'ers can:

- ◆ Work on something they like and are interested in
- ◆ Gain new knowledge and learn about a specific subject
- ◆ Learn to plan and organize their thoughts so they can express themselves more clearly
- ◆ Emphasize the major points of a presentation with visuals or examples
- ◆ Increase in poise, confidence, and self-assurance
- ◆ Develop the ability to demonstrate good judgment and speak and act well before an audience

- ◆ Listen to the opinions of others
- ◆ Teach and show others improved methods and practices, thus performing a service to the community
- ◆ Take part in interesting events and activities

### What's the difference?

A method demonstration differs from an illustrated talk in that:

- ◆ A demonstration is doing; an illustrated talk is talking.
- ◆ A demonstration is showing how to do something while telling how to do it; an illustrated talk is telling how while showing visuals.
- ◆ In a demonstration, the presenter makes or does something; there is a finished product. In an illustrated talk, the presenter uses pre-made charts, posters, photographs, computer programs, slides, pictures, models, and/or cutouts to support the information given.
- ◆ The key to a good demonstration is “go and do likewise.” The key to an illustrated talk is “here is information.”

## Who?

Everyone involved with the 4-H program gives educational presentations. As a 4-H leader, you should encourage younger 4-H members to give at least one educational presentation at a meeting during the year. Even though the talk and action may last only a minute, the 4H member will have stood before a group, said something, and done something while fellow members, parents, and friends watch and listen.

Older members should plan to give several educational presentations at 4-H and other meetings, such as civic organizations, schools, or libraries, throughout the year.

## Why?

Educational presentations add variety, interest, and enthusiasm to a 4-H program. One key to a good 4-H program is member participation. The more often 4-H'ers are involved in club and project meetings through educational presentations, the more interested they become. They may also continue their 4-H membership for a longer period.

4-H members who present educational presentations will develop their skills in speaking, researching, and organizing their thoughts into a logical order.

## Where?

Educational presentations should begin in a 4-H project meeting. As the members practice and gain public speaking skills, they can move on to presenting at club meetings, school classes, local communities, and beyond.

Encourage 4-H members who have sufficient experience to give presentations at public gatherings. Work with Extension program committees and civic organizations to arrange for 4-H presentations. These opportunities help the 4-H'ers grow and give them a chance to share the benefits of the 4-H program.

4-H Roundup contests encourage 4-H members to compete at county, district, and state levels. Educational presentations on a wide variety of subjects may be presented. Preparing for and participating

in contests helps members expand their educational experiences and learn to plan, make decisions, acquire information and skills, and develop self-confidence.

Different people see contests in different ways. Help the youths understand that competing can mean more than just winning. A contest can help 4-H members measure their present knowledge and skills against their personal goals.

## The starting point

To introduce younger 4-H members to presentations, a 4-H leader can:

- ◆ Give a short, simple demonstration, perhaps following it with a talk about the parts of an educational presentation and one or two demonstration techniques.
- ◆ Show one beginner how to complete a simple task such as threading a needle or driving a nail. Then ask the member to show another member or the group how to do it. After the member has completed the “showing,” point out that this was a demonstration. Follow this with a word of praise for the presenter and encouragement for the others to try a “show-how.”
- ◆ Ask an older 4-H member to give an educational presentation for younger members. The talk should be smooth, clear, and simple enough for younger members to see that they can do it too.
- ◆ Arrange for the younger members to attend county or district contests to see presentations by other 4-H'ers. Members need not compete the first year they are enrolled. Your goal may be to have each first-year member try informal educational presentation within the project group and watch older members giving presentations at the county and district level. However, encourage the younger members to compete if they seem willing.
- ◆ After explaining educational presentation techniques at one meeting, assign several 4-H members to give presentations at the next meeting using the techniques learned.

- ◆ List possible subjects from which the members may choose.
- ◆ Obtain a videotape on 4-H presentations from your county Extension agent.
- ◆ Have fun with impromptu educational presentations. For example, place items such as pieces of fabric, cooking utensils, a dog brush, or small equipment in a paper bag. At a meeting, ask one or two members to use items from the sack for a presentation.

## The first presentation

A boy or girl's first opportunity to give an educational presentation makes a lasting impression. If the experience is enjoyable, the beginner learns something while receiving recognition from peers, parents, and leaders. The member will want to try again.

At project and club meetings, members learn to perform in front of their peers. There they can overcome the hurdle of talking while standing before an audience. Poise and confidence will often increase with each performance.

The first presentation should be short—1 to 2 minutes—and on a topic that the 4-H'ers know well. Most people find it easier to talk in front of a group if they have something to do with their hands. For this reason, it is often easier for a beginning 4-H'er to give a demonstration than an illustrated talk.

## Presentations can be easy

The beginning 4-H'er needs careful guidance, direction, and encouragement:

- ◆ Encourage the beginner to start with something already taught and used in the 4-H group. The information should be well understood by the member and useful to the audience.
- ◆ Suggest several possible topics to help the member get started.
- ◆ Help the member make a simple, step-by-step outline.
- ◆ Make practicing fun!
- ◆ Be sure the members have a chance to deliver their presentations after they have prepared

them. Make sure the young member's first few presentations are as easy as possible.

- ◆ Schedule the beginning member to speak early in the program so that the excitement will not turn to fear.
- ◆ Avoid scheduling a beginner to follow the complex, polished presentations of older members.
- ◆ A good introduction by the leader or presiding officer makes it easier for the presenter to say the first few words.
- ◆ If the speaker falters or makes a mistake, give a little help. But do not take over, finish the demonstration, or talk for the member.
- ◆ Provide a seat nearby where the member can unwind without being watched immediately after the presentation.
- ◆ Be generous with praise. A smile and a nod as the member sits down, or a hand on the shoulder and the words "I'm proud of you," are worth a fortune at that moment.
- ◆ Review the 4-H "Score Sheet for Educational Presentations" with the member and help him use it to rate his own performance. Younger members might try their skill at judging while watching older members give presentations.

## The experienced 4-H'er

To help the members advance and gain experience, leaders should encourage them to:

- ◆ Choose subjects within their 4-H experience
- ◆ Find new resources to strengthen and enrich the demonstration
- ◆ Check information carefully to be sure it is accurate
- ◆ Consider others' interests as well as their own in selecting a subject
- ◆ Recognize the importance of practice, practice, and more practice!
- ◆ Find opportunities to present and practice; for example, older 4-H members who have prepared educational presentations for contests could give them for other groups

- ◆ Evaluate their own performance and find ways to improve it
- ◆ Recognize that they are providing an example for and have an opportunity to inspire younger members

Advanced 4-H'ers can explore new fields by:

- ◆ Selecting subjects that appeal to broader audiences and have real value to the community
- ◆ Showing increased concern for timeliness and appropriateness for the occasion
- ◆ Using the demonstration as a teaching medium
- ◆ Evaluating the demonstration's development step by step
- ◆ Learning to use many resources for accurate, up-to-date subject matter
- ◆ Striving for professional competence in performance and in the use of visual aids

J. Lyman MacInnis, a public speaking expert, offers these tips in his book, *The Elements of Great Public Speaking*:

- ◆ Continually expand your skills and knowledge base, particularly in vocabulary and grammar.
- ◆ Be observant; try to learn from everything that goes on around you.
- ◆ Take extensive notes.
- ◆ Develop a filing system that will enable you to easily find and refer to your notes.
- ◆ Be open-minded; become interested, not judgmental.
- ◆ Try doing new things and doing old things in new ways.
- ◆ Always consider your audience's point of view.

## Recognize individual differences

The 4-H members differ in many ways—each child is unique in intellectual, social, and physical development. The group members will react differently to the challenge of giving educational pre-

sentations. If they are reluctant to perform, try to understand why. They may:

- ◆ Not know how
- ◆ Feel insecure mentally and/or physically
- ◆ Fear someone will make fun of them (peer group approval is important)
- ◆ Be afraid of doing poorly

Leaders can help 4-H members build confidence by showing a genuine interest and faith in them and their ability. If you understand individual differences and recognize the potential of each member, you can offer help and guidance where it is needed most.

Remember: There is a difference between helping and doing. Although adult support is encouraged, the presentation should be the work of the 4-H member. This includes the creation of visuals.

## Steps in developing an educational presentation

There is not just one right way for preparing and giving an educational presentation; however, the following steps may be helpful:

- ◆ Visualize the audience.
- ◆ Choose a subject that is interesting to you.
- ◆ Decide on a goal.
- ◆ Gather information.
- ◆ Select the kind of presentation—illustrated talk or demonstration.
- ◆ Develop an outline.
- ◆ Organize the presentation.
- ◆ Choose equipment and visual aids.
- ◆ Create the title.
- ◆ Practice delivery.

## Visualize the audience

The 4-H member should keep the audience in mind while preparing a demonstration or talk. A beginner's audience may be only fellow 4-H members. The experienced 4-H'er, however, may address

4-H members, leaders, parents, and members of another organization. Important questions to consider include:

- ◆ Who will be in the audience?
- ◆ How many will be in the audience?
- ◆ What are their interests?
- ◆ What kind of meeting will it be?
- ◆ What does the audience know about the subject? For example, if the listeners are not 4-H participants, 4-H terminology may be unfamiliar to them.
- ◆ What would the audience like to know about the subject?

## Choose a subject

The subject should fit the 4-H member's interests, experience, knowledge, and skills. It should be exciting and challenging, not routine. 4-H projects provide excellent ideas.

Many club members and leaders keep a file of ideas for educational presentations. This file can become a catchall for possible topics to be sifted through as the need arises. Discard ideas or topics that become dated or too simple for group's the experience level. For example, demonstrating measuring ingredients for recipes is appropriate for first- or second-year members but overly simple for older 4-H'ers), they should be discarded. As the experience level in a project area increases, so should the difficulty of the educational topics.

Although the leaders can help 4-H members think of subjects, the final selection should be left up to the 4-H'ers. They are more likely to succeed if they choose a subject from their own project experience. Such familiarity will give them more to talk about, make them more comfortable handling the equipment, and help them handle questions from the judges.

Have each presenter limit the demonstration or talk to one principal idea or theme. The members should avoid trying to include too much material. Older 4-H'ers should choose subjects that are challenging and incorporate new or current information.

After selecting a subject, the 4-H member should answer these questions:

- ◆ Is this something I have learned as a part of my 4-H experience?
- ◆ Do I really want to learn more about the subject?
- ◆ Can I develop the skills, techniques, or visuals to really show or tell others about it?
- ◆ Does it have enough action, or can I get enough visuals to hold the audience's attention?
- ◆ Is it within my ability—not too simple or too difficult?
- ◆ Is this something I really want to do?

If the 4-H'er can answer "yes" to most of these questions, the topic is right. MacInnis offers these comments on choosing a topic for public speaking:

- ◆ The key to a successful speaking experience is to talk about the right topic for you.
- ◆ You must have significant knowledge and sincerely care about the topic.
- ◆ You must have a strong desire to impart your knowledge and feelings to the audience.
- ◆ If you know your material thoroughly, you'll perform with such confidence that distractions, interruptions, or losing your train of thought will not be a problem.
- ◆ If you care enough about your topic, you are less likely to worry about how you look and sound during your delivery.
- ◆ If you really want to impart your knowledge and feelings about your topic, you'll enjoy doing so, and the audience will catch your excitement and have a good time too.
- ◆ You can sometimes meet the criterion of caring enough about the topic by acting as if you do.
- ◆ But if you don't know enough about the subject, you will fail.

After selecting the subject, the 4-H'er must decide whether to present it individually or as part of a team. A team presentation provides valuable experience in planning and cooperation. At times, individual presentations may be more fitting for the subject and situation.



4-H members who plan to compete in Roundup contests should refer to the *Texas 4-H Roundup Guide* for information on the number of participants that make up an entry in the various contest areas.

## Decide on a goal

What is the demonstration or talk to accomplish? Is it to entertain? Stimulate? Convince? Is it to help others learn, or to show what the member knows? Or both?

The 4-H'er should decide on the desired response from the audience and work toward that goal. A beginner's goal may simply be to share information. An experienced 4-H member may want to share knowledge as well as convince members of the audience to try what is being demonstrated.

## Gather information

For demonstrations or talks presented to the 4-H club, the presenter should allow at least 1 month of preparation time. For talks that will be presented to outside groups or used in competitions, allow 2 to 3 months.

Once the subject has been selected, the 4-H'er should learn as much as possible about it. Having a good foundation of information gives confidence, ensures a better performance, and makes it easier for the presenter to answer questions from the judges.

4-H project guides are good sources of information. In addition, publications from the Texas AgriLife Extension Service, textbooks, circulars, libraries, newspapers, and current magazines contain valuable information. Personal interviews with professionals, manufacturers, or processors also can provide specific information. Caution the members about obtaining information from the World Wide Web. They should check to make sure that it is accurate information rather than one person's opinion.

4-H members should become acquainted with people in their community who can help, such as

an electrician, farmer, doctor, nurse, or anyone with special information. The county Extension agent is also a valuable resource person. Have the presenters ask for assistance.

One of the leader's responsibilities is to help the members be selective in their choice of resources. Help them determine whether the information they plan to present is accurate, complete, up to date, appropriate for their age, and an approved practice.

## Select the method

As you work with 4-H members in deciding on which method to use, ask them the following questions:

- ◆ Do you want to show and explain the actual steps in a process? If the answer is "yes," give a demonstration.
- ◆ Can you best explain or tell how to do something with the use of visuals? If the answer is "yes," give an illustrated talk.
- ◆ Will you be able to take all of the equipment and supplies needed for a demonstration to the site? If the answer is "no," give an illustrated talk.
- ◆ Do you want to make or do something and have a finished product? If the answer is "yes," give a demonstration.
- ◆ How many people will be in the audience? Will everyone be able to see what you are doing if you give a demonstration? If the answer is "no," give an illustrated talk.
- ◆ Will the audience be made up of youths or adults? Which method would be the best for the audience?

You probably can think of additional questions relating to the particular subject that the 4-H'er has chosen. The main point is that the method used should suit the material to be covered and the situation where it will be presented. Whether the 4-H'er wishes to show, explain, or tell will determine whether a demonstration or illustrated talk is used.

## Develop an outline

4-H'ers need help to understand the importance of creating an outline for the presentation. Just as a family needs a road map to plan a trip, a speaker needs an outline to follow when preparing a presentation. An outline helps the presenter organize the steps in the process and determine the knowledge, equipment, supplies, and illustrations needed. Organization will enable the 4-H'er to coordinate the messages with the steps and make the best use of the time available.

An adult may need to help in outlining (see the outline guide on page 11.) The 4-H'er should:

- ◆ List the important steps and processes to be discussed.
- ◆ Arrange the steps in logical order.
- ◆ Outline the explanation necessary to go with each step or process. Remember: People learn in different ways, so include both verbal and visual information in the presentation.
- ◆ List the material, equipment, illustrations, models, and other materials needed.
- ◆ Plan the illustrations needed.

An outline serves as a guide for the 4-H member to:

- ◆ Present material in a logical sequence to make the presentation easy to follow.
- ◆ Determine how much action there is and how much telling. A good balance can be achieved by careful planning.
- ◆ Relate the visuals, equipment, and supplies to the information being given.
- ◆ Emphasize the essentials and delete the unimportant.

## Organize the presentation

Every complete presentation has four major parts: an introduction, a body, a summary and a question-and-answer period.

### Introduction

The introduction is the interest-grabber. The presenter must convince the listeners that the

subject is important and worth their time. The member should explain the reasons that the demonstration or talk was selected and its importance for the audience. Although the introduction should be original and clever, make it brief to save time for the main part of the presentation.

In an individual presentation, the 4-H member should introduce himself; in a team presentation, one member may introduce all of the team.

### Body

The body of a speech is the “show and tell” part, when the 4-H members exhibit their “know-how” and skills in communicating it. As they present each step, they explain what is being done and why the method is being used. If the step is not finished by the time the explanation is completed, the presenters should give additional information about the material or equipment being used.

Each step should include only enough explanation to fill the action time required for that part of the demonstration or talk. The 4-H'er should also avoid talking over the noise of a loud tool such as a mixer or drill.

If the members know how to do each step in the demonstration, they can make the talk fit their actions. To be convincing, they must use their own words and avoid memorizing the talking part of the presentation.

For a team demonstration or talk, the 4-H members should divide up the work and explanation to give each team member about the same amount to do. The divisions should transition naturally from one step to another; avoid shifting in the middle of an idea or process.

The presenters should practice speaking in complete sentences, and avoid using slang expressions or trailing off in the middle of a thought.

### Summary

The summary reviews the important points of the presentation. A good summary is short, concise, and pertinent. This is the presenter's last chance to sell the idea, give information, and motivate the audience to follow the suggestions given.

Ending a presentation might be compared to wrapping up a package:

- ◆ Tie up the package by emphasizing the main points the audience should remember.
- ◆ Put the name on the package by encouraging the audience to use the information or method.
- ◆ Add a fancy bow by telling why it is important.

The summary is also an excellent time to tell the audience where the information came from and to cite references.

### Questions and answers

At the end of a presentation, the 4-H member should ask for questions. Explain that allowing the audience to ask questions gives presenters an opportunity to use their background knowledge and teach more thoroughly. Some points may not have been made clear. Questions can help the speaker clarify points not covered or those someone in the audience failed to hear.

In answering questions, the members should:

- ◆ Repeat the question if all the audience members did not hear it.
- ◆ Give only correct answers. Admit it if they do not know the answer and offer to find the information and supply it to the person later.

### Choose equipment and visual aids

The complete success of a demonstration or talk depends on the use of appropriate tools and equipment and the effective use of visuals. What is shown in a demonstration is as important as what is said. The equipment should be:

- ◆ Designed for the job (makeshift arrangements show a lack of preparation)
- ◆ Accepted and recommended by authorities
- ◆ Clean and in good working condition

Visuals such as posters, charts, models, and pictures should:

- ◆ Be used only when really needed. When possible, the 4-H'ers should use the real item rather than an image of it.

If the presentation is clear without visuals, the presenter may choose not to use them.

- ◆ Be large enough to be seen by all members of the audience
- ◆ Have lettering large enough and dark enough to be seen by all audience members. Letters made with black grease pencil or felt point pen, or letters cut from paper, can be seen easily.
- ◆ Not look crowded. It is better to use two or three charts than to have too much information on one.
- ◆ Be clean and neat
- ◆ Be on heavy cardboard that will not buckle or bend

Models should be used only for one of two purposes: small-scale models for ease in handling topics such as tractors, animals, furniture, or buildings; or enlargements to enable the audience to see small operations, such as electrical work and sewing techniques. If models are used, they should be well built and actually do the intended job.

Each visual should be tested against these questions:

- ◆ Is it needed?
- ◆ Does it focus attention?
- ◆ Is it neat and simple?
- ◆ Is it easy to use?
- ◆ Does it fit smoothly into the presentation?

A “yes” answer on these points will indicate a good choice of visuals. MacInnis offers these suggestions on visuals:

- ◆ Unless in a teaching situation or when introducing a new and complex subject, use as few visual aids as possible.
- ◆ If you're using copyrighted material such as a comic strip panel, you must get permission from and give credit to the copyright holder.
- ◆ Visual aids should never dominate a presentation; you want the audience to remember you and your message, not just the sound and light show.

- ◆ The more visual aids you use, the weaker you seem as a leader.
- ◆ Don't get mired in technology.
- ◆ Visual aids should be relevant, informative, necessary, foolproof, and worth the time and expense.
- ◆ Pictures are better than words, and graphs are better than numbers.
- ◆ Unless it's a summary, deal with just one main point per visual aid.
- ◆ Unless it's a summary or a backdrop, don't let the audience see the visual aid until you've introduced the information on it.
- ◆ When you've finished with the visual aid, remove it.
- ◆ Never use a visual aid solely for dramatic effect; it must also support your message.
- ◆ Don't distribute copies of your visual aids before the talk unless you want the copies to be used as a workbook.
- ◆ Never speak with your back or side turned to the audience while looking at a visual aid.

Encourage the members follow these guidelines for handling equipment and visuals:

- ◆ Make a list of the equipment and supplies needed.
- ◆ Use trays to assemble the equipment and supplies.
- ◆ Arrange trays on an extra table to the side or in back.
- ◆ Plan the arrangement to avoid reaching across the body.
- ◆ Keep the table clear in front, so people can see.
- ◆ Handle props carefully and quietly. Have a folded towel under bowls or pans.
- ◆ Keep the work surface clean. Have damp cloths, sponges, or paper towels handy. Tape a paper bag to the table back for trash.
- ◆ Before beginning the presentation, check all posters, charts, and easels for proper sequence and to see that each is secure.

- ◆ Be sure each part of the presentation is visible. Use step shelves, slant boards, clear bowls, or mirrors as needed.
- ◆ Show visuals at the right moment. Posters put up before they are needed will distract the audience's attention from what the presenter is saying and doing.
- ◆ Before using photo or computer projection, make sure that it is needed. The equipment can be difficult to transport, set up, and use. Take into account the amount of time a computer takes to start up, and learn the sequence of turning on the projector and connecting it to the computer before turning on the computer. Never try to use a computer and/or projector that you have not tested with your visual presentations.

## Consider the title

Choosing a title may be the last step in preparing a presentation. Encourage the member to concentrate on the idea for the presentation and the development of the idea. The title will come later.

Titles that are most effective usually are fun, short, descriptive, and image making. A title should suggest the demonstration subject without telling the whole story.

## Practice delivery

Practice is vital. After each review, the 4-H members can see whether their ideas are in order and supported with examples, illustrations, or quotations. Practice will help them:

- ◆ Synchronize action and explanation
- ◆ Do things in logical order
- ◆ Stay within the time limit
- ◆ Know whether or not he has sufficient information on the subject
- ◆ Use equipment skillfully
- ◆ Know that special equipment is functioning as it should

Practicing before several audiences—members, leaders, or parents—is helpful, as is recording with a tape recorder and practicing in front of a mirror.

If the equipment is available, use a video camera to record the presentation so the 4-H'ers can see themselves in action.

## Making presentations effective

- ◆ Practice good posture; stand tall. Do not lean on the table or twist one foot behind the other.
- ◆ Maintain eye contact with the audience—project your voice to the back of the room to make sure the entire audience can hear.
- ◆ Speak in a voice that is natural, distinct, and loud enough to be heard. A friendly, confident tone of voice is the most convincing.
- ◆ Avoid mannerisms, such as pushing back hair or rocking back and forth, that may distract the audience.
- ◆ Be neat and well groomed.
- ◆ A dress rehearsal is an opportunity to evaluate the overall effectiveness of the performance.
- ◆ Smile to indicate interest and enthusiasm for the subject.
- ◆ Look and act as if you are enjoying presenting the demonstration or talk so the audience will want to follow the example.

## Evaluation

Members and leaders evaluate or rate educational presentations with different rating scales. Both, however, are looking for the personal growth and development of the individual.

As a 4-H leader, ask yourself to what extent the 4-H member assumed responsibility in planning and presenting the demonstration or talk. Did the demonstration or talk lead the member into new learning or expanded interest in 4-H? Has the member matured through participation in educational presentations?

The 4-H'er members will measure their success by their own feelings of satisfaction, the response of the audience, and the rating of the judges.

Although 4-H demonstrations and illustrated talks help members acquire confidence, poise, and

knowledge, they are also used in competition at the county, district, and state levels.

Explain to 4-H members the judge's role and what to expect. The task of the judge is to:

- ◆ Rate each demonstration or talk according to an acceptable standard
- ◆ Select contest winners when appropriate
- ◆ Give reasons for judging decisions
- ◆ Give constructive suggestions

In making decisions, judges:

- ◆ Look at the demonstration or illustrated talk in light of points given on the *4-H Presentation Score Sheet*
- ◆ Ask questions if more information is needed to clarify the presentation or to further test the member's knowledge or background. Judges should ask questions only on the material covered in the presentation.
- ◆ Base their rulings on the ratings on the "Score Sheet for Educational Presentations," the presenter's responses to questions, and the total impact of the presentation on the judges and audience
- ◆ Encourage the 4-H member and give suggestions for improvement, either orally or in writing

Leaders and parents can help members to accept both winning and not winning and to sustain their interest in giving educational presentations by:

- ◆ Explaining that not everyone can win every competition
- ◆ Acquainting members with the score sheet to be used by the judges
- ◆ Giving members verbal approval often so that tangible awards do not become the only form of recognition
- ◆ Explaining the value of each rating so the members will be proud to receive participation certificates, ribbons, medals, or other awards
- ◆ Keeping informed about current standards so that you can answer members' questions

- ◆ Helping members understand that participation in competitive events is a worthwhile activity regardless of how they place

## **Additional resources**

*4-H Method Demonstration Instructional Video*,  
Texas AgriLife Extension Service

*4-H Presentation Planning Sheet*

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# **Example Presentation Outline**

## **Introduction**

Who are you?

Why did you select this topic?

Why is your topic important?

## **Body**

How activity to be done:

Do:

Say:

Need: (supplies, equipment, visuals)

## **Summary**

What was accomplished?

What were the main points of the presentation?

What did the subject mean to you?

What can it mean to the audience?

What references did you use?

## **Questions and answers**



# Score Sheet for Educational Presentation

NAME(S) \_\_\_\_\_

PRESENTATION TITLE: \_\_\_\_\_

AGE CATEGORY:                      Junior                      Intermediate                      Senior

MAX TIME 12 MINUTES:    Starting Time: \_\_\_\_\_    Ending Time: \_\_\_\_\_    Elapsed Time: \_\_\_\_\_

TYPE OF PRESENTATION:    Method Demonstration    Illustrated Talk    Public Speech

Each person evaluation an education presentation is to score all items in divisions I, II, III (see reverse side). It is important that each item be scored and additions be checked for accuracy. The scoring team should compare scores and arrive at a combined score for each presenter.

JUDGE'S COMMENTS	FACTORS FOR SCORING	POINTS
	<b>I. The 4-H member (20 points)</b>	
	A. Appearance (5 pts)	
	B. Voice (5 pts)	
	C. Poise (5 pts)	
	D. Grammar (5 pts)	
	<b>II. Presentation (35 points)</b>	
	A. Introduction (5 pts)	
	B. Method (5 pts)	
	C. Verbal Presentation (5pts)	
	D. Teaching Aids (5 pts)	
	E. Organization (5 pts)	
	F. Audience Appeal (5 pts)	
	G. Summary (5 pts)	
	<b>III. Subject Matter (45 points)</b>	
	A. Selection of Subject	
	1. Reason for Choice (5 pts)	
	2. One Basic Theme (5 pts)	
	3. Practical (5 pts)	
	B. Information Presented	
	4. Accurate (5 pts)	
	5. Up-to-Date (5 pts)	
	6. Complete (5 pts)	
	7. Appropriate for Experience (5pts)	
	C. Knowledge of Subject	
	8. Principles (3 pts)	
	9. Application (2 pts)	
	10. Judge's Questions (5 pts)	
	<b>FINAL SCORE</b>	

cut along dotted line before returning to 4-H member

# POINTS TO CONSIDER IN SCORING

## I. The 4-H Member (20 points)

- A. Appearance - Neat, appropriate dress, good posture. Is the 4-H'er well groomed? (5 points)
- B. Voice - Distinct, forceful, yet natural. Does the 4-H'er have a clear, reasonably strong voice with distinct enunciation? Is he/she enthusiastic? (5 points)
- C. Poise - Calm, pleasant, confident. Does the 4-H'er keep his/ her composure even when something appears to go wrong or does go wrong? Does he/she have self-assurance, yet a pleasant manner? (5 points)
- D. Grammar - Correct, well chosen words. Does he/she use correct grammar and choose words that make the meaning clear? (5 points)

## II. Presentation (35 points)

- A. Introduction - Effective, interesting. This is an explanation of the presentation, not an introduction of the 4-H'er. Does it get the attention of the audience? (5 points)
- B. Method - Did the 4-H'er demonstrate when the illustrated talk would have enabled him/her to do a better job or vice versa? (5 points)
- C. Verbal Presentation – Is the presentation well coordinated? Has the 4-H organized the presentation to create a smooth flow of information. If the 4-H member is doing a demonstration, does the explanation match the process? If information is given is it to fill time during the process; is it related to what is being shown? (5 points)
- D. Teaching Aids - Posters, Equipment, illustrative aids, and supplies effective and well arranged. Did the 4-H'er choose the teaching aids that would best tell the story? Were they neat, concise and appropriate? (5 points)
- E. Organization - Presentation well organized, clear and logical, not memorized. Is evidence shown that the 4-H'er has planned the presentation? (5 points)
- F. Audience Appeal – Did the 4-H'er maintain the attention of the audience? If using visuals were they readable throughout the room? If they gave a speech, did they interact with the audience, use voice inflection, etc to keep interest. Was it something of interest? (5 points)
- G. Summary - Are key points summarized? (5 points)

## III. Subject Matter (45 points)

- A. Selection of Subject (15 points)
  - 1. Reason for Choice - Why did the 4-H'er choose this particular subject? This can be implied in talk. (5 points)
  - 2. One Basic Theme - Is the presentation confined to one theme or is it so broad in scope that it cannot be covered in the allotted time? (5 points)
  - 3. Practical - Is the subject important to the project area and to the 4-H'er? (5 points)
- B. Information Presented (20 points)
  - 4. Accurate - Is it the information correct? (5 points)
  - 5. Up-to-Date - Is it the most current information to which the 4-H'er would have access or is obsolete information given? (5 points)
  - 6. Complete - Are all the steps in the process shown? Is given information adequate to cover the topic? (5 points)
  - 7. Appropriate for Experience - Is the presentation appropriate to the experience of the 4-H'er? (5 points)
- C. Knowledge of the Subject (10 points)
  - 8. Principles - Did the 4-H'er understand principles and practices presented? (3 points)
  - 9. Application - Did the 4-H'er understand application of information presented? (2points)
  - 10. Judges' Questions - Did the 4-H'er understand and answer questions correctly (5 points)

*Acceptable forms of presentations - (1) Illustrated Talk, (2) Method Demonstration, or (3) Speech with no props or illustrations.*



## Texas Essential Knowledge and Skills (TEKS)

Instructors who use this curriculum will address the following TEKS as outlined by the Texas Education Agency:

### *English and language arts*

The student listens attentively and engages actively in a variety of oral language experiences.

**Speech communication:** The student is able to recognize and explain the importance of communication in social, academic, citizenship, and professional roles.

**Analysis of visual media:** The student is able to distinguish the purposes of various media forms such as information, entertainment and persuasion.

**Public speaking:** The student is able to identify and analyze the traditional elements of speech form, including introduction, body, and conclusion.

**Communication applications:** The student is able to explain the importance of effective communication skills in professional and social contexts.

**Oral interpretation:** The student is able to analyze the audience, occasion, and purpose when designing presentations.

### *Home economics education*

**Skills for living:** The student applies principles of effective communication.

### *Technology education*

**Exploring communication technology:** The student uses communication technology to meet practical objectives.

**Communication systems:** The student selects and uses the proper communication technology to meet practical objectives.

**Communication graphics:** The student applies communication graphics technology to practical problems.

## Developmental assets and life skills

Young people who have learning experiences through this curriculum may develop certain assets and life skills that contribute to their personal development:

### *Developmental Asset*

#### **Search Institute®**

- Support
- #4 Caring Neighborhood
  - Boundaries & Expectations
- #14 Adult Role Models
  - Positive Values
- #30 Responsibilities
  - Social Competencies
- #32 Planning and Decision Making
- #33 Interpersonal Competence
  - Positive Identity
- #37 Personal Power
- #39 Sense of Purpose
- #40 Positive View of Personal Future

### *Targeting Life Skills Model*

#### **Iowa State University Extension**

- Nurturing Relationships
- Self-responsibility
- Planning/Organizing
- Goal Setting and Personal Feelings

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Revision



# 2016-2017 D-9 4-H Discover Science Method Research Poster Contest

## INTRODUCTION

The 4-H Discover Science Method Research Poster Contest allows youth the opportunity to apply the scientific method to the subject matter they have learned through their 4-H projects. It is framed in principles of science, engineering, and technology (S.E.T.). Participants will 1) construct a poster, 2) write a final written report, and 3) deliver a short oral presentation. Participants may enter in one of six categories:

1. Biochemistry/microbiology/food science
2. Environmental science/chemistry/earth science
3. Animal science
4. Plant and soil science
5. Engineering/physics
6. Consumer product testing

The scientific method is a process for experimentation that is used to explore observations and answer questions. Scientists use the scientific method to explore relationships in nature.

### Steps of the Scientific Method

- Ask a question
- Investigate previous research on the topic
- Construct a hypothesis
- Test hypothesis by performing an experiment
- Analyze data and formulate results
- Interpret results and draw a conclusion
- Communicate results

The members of Texas A&M AgriLife will provide equal opportunities in programs and activities, education, and employment to all persons regardless of race, color, sex, religion, national origin, age, disability, genetic information, veteran status, sexual orientation or gender identity and will strive to achieve full and equal employment opportunity throughout Texas A&M AgriLife.

### Content

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Contest overview  
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    Research categories  
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    Project certification  
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    Poster exhibit safety  
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Sample Contest entries  
Scoring rubric  
Contest forms  
Entry form  
County agent approval form  
Human vertebrate endorsement  
Non-human vertebrate endorsement

## OBJECTIVES

- To initiate a program based on science and the scientific method
- To increase awareness of science, engineering and technology among 4-H members
- To place science, engineering, and technology in the forefront of 4-H project work
  - **Science** abilities encompass the entirety of the cause and effect on the world
  - **Engineering** is recognized as a problem-solving and design process within science and technology
  - **Technology** is human innovation

**NOTE:** *The Scientific Method is not to be confused with the 'Engineering Design Process' which is applied by engineers to create original design of prototypes, processes, or solutions to engineering problems.*

## CONTEST OVERVIEW

**Eligibility** – The contest is invitational. Individuals do not need to qualify at the county level to participate. Age Divisions are Junior, Intermediate and Senior.

Research projects may be an individual effort, or be conducted by a team of up to three (3) 4-H members. Team members should keep separate research journals (notebooks) and then combine the notes and data to construct and submit (1) final project report. Topics for the Texas 4-H Research Poster Contest should be age appropriate. Research should be of a nature that the 4-H member can design, experiment, analyze and write a meaningful report on the age-appropriate topic. Sample projects are listed on page 12.

**Research Categories** – Individuals and teams can enter in one of six categories. Topics may cover any field as long as it is research oriented, and may include humanities or social sciences that meet the research criteria.

### 1. Biochemistry/Microbiology/Food Science

Biology of microorganisms – bacteriology, virology, protozoology, fungi bacterial genetics, yeast. The topic may also include chemistry of life processes such as molecular biology, molecular genetics, enzymes, photosynthesis, protein chemistry, food chemistry, hormones, etc. *Example: Compare different yeast fermentation techniques for converting sugar to alcohol.*

### 2. Environmental Science/Chemistry/Earth Sciences

Study of pollution sources (air, water, and/or land) and their control. Study of nature and composition of matter and laws governing it – physical chemistry, organic chemistry, inorganic chemistry, geology, mineralogy, oceanography, geography. *Example: Examine the effects of cropping practices on wildlife population.*

### 3. Animal Science

Study of animals – animal genetics, entomology, animal husbandry, animal physiology, studies of

invertebrates. *Example: Study the effects of growth hormones on meat or milk production.*

#### 4. Plant and Soil Science

Study of plant life – agriculture, agronomy, horticulture, forestry, plant taxonomy, plant genetics, etc. *Example: Study the effects of weather and soil conditions on plant growth.*

#### 5. Engineering/Physics

Technology projects that directly apply scientific principles to manufacturing and practical uses – mechanical, chemical, electrical, environmental engineering, etc. Theories, principles, and laws governing energy and the effect of energy on matter. *Examples: Compare the energy output and efficiency from different types of solar panels.*

#### 6. Consumer Product Testing

Comparison of product quality, effectiveness, usefulness, economy, cost, smell, environmental friendliness, etc. *Example: Compare the effectiveness of different household cleaning products on removing bacteria from kitchen surfaces.*

### Judging Criteria

Entries are judged based on their adherence to the steps and principles of the Scientific Method. The contest requires a **poster**, **final written report**, and **oral presentation and interview**. Each age division is judged separately. The scoring rubric is on pages 13-14 of this document. First to 3<sup>rd</sup> place winners in each category and age division will be recognized. Only contestants and judges are allowed in the judging area for presentations and interviews.



**Research poster** – The poster should summarize each step of the Scientific Method as it relates to the project. The poster should include an abstract, introduction, background, hypothesis, methodology, results, and conclusions. Following are suggestions for a good research poster:

- Good title – Your title is an attention getter. A good title should simply and accurately present your project and its nature. The title should be no longer than 10 words.
- Nice visuals – Include photographs, drawings, charts, and graphs as appropriate to effectively communicate your project. Visuals should be clear and easy to interpret. Include headings and labels on graphs, charts, diagrams, and tables.

- Creative but logically organized – Your poster should be logically sequenced and easy to follow. A brief glance should permit anyone (especially the judges) to quickly locate the title, summary, experiments, results, and conclusions.
- Clearly presented – The font size should be large enough to read from 3 feet away. The poster should include the information the judges will need without being crowded.

**Poster Guidelines:** Poster should be no larger than 48” wide by 30” deep (the distance from front to back) 108” high (from floor to top, includes table if project is on table top). Note that tables are generally 24” wide, but can vary with convention location. Items that do not adhere to the poster must fit on the tabletop within the dimension of the unfolded poster. Avoid lights, banners, shelves, etc. that are outside of the poster dimensions.

**Final written report** – The final written report should chronicle the 4-H member’s or team’s work on the chosen research topic. Content should be organized with the following headings:



- Title Page – Include title of entry, contestant name(s), category, age division, and county.
- Abstract – Brief and concise description of the purpose, hypothesis, research methods, results and conclusions. (Use no more than 5 to 6 sentences)
- Introduction – State the question or problem being studied and why it is important.
- Literature Review – Provide an overview of what research has already been done to address the problem or issue. Be sure to cite references.
- Materials and Methods – Describe the manner in which the study or experiment was conducted. After reading this section, readers should have sufficient information to replicate the study.
- Results – Summarize data and final results obtained from the study or experiment. It is helpful to present results using graphs and/or tables.
- Discussion & Conclusions – Discuss what conclusions you draw from the results. Answer whether your hypothesis was supported or rejected based upon the results. Suggest what further study is needed based on your results.
- References (APA Format) – List significant sources of information used in your final written report. Refer to the following document for help on citing references:  
[http://writing.wisc.edu/Handbook/American\\_Psychological\\_Association\\_%28APA%29\\_Documentation\\_M.pdf](http://writing.wisc.edu/Handbook/American_Psychological_Association_%28APA%29_Documentation_M.pdf)
- Acknowledgements – Give credit to individuals or groups who assisted you with the project.

The final report may be typed or hand-written. It may be bound, or it may be submitted in a 3-ring binder. Research journal entries may be added as an appendix at the back of the report.

**The Final Written Report is due upon check-in the day of the contest.**

### **Your Research Journal (notebook)**

A research journal (or notebook) should be kept current throughout the duration of the project and used to complete the final written report. Your journal should chronical all research activity including meeting notes with County Extension Agents, details regarding your experiment, recorded raw data, and other information as appropriate. For project teams, each member should keep his/her personal journal and contribute to the final written report. The journal will not be judged, but you are encouraged to bring it to the competition.

**Oral presentation and interview** – The contestant(s) will give a 7-10 minute presentation and have a short interview by judges. If you enter as a team, all team members must have a speaking role during the presentation. Following are suggestions for presenting your poster:



- Be sure to state the title and purpose of your project. Provide a brief explanation of why you selected the topic and why it is important to you.
- Speak in a loud and clear voice.
- Use vocabulary which demonstrates knowledge of the subject matter.
- Stay relaxed and use good posture. Avoid fidgeting and maintain eye contact with judges.
- Practice your presentation and anticipate the types of questions a judge may ask.

### **Project Certification (by County Extension Agent or designee)**

**The County Extension Agent or their designee must approve all projects.** The County Extension Agent, with special emphasis on research projects that involved human and animal subjects, must also review and certify compliance with the Human Vertebrate Endorsement or Non-Human Vertebrate Endorsement forms if applicable. These forms are located on pages 17-18 this document.

### **Entry Procedure and Deadline**

Individuals or teams of up to (3) people may enter the contest in their appropriate age division (Junior, Intermediate or Senior) in one of the six topic categories previously listed.

To enter, complete the **Entry Form, County Extension Agent Approval Form, Human Vertebrate Endorsement** and **Non-Human Vertebrate Endorsement** forms pages 15-18.

## Suggested Project Activity

### 1. Set meeting with County Extension Agent

- a. Take information with you to outline your research project
- b. Discuss and narrow down topic
- c. Discuss your experiences related to this topic and why you are interested
- d. Review safety guidelines with County Extension Agent and parents
- e. Review articles or books on the topic that interest you
- f. Plan an initial project timeline of project activity
- g. Record meeting notes in your research journal and date it

### 2. Generate Research Question and Hypothesis

- a. Write your inquiry question
- b. Begin with what you know
- c. Write why you want to conduct an experiment on the subject
- d. Determine if you have sufficient resources to conduct the experiment
- e. Set meeting with County Extension Agent to discuss your question and hypothesis

### 3. Design Research and Conduct Investigation

- a. Write your hypothesis (what you think will happen)
- b. Research variables (what they are, and what type of variables) and what controls are needed for experiment
- c. List the materials and methods you will use and the experimental procedures you will follow
- d. Set meeting with County Extension Agent to discuss your experiment

### 4. Perform Experiment

- a. Gather all the materials you will need to begin your experiment
- b. Journal entries should be as complete as possible
- c. Notes are the way to put your observations down so later you can find answers
- d. Dates, times, and thoughts you have about the experiment should be written
- e. Plan data records that need to be collected
- f. Conduct experiment or research
- g. Collect and organize data
- h. Set regular meetings with your County Extension Agent to report the progress of your research
  - i. Take your research journal each time so each of you sign and date the meeting notes page
  - ii. Bring out any unique things you are recording in your journal
  - iii. Write down ideas from other research projects that interest you from your work
  - iv. Begin thinking of how to organize information to put on the poster display

## 5. Analyze Data and Prepare Report

- a. Identify any patterns in results
- b. Explicitly use results to answer the question and test the hypothesis
- c. Point out sources of errors or limitations
- d. Develop your presentation and sketch your poster display layout
- e. Set meeting with County Extension Agent to review your journal and to plan your final poster lay out and written report
- f. Draft your poster and final written report
- g. Practice your poster presentation among different groups
- h. Share results with others in your community and gather feedback
- i. Finalize your poster and written report based on feedback
- j. Now relax – the hard work is over. Now enjoy telling everyone about it at Roundup!

## Research Safety

Safety should be a primary concern for every science experiment. Almost any tool or technique, no matter how safe, can be used in an unsafe manner. At the same time, many potentially dangerous tools are perfectly safe if they are used in the proper way. So how do you know if your project is within reasonable safety guidelines? Science Buddies ([www.sciencebuddies.org](http://www.sciencebuddies.org)) recommends you ask three simple questions to test your project's level of safety.

Is it safe for other people or animals that are involved? All projects involving humans as subjects must involve minimal risk. Unacceptable risks include ingestion of any substance or physical contact with any potentially hazardous materials, as well as unnecessary physical, psychological, or emotional stress, including invasion of privacy. Even if you are simply surveying other students, you should review your questions in advance and decide if the questions meet this test, and determine if a parent/guardian's consent is needed for any students that are participating. If you are not sure, do not hesitate to ask your County Extension Agent, parent, or mentor to help you decide.

Live animals (in particular vertebrate animals-those with a backbone) should be housed, cared for, and observed in a safe and humane manner.

If you are participating in another science fair at your classroom or school fair, does your project meet the safety rules for that higher-level fair? If you will be participating in a city or county-wide fair, make sure that the projects meet the rules of that fair. Science fairs affiliated with the Intel International Science and Engineering Fair (ISEF) must follow very strict and detailed safety rules, often including pre-approval before experimentation begins. The Science Buddies website has an overview of these rules on the Scientific Review Committee (SRC) page.

Finally, have you addressed safety concerns to your parents' and County Extension Agent's satisfaction? Make sure you address all safety issues in your project proposal so your adult supervisors are aware of any issues ahead of time. Your County Extension Agent will then evaluate your project based on the following questions:



1. Where will the experiment be performed?
2. What safety gear will be used?
3. Who will be supervising the experiment?
4. Are you knowledgeable about or do you have training in the procedures being used?

If in doubt about the safety of the experiment, ask your County Extension Agent, parent, or mentor for advice. Be prepared to choose another project if your County Extension Agent decides that yours does not meet age appropriateness or the safety guidelines. Hopefully good common sense and the questions above will help you put together a fun, informative, and safe research project.

## Poster Exhibit Safety

1. If an exhibit becomes unsafe or unsuitable for display, it will be removed and deemed ineligible for any awards.
2. Projects which involve vertebrate animal subjects must conform to the following statement: **Experiments on live animals involving surgery, the removal of parts, injection of harmful chemicals, and/or exposure to harmful environments, are not acceptable at the Discover Scientific Method Research Poster Contest.** Live vertebrates are not permitted at the Discover Scientific Method Research Poster Contest.
3. Toxic and hazardous chemicals are prohibited.
4. All necessary chemical glassware must be displayed in a stable manner. The items must be back from the edge of the table and may not be operational at any time.
5. 4-H Member should substitute colored water, photographs or drawings for chemicals.
6. Crystals, other than sucrose (sugar) and sodium chloride (salt), may not be displayed. Projects involving crystals can be represented by pictures or other three-dimensional models.
7. Hypodermic needles and syringes may not be displayed in any exhibit at the Discover Scientific Method Research Poster Contest.
8. It is critically important that no person be exposed to any bacteria that are considered pathogenic. Therefore, the following two rules are very important: **No wild cultures incubated above room temperature; no cultures taken from humans or other warm blooded animals may be used.** This includes, but is not limited to skin, throat and mouth.
9. Plastic petri dishes must be sealed.
10. Lasers may not be used in any exhibit.
11. Dangerous and combustible materials are prohibited.
12. No exhibit shall have open flames. Any part of an exhibit that can get hotter than 100 degrees Celsius (boiling water temperature) must be adequately protected from its surroundings.

**13. Notify Contest Superintendent if electricity is needed.** If an exhibit includes electrical wiring or devices, they must be safe. For voltages above 20 volts, special precautions must be taken. All connections must be secure and provide suitable protection against short circuits, etc.

**14.** All wiring carrying more than 20 volts must be well insulated. Also, the connections must either be soldered or secured by UL approved fasteners. The wire used must be insulated adequately for the maximum voltage that will be present and the wire must be of sufficient size to carry the maximum current you anticipate. Open knife switches or doorbell-type push buttons in circuits using more than 20 volts may not be used.

**15.** If the exhibit will be connected to 120 volt AC power (plugged into a wall outlet) fuses or circuit breakers must be provided to protect not only the exhibit but also any others that may share the same sources of power. The power cord used must be UL approved for the voltage and current it will be carrying, and it must be at least 1.8 meters (6 feet) long. Discover Scientific Method Research Poster Contest staff must be notified of the need for power at the time of certification so power can be ordered in advance.

**16.** Exhibits requiring voltage in excess of 120 volts AC are not allowed.

## **THE SCIENTIFIC METHOD** (excerpt from Science Buddies presentations for teachers)

Scientific method refers to techniques for investigating phenomena, acquiring new knowledge, or correcting and integrating previous knowledge. To be termed scientific, a method of inquiry must be based on gathering observable, empirical and measurable evidence subject to specific principles of reasoning. A scientific method consists of the collection of data through observation and experimentation, and the formulation and testing of hypotheses.

Reasoning is the cognitive process of looking for reasons for beliefs, conclusions, actions or feelings. Although reasoning was once thought to be a uniquely human capability, other animals also engage in reasoning.

A hypothesis consists either of a suggested explanation for an observable phenomenon or of a reasoned proposal predicting a possible causal correlation among multiple phenomena. The term derives from the Greek, "*hypotithenai*" meaning "to put under" or "to suppose." The scientific method requires that one can test a scientific hypothesis.

The steps of the scientific method are:

- Ask a question
- Investigate previous research on the topic
- Construct a hypothesis - a prediction based on previous research
- Test hypothesis by performing an experiment
- Analyze data and formulate results
- Interpret results and draw a conclusion
- Communicate results

The scientific method is a process for experimentation used to explore observations and answer questions. Scientists use the scientific method to search for cause and effect relationships in nature. In other words, they design an experiment so that changes to one item cause something else to vary in a predictable way. Just as it does for a professional scientist, the scientific method will help you to focus your research poster project question, construct a hypothesis, design, execute, and evaluate your experiment.

## Steps of the Scientific Method

- Ask a Question:** The scientific method starts when you ask a question about something that you observe: How, What, When, Who, Which, Why, or Where? And, in order for the scientific method to answer the question it must be about something that you can measure, preferably with a number.
- Investigate previous research on the topic:** Rather than starting from scratch in putting together a plan for answering your question, you want to be a savvy scientist using library and Internet research to help you find the best way to do things and insure that you don't repeat mistakes from the past.
- Construct a Hypothesis:** A hypothesis is an educated guess about how things work: "If \_\_\_\_\_[I do this] \_\_\_\_\_, then \_\_\_\_\_[this]\_\_\_\_\_ will happen." You must state your hypothesis in a way that you can easily measure, and of course, your hypothesis should be constructed in a way to help you answer your original question.
- Test Your Hypothesis by Performing an Experiment:** Your experiment tests whether your hypothesis is true or false. It is important for your experiment to be a fair test. You conduct a fair test by making sure that you change only one factor at a time while keeping all other conditions the same. You should also repeat your experiments several times to make sure that the first results weren't just an accident.
- Analyze Your Data and Formulate Results:** Once your experiment is complete, you collect your measurements and analyze them to see if your hypothesis is true or false.

Scientists often find that their hypothesis was false, and in such cases they will construct a new hypothesis starting the entire process of the scientific method over again. Even if they find that their hypothesis was true, they may want to test it again in a new way.

**Interpret Results and Draw a Conclusion:** What do the results mean? How can results be in a manner to support your conclusion?

**Communicate Your Results:** To complete your project you will communicate your results to others in a final report and display board. Professional scientists do almost exactly the same thing by publishing their final report in a scientific journal or by presenting their results on a poster at a scientific meeting.

Even though we show the scientific method as a series of steps, keep in mind that new information or thinking might cause a scientist to back up and repeat steps at any point during the process. A process like the scientific method that involves such backing up and repeating is called an iterative process.

## **SUPPLEMENTAL RESOURCES**

### **Science Projects for 4-H from Science Buddies**

[http://www.sciencebuddies.org/science-fair-projects/parents\\_4h.shtml](http://www.sciencebuddies.org/science-fair-projects/parents_4h.shtml)

### **Making an Academic Poster Presentation**

<https://nau.edu/undergraduate-research/poster-presentation-tips/>

### **Scientific Poster Design**

<http://hsp.berkeley.edu/sites/default/files/ScientificPosters.pdf>

### **Tips on Making Presentations**

<https://www.kent.ac.uk/careers/presentationsskills.htm>

## SAMPLE 2015-2016 CONTEST ENTRIES

- *Effects of Environmental Temperature on the Presence of Siphia Flava on Johnson Grass.* “The objective of this experiment is to determine if sugarcane aphids are surviving the winter, and determine when the aphids will reappear to prevent crop loss.”
  
- *Effects of Estrus Synchronization on Conception Rate, Pregnancy Type, & Length of Breeding Season.* “The purpose of this project was to compare the benefits of breeding on a synchronized natural estrus compared to natural breeding to determine if one had the advantage over the other.”
  
- *Keeping Score with Dyna-Hex 4.* “This project will determine the effectiveness of common household cleaning agents such as (Clorox bleach, Dawn dishwashing liquid and Purell antibacterial hand sanitizer) vs hospital-grade Dyna-hex 4 or Chlorhexidine Gluconate 4% solution antiseptic at destroying bacteria.”
  
- *Do You Feel the Bag?* “The purpose of this experiment is to determine if it is really possible to select the bag of chips with the most chips by feel alone.”
  
- *“PUREfected” Water – A Study on Solar Water Disinfection.* “The purpose of this experiment was to test if solar water disinfection could help prevent water borne diseases caused by E. coli bacteria.”
  
- *No Till Soil ... Saves Soil and Moisture.* “The purpose of this experiment was to observe which farming practice retains the most soil moisture and has the least amount of run-off soil.”
  
- *The Impact of Defoliation, Desiccation, Green Leaf and Growth on Different Combinations of PPO's.* “The objective of this experiment was to investigate the effects of different combinations and concentrations of PPO's, including Display, ETX, AIM, Sharpen, and Sharpen/E on defoliation, desiccation, green leaf, and regrowth percentages of dry land cotton.”
  
- *The Effect of Arrow Fletching Type on Arrow Accuracy and Consistency.* “The question posed was if there would be a difference in accuracy and consistence between the three most common types of arrow fletching – feathers, spin wings and vanes?”
  
- *SPLISH! SPLASH!: A Study of E. coli Levels in Storm Water Runoff Affecting the Concho River Watershed.* “The focus of this research project is to identify Escherichia coli bacteria levels in storm water runoff within the geographical area of a specific neighborhood. The objective was to determine if these levels exceeded the EPA's safe surface water standard set by the 2012 Recreational Water Quality Criteria Recommendations 2, and therefore identify a non-point source pollutant's origin.”



## District 9 4-H Discover Science Method Research Poster Contest Score Sheet

**4-Her's Name(s):**

**Category:**

**Project Title:**

### Part 1: Written Report

<b>Section:</b>	<b>Possible Points:</b>	<b>Points Earned:</b>
<b>Title Page</b> Should include: 4-Her(s) Name, Category, Age Division, and County.	<b>2</b>	
<b>Abstract</b> Abstract should briefly and concisely describe the purpose, hypothesis, methods, results, and conclusions.	<b>5</b>	
<b>Introduction</b> Should answer the question, "why was the work done?" It should also clearly state the problem that justifies the research.	<b>5</b>	
<b>Literature Review</b> Should detail what information currently exists concerning the research project. Information listed should be materials used in the research.	<b>3</b>	
<b>Materials and Methods</b> The materials and methods section should enable others to reproduce the results by duplicating the study.	<b>10</b>	
<b>Results</b> Should list a summary of results the project produced.	<b>10</b>	
<b>Discussion and Conclusions</b> Should show the conclusions that were drawn from the results of	<b>10</b>	

**Part 2: Poster Display**

	<b>Possible Points:</b>	<b>Points Earned:</b>
Is the project original and creative?	5	
Is the display logical and organized?	5	
Are headings and photos appropriate for the project?	5	
Are graphs, charts, diagrams, and tables properly labeled?	5	
Are colors, fonts, and formats appealing and easy to read?	5	
<b>TOTAL (PART 2)</b>	<b>25</b>	

**PART 3: Oral Presentation and Interview**

	<b>Possible Points:</b>	<b>Points Earned:</b>
Did the 4-Her(s) speak in a loud, clear voice?	5	
Did the 4-Her(s) use vocabulary which demonstrated an in-depth knowledge of the topic?	5	
Did the 4-Her(s) use appropriate posture, body language, and eye contact?	5	
Did the 4-Her(s) state the title and purpose of the project and explain the reason for the topic selection?	5	
Was the 4-Her(s) well prepared and knowledgeable on the project?	5	
<b>TOTAL (PART 3)</b>	<b>25</b>	

**Total Score (with all three parts combined)** \_\_\_\_\_/100

**Judge's Comments:**