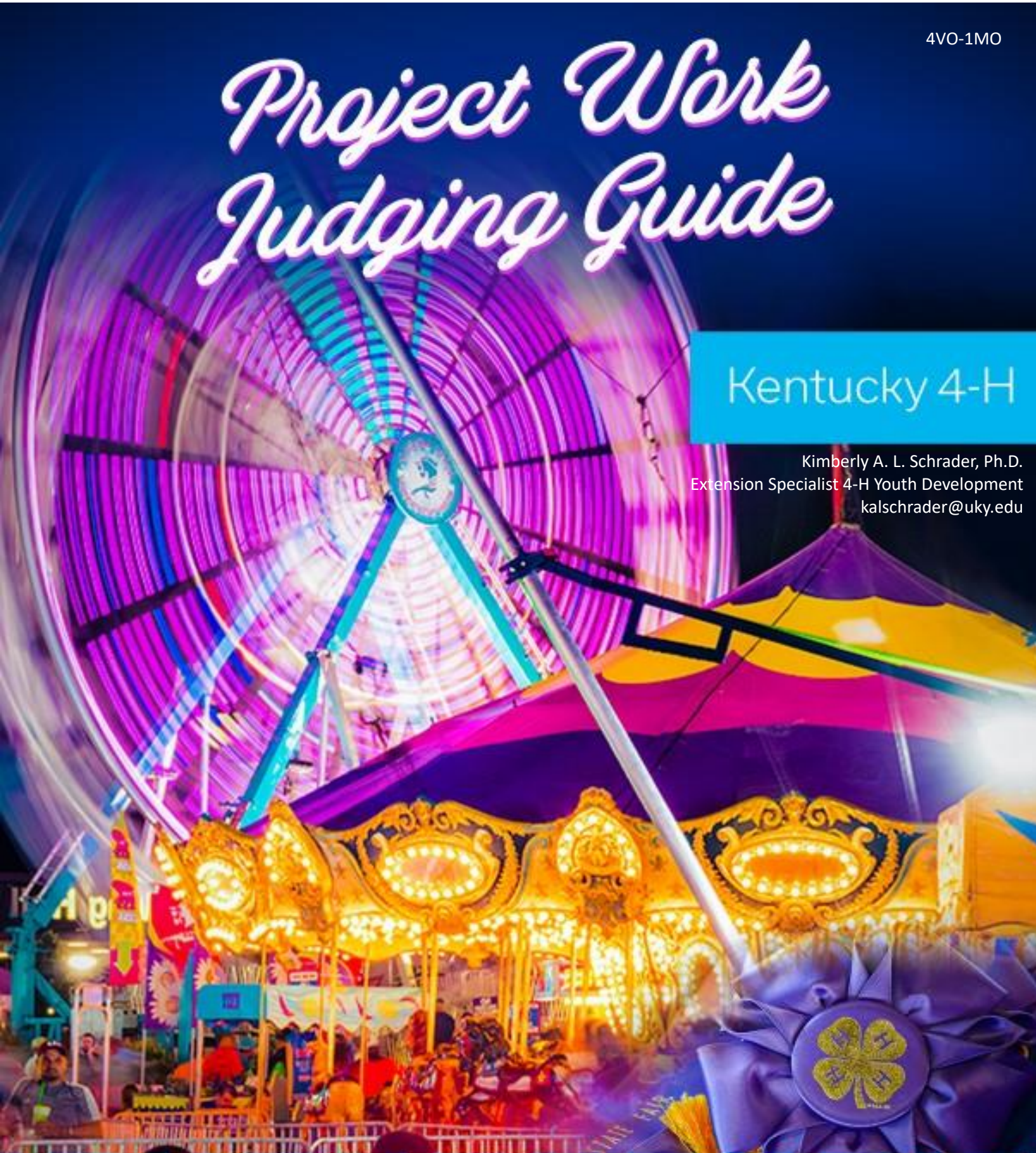


# Project Work Judging Guide

Kentucky 4-H

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Cooperative  
Extension Service



Dear Kentucky 4-H Project Judge,

Kentucky 4-H appreciates your willingness to serve as a project judge for the Kentucky 4-H Youth Program. Your time and talents allow us to make a difference in the lives of over 200,000 youth across the commonwealth. The following pages contain helpful information about judging 4-H project work, and the criteria used to evaluate those projects. If you have any questions concerning the content covered, contact your local 4-H Youth Development Agent.

Sincerely,

County Extension Agent for 4-H Youth Development

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## Overall Information of 4-H Project Judging

### What is 4-H Youth Development

#### What is 4-H?

4-H is America's largest youth development organization, empowering nearly six million young people with the skills to lead for a lifetime. Kentucky 4-H reaches on average 200,000 young people each year.

In 4-H, we believe in the power of young people. We see that every child has valuable strengths and real influence to improve the world around us.

#### We Believe In:

- All young people's potential,
- Developing young people who are empowered, confident, hard-working, determined, responsible, and compassionate seeing a world beyond themselves so that they have the life-long skills to succeed in college and career,
- Ensuring access and equity for all,
- The power of being a part of America's leading public universities,
- The practice of positive youth development by creating positive learning experiences,
- Caring and trusted adult mentors who cultivate positive relationships with youth,
- Creating safe, diverse, and inclusive environments, and
- Meeting young people wherever they are.

#### Mission and Vision of Kentucky 4-H

##### *Mission:*

Kentucky 4-H provides education and life skill development opportunities for youth to grow into confident, capable, and contributing members of their communities.

##### *Vision:*

4-H is a community of young people across Kentucky who are learning communication, civic engagement, and leadership skills.

#### The 4-H Pledge

I pledge my head to clearer thinking, my heart to greater loyalty, my hands to larger service, and my health to better living, for my club, my community, my country, and my world.

For more information on Kentucky 4-H please visit: <https://4-h.ca.uky.edu/> or contact your local 4-H Youth Development Agent.



## The Philosophy of 4-H Project Judging

Recognition is an integral part of 4-H. Appropriate recognition can inspire 4-H members to set and attain goals. Recognition is at its most effective when it is given soon after the project work is accomplished.

Cloverbud exhibits are noncompetitive, and not to be judged. Cloverbud exhibits should be given participation ribbons and judges' comments only.

Quality competitive events are an important component of the 4-H program and serve to attract young people to engage in 4-H educational experiences. These events provide evaluation, feedback, and help 4-H members learn how to make decisions confidently and express themselves.

### Focus on Youth

Suggestions to help you focus the judging process on youth:

- Youth development is the purpose of 4-H project work.
- Judge the exhibit, and not the child. Whenever possible, utilize a conference style of judging. Conference judging is a face-to-face interaction where the project judge and member can discuss various points of the 4-H project. Discuss with the member, the standards, the rationale of the standards, and the relation the standards have to real-life participation. Explain the value (weight) you are placing on various aspects of the project display.
- Judge the exhibit as an illustration of a 4-H member's achievements toward project goals and objectives. At the county level, a judge may want to discuss with a 4-H member their understanding of the project goals, objectives, activities, and exhibit development.
- When the 4-H member is not present when the project is being judged, consider providing feedback on the project in the form of Positive Youth Development on the judging rubric.

## 4-H Project Work

### Focus on Progressive Experiences

Kentucky 4-H Youth Development teaches invaluable life skills and focuses on progressive experiences. The “learn by doing” approach utilizes project work experiences that build upon one another over time (National 4-H Learning Work Group, 2016).

*4-H learning experiences are connected in active, progressive learning pathways. Experiences are designed with the end in mind so that each experience builds on the last. Learning experiences are designed for frequency and duration that build learning over time. Learning pathways spark youth interest, deepen their learning, and sustain their growth. 4-H learning pathways provide hands-on, real-world learning that takes place in community and provides young people opportunities to develop relationships, skills, and leadership. They focus on contribution - young people learn by doing for themselves and for others. Pathways may be different for each young person. The learning purpose, goals, and outcomes of these pathways are determined in partnership by everyone involved (National 4-H Learning Working Group, 2016).*

Kentucky 4-H progressive experiences start at the beginner level and transition to the intermediate level and then the advanced level.

### Depth and Breadth of Involvement

The intensity, duration, and breadth of youth involvement provide a more meaningful way to assess youth engagement in a program (Arnold, 2018). The longer a youth member is involved in a program or activity at a deeper level, the greater the developmental outcomes. In Kentucky 4-H, we interpret this as at least six hours of educational instruction through the high-quality program design of positive youth development programs. Youth showcasing their work through a cumulative experience in 4-H will be engaged in at least six hours of educational instruction in the core program area in which they are demonstrating their work.

### Advancement of Skills

A hallmark of 4-H is the focus on developmentally appropriate opportunities for young people to engage in hands-on experiences. Although 4-H will provide opportunities at the beginner, intermediate, and advanced levels it is imperative to take into consideration the various needs of a young person.

- Beginner-level: 4-H experiences should prepare a young person with the skills needed to advance within their interest area, building a solid foundation for progressive work in 4-H.
- Intermediate-level: 4-H experiences should build upon beginner-level knowledge, advancing a young person’s skills within their interest area along with contributing to progressive work.
- Advanced-level: 4-H experiences should allow young people the opportunity to practice skills they have developed through their 4-H work, mastering concepts at a deeper level and contributing as leaders in their area of interest.

*“Certain characteristics are common to children at each age level. Although children differ in the rate at which they develop, the order of the stages does not vary. While it is extremely important to remember*



*that every child is unique and special in his or her own right, some needs and interests are universal to all children to ensure successful development,” (Iowa State University, 2006).*

*“There are exceptions to those opportunities. For example, some projects are written for specific ages. Additionally, consider the following when guiding a 4-H member in selecting a project: (a) interests, needs, and capabilities of the young person, (b) opportunity for sufficient challenge and growth, (c) family situation, (d) availability of adequate financing, (e) availability of equipment and space, and (f) availability of leadership for the project,” (Oklahoma 4-H Volunteer Development Series, 2020).*

### Project Work Levels of Evaluation

Project work can be evaluated at various levels, depending on county needs, employee capacity, and available resources.

- County - All projects belong to 4-H members of the same county.
- Multi-county - All projects belong to 4-H members of at least two counties. The counties do not have to be in the same area or region.
- Area Grouping - All projects belong to 4-H members of at least two counties. Participating counties are in the same area grouping.
- Regional - All projects belong to 4-H members within one region.
- Multi-regional - All projects belong to 4-H members and have representation from more than one region but not the whole state.
- State - All projects belong to 4-H members across one state.
- National - All projects belong to 4-H members across more than one state.
- International - All projects belong to 4-H members from more than one country.



## Ribbon Systems Used for Judging

Most 4-H events utilize the Danish System of judging. However, ask the extension professional or event official which ribbon system will be used for the program. It should be noted that the appropriate ribbon must be awarded to the participant based on the evaluation of the exhibit using an accepted standard, rubric, or scoresheet. Below are definitions of various ribbon systems used for judging.

### Danish System

The Danish System of judging is based upon established standards of quality for each. In Kentucky 4-H it is used for project work. In this system, each exhibit is judged according to how well it meets that standard rather than how it compares with other exhibits. The Danish System of Judging does not compare one person's work to another. The evaluation is made against a project standard. The judge evaluates whether the requirements have been met. Ribbons are awarded according to the degree to which the exhibitor's project meets the standards. Also, in the Danish System, 4-H members whose project work fulfills the minimum qualifications receive a ribbon.

Exhibits are placed in three ribbon groups.

Blue, Red, or White

- Blue - Exceeds the standard.
- Red - Meets all minimum standards.
- White - Fails to meet minimum standards.

Higher levels of accolades

- Purple flat - Signifies class champion.
- Purple rosette - Signifies division champion.
- Pink rosette - Signifies division reserve champion.

### Modified Danish System

Exhibits are compared to a standard, placed in four-color ribbon groups, but are ranked top to bottom within each ribbon group.

### American System

Most known award system. Not all exhibits may receive a ribbon. Exhibits are ranked 1-2-3, etc. with a different colored ribbon for each place. Exhibits are compared to each other.

### What Are Standards

The standards of excellence are printed on a judge's rubric/score sheet. Ideally, standards are derived from research - primarily from land-grant universities - and are the same standards used by adults. As a judge:

- Avoid using personal preferences.
- Be familiar with the rubric or scoresheet that is being used.
- Do not change the standards. Standards should not be changed because of problems or situations with the 4-H members.



## Provide Appropriate Feedback

Interact with the child whenever possible through conference judging. Conference judging involves one-to-one communication in which the judge and 4-Her talk directly with each other. As such, parents/guardians may not communicate for the child unless there are special circumstances.

If you are in a conference judging setting, try to put the 4-H member at ease. Introduce yourself and encourage the 4-H member to ask questions and discuss their project. Avoid questions that can be answered yes, or no. Help the 4-Her feel proud of their accomplishments. Explain why the ribbon placement was awarded.

### Sandwich Method of Providing Feedback

- Start with two positives.
- Discuss one way to improve.
- Add another positive.
- End with a one- or two-word descriptor.

### Positive Comments to Use:

- I like how you...
- I can tell you enjoyed this because...
- You handled it very well.
- I can tell you learned a new skill by how...
- You should feel proud because...
- You did a wonderful job of following the project standards by...

### Constructive Comments to Use:

- The next time you might...
- Some other ideas to try...
- It would be helpful if...
- It may be helpful to practice before you do this again.
- As you work on your project, an important thing to remember is...

4-H uses a child-centered approach to learning. This means the program focuses on the needs and interests of the youth. As a judge, you can provide recognition and encouragement as youth strive to reach their goals through the activities in each project. Below are some suggestions.

## Words to Provide Appropriate Feedback

There are at least 100 ways to say, “very good.” You may want to include some of these as appropriate, but please remember to give the 4-Her some specific feedback on their exhibit and what could make it better next time.

Now that’s what I call a fine job!  
You’re doing a good job.  
You did that very well.  
You’ve just about got it.  
You’ve been practicing!  
That’s the best I’ve ever seen.  
Fantastic!  
Congratulations!  
I can tell you’ve been working hard on this.  
Superb!  
Now you’ve figured it out.  
Good remembering!  
Keep it up!  
Now you have it.  
You did a lot of work today (this year, etc.)!  
You’ve got that down pat!  
Great!

You certainly did well.  
You’re learning fast.  
Tremendous!  
Keep working on it, it’s getting better.  
You’re doing fine.  
Good thinking!  
Couldn’t have done it better myself.  
You are learning a lot.  
You make it look easy.  
Keep on trying!  
You make my job fun.  
You outdid yourself today!  
That’s the right way to do it.  
I’ve never seen anyone do it better.  
One more time and you’ll have it.  
Good for you!  
Good going!

Marvelous!  
That’s the way!  
Nice going.  
WOW!  
Now you’ve figured it out.  
SENSATIONAL!  
That’s really nice.  
You haven’t missed a thing.  
It’s a pleasure to be a leader when I see work like this –  
Good Job!  
PERFECT!  
That’s the way to do it.  
Keep up the good work.  
You’re right!  
That’s better.  
CLEVER  
That’s first-class work.  
That’s great!

Adapted From Utah State University, The Child Centered Approach. (2015)



## Judging Guidelines

### *General 4-H*

#### 4-H Posters

When judging posters, evaluation according to the following criteria will be central to the evaluation of the project.

##### Readability

- Letters should be easy to read.
- Printing should be consistent with general rules for style, weight, size, and case. Hand lettering should conform to a generally practiced style.
- The title should be in larger lettering than the content.
- There should be sufficient space around the edges and between the areas of lettering.

##### General Appearance

- Neat and clean in appearance.
- The poster should be effectively illustrated. The illustration should have an appropriate impact.
- The poster should be the appropriate size according to the project description.
- The poster should attract attention and the color should be pleasing.
- Correct spelling and punctuation.

##### Message

- The message should be appropriate, brief, and clear. A single idea should be conveyed.
- The title and content should relate to each other.
- One main idea is presented clearly.

##### Originality

- The idea should be presented in an original, clever, and attention-getting manner.

##### Organization

- Easy to understand.
- Logical.
- The main idea is clear to the viewer.



## Educational Exhibits

An educational exhibit or display may convey one idea learned from participation in the project area. Each fair may have specific guidelines so be sure to check with the division superintendent before judging.

The following criteria may be helpful when judging educational exhibits:

### General Appearance

- Artistic, neat, well balanced.
- Pleasing colors.
- The proper amount of material.
- Effectively lit (if applicable).
- Balanced proportions.

### Plan of Action

- One central idea or theme.
- Key items are displayed.
- Is the information accurate and factual?
- Does the exhibit instruct/teach/promote/call for action?

### Ability to Attract and Hold Attention

- Does it arouse and hold interest?
- Does it tell a coherent, clear-cut story with a logical sequence of thought?
- Are the title and caption effective in conveying the message?

### Effectiveness in Telling a Story

- Current interest
- Idea grasped quickly and easily by the viewer.
- The idea is shown simply and clearly.

- The subject matter is accurate.
- Educational value – evidence that 4-Header learned from the project experience? Is information passed onto the viewer?

### Quality of Workmanship

- Easy to read and neat.
- Models (if any) are well-proportioned.
- Good background materials.

### Creativity

- Original idea.
- Functional design.
- The idea is clearly defined and shows an understanding of purpose and direction.

### Design and Mechanics

- An effective use of color, lighting, sound, and motion.
- The number of items or materials are used appropriately for the exhibit. The exhibit is neither cluttered nor bare in appearance.
- The design, lettering, posters, figures, and equipment are in relative proportion to the area, shape, and space of the exhibit.

## Scrapbooks

### Craftsmanship

- The lines are clean and straight.
- The page has a pleasing quality.
- Handwriting /lettering is legible.
- Good use of space on each page.
- The colors, paper, and stickers work well with the photos and or memorabilia.
- The exhibitor has shown creativity with background sheets, graphics, stickers, colors, font types, and colors.

### Photo quality

- The photos chosen are expressive and tell a story.
- The exhibitor accurately describes the event through the scrapbook pages.

### Journaling

- The journal entries match the photos/graphics to tell a complete story.
- The exhibitor has taken time to reflect on the events/people in the book and shown impact.





## Agriculture

*(Livestock judging is contained in the respective species manuals and livestock kits.)*

4-H members can participate in many Agriculture curriculum projects. For information specific to county and state-level show events (such as livestock shows and expos, rabbit shows, and dog shows) and project work (such as educational posters) contact your county Cooperative Extension Service 4-H Youth Development Agent.

### Crop Science

4-H members can showcase their crop science project work at the county and state level which includes: (a) legume hay, (b) grass hay, (c) mixed hay, (d) yellow corn, (e) white corn, (f) popcorn, (g) field soybeans, (h) grain sorghum, (i) sweet sorghum, (j) wheat, (k) burley tobacco, (l) dark stripped tobacco, (m) green stick, and (n) potted burley tobacco. At many county fair events, Agriculture and Natural Resources Agents and/or Horticulture Agents assist with judging crop entries.

When judging crop samples, keep in mind what the product is used for to produce a vigorous, even stand of plants that will give a high yield of a good quality crop. Additionally, if seed plants are to grow properly, they must be uniform, fully mature, and free of damage from weather, insects, disease, or machinery.

CROP SCIENCE	
<b>Field Soybeans</b>	Soybean plants with large root systems
	Plants with considerable nodulation
	Plants with little to no leaf blemishes (diseases, flecking, holes, rips, insect feeding, etc)
<b>Field Soybeans from the Previous Year</b>	Seeds that are intact, have no visible cracks and are clean.
	Little dust, no foreign matter/material.
	Higher test weights are preferred.
<b>Grain Sorghum</b>	Large root system.
	Plant leaves without blemishes.
<b>Grain Sorghum from the Previous Year</b>	Seeds that are intact, have no visible cracks and are clean.
	Little dust, no foreign matter/material.
	Higher test weights are preferred.
<b>Wheat</b>	Seeds that are intact, have no visible cracks and are clean.
	Little dust, no foreign matter/material.
	Higher test weights are preferred.
<b>Barley</b>	Seeds that are intact, have no visible cracks and are clean.
	Little dust, no foreign matter/material.
	Higher test weights are preferred.



## Horticulture

4-H members can exhibit their horticulture projects at the county and state level. Examples of horticulture classes offered at county fairs may include annual container garden displays, specific vegetable entries, and horticulture project posters. Several 4-H horticulture classes are offered at the Kentucky State Fair including poster entries featuring specific horticulture projects youth have completed, plant displays, vegetable entries, and garden or orchard displays.

The following Extension publications provide information about exhibiting and judging horticulture projects. Contact your county Extension agent for specific information related to your county fair guidelines.

What to Look for When Judging Horticulture Exhibits	
Condition	Free from disease, insect, mechanical, or other forms of damage including dirt or stains
Quality	Exhibits that are at the “peak of perfection” for eating. Crisp, firm, mature (not over- or underripe)
Uniformity	In size, shape, and color. The attractiveness of an exhibit is enhanced by all specimens being uniform
Typical of Variety	Specimens should be typical of the type and variety of vegetables and fruit. Avoid unusual or non-typical types of exhibits for show purposes
Size	The size of specimens should conform to market demands. In general, very large specimens may be undesirable since they are not as tender or flavorful as more medium-sized specimens. Don’t select specimens based on size alone
Merits	Faults
Uniformity of size, shape, color	Wilted
Maturity	Immature or overly mature
Specimen firm, fresh	Blemishes
Free of insect or disease damage	Misshapen
Free of mechanical damage	Poor color

\* Check the premium book for your local fair or show for the number of specimens that constitute an exhibit. These may vary from one show to another.

### Horticulture Extension Publications for Further Reference:

4AH-16PA Exhibiting and Judging Vegetables	4HA-07PO Garden and Orchard Displays
4HA-10PA Annual Container Garden	4HA-05PO Horticulture Project Exhibit
4HA-02PO Bell Pepper Exhibit	4HA-06PO Hot Pepper Exhibit
4AH-12PO Cantaloupe Exhibit	4HA-09PA Making a Desert Dish Garden
4AH-13PO Eggplant Exhibit	4HA-03PO Production and Marketing
4HA-08PO Environmental Awareness	4AH-14PO Summer Squash Exhibit
4HA-04PO Experimental Horticulture	4HA-01PO Sweet Pepper Exhibit

## Companion Animal Judging

Companion animal educational poster classes are offered (specifically for dogs and rabbits). Two scoring rubrics are used: (1) general dog and rabbit posters (e.g., showing/grooming/caring for your animal, animal health, nutrition) and (2) dog and rabbit breeds. These rubrics can also be used at the county level.

General Companion Animal Posters	
<b>Educational Content</b>	Knowledge of 4-H Club work related to dog or rabbit projects.
	Evidence of research beyond the scope of the project manuals.
	The topic is applicable and timely.
	The information is accurate and complete.
<b>Neatness/ Appearance</b>	Illustrations/artwork present the message in a pleasing manner.
	Colorful and neat
	Well balanced
<b>Originality</b>	Captures interest and holds attention.
	Shows creativity in presenting the information.
	The topic presented arouses interest and curiosity.

Companion Animal Breed Posters	
<b>Educational Content</b>	Overview of the breed.
	Information on the care of the breed that includes; (a) health, (b) grooming, (c) exercise, and (d) nutrition.
	History of the breed.
	Information on the breed standard, color, and markings.
	Reliable sources are cited on the back of the poster.
<b>Neatness/ Appearance</b>	Illustrations/artwork present the message in a pleasing manner.
	Colorful and neat
	Well balanced
<b>Originality</b>	Captures interest and holds attention.
	Shows creativity in presenting the information.
	The topic presented arouses interest and curiosity.





## Country Ham

When judging the 4-H Country Ham Speech Contest please be mindful of the following:

- Use of note cards is optional, do not add or subtract points unless their use is distracting.
- Electronic Notes are acceptable, do not add or subtract points unless their use is distracting.
- Under three or over five minutes is a two-point deduction; all senior speeches must be at least two minutes long or they will be disqualified, and the ham forfeited.
- If the speaker gives their speech on the wrong topic, the “Knowledge of Subject” category should be scored as 0 points.

Score Level	Qualifiers
90-100	The delivery of the speech was excellent. The topic is well-researched and thoroughly covered. 4-Her has obviously practiced and put in maximum effort.
80-89	Delivery of the speech is good, with possibly a few minor problems with delivery. The topic is well-researched and adequately covered. 4-Her has obviously practiced and put in a good effort.
70 - 79	4-Her has some problems with speech delivery, possibly due to nerves. The topic is covered. 4-Her has prepared in advance to present their speech and made a good effort to present it.
60 – 69	4-Her has some difficulty with speech delivery, Moderate coverage of the topic, more details could have been included. Shows some evidence of prior preparation and makes an effort to present the speech.
50 – 59	Little effort was given in speech delivery. The topic is barely covered. 4-Her does not appear to have prepared in advance. The speech was extremely short.
Below 50	4-Her doesn't present a true speech. No effort was given to prepare the speech. The topic was not covered. Just fulfilling the speech requirement to get their ham.

The country ham itself is scored on the following:

- Conformation (20 pts) – The ideal conformation will be a full, plump tear drop-shaped ham.
- Workmanship (10 pts) - The ideal ham will be free of mold, excess cure, and smooth skin, and will not be over-trimmed. Furthermore, hams with excess oil will lose points.
- Color (20 pts) - The ideal unsmoked ham will have an even mahogany color, whereas the ideal smoked ham will have a darker mahogany color, but not too dark.
- Aroma (30pts) - The ideal aroma is a sweet, fermented, peppery smell. The aroma is determined by an ice pick inserted into the ham.





## *Natural Resources*

4-H members can participate in forestry, entomology, geology, and wood science projects at the county and state levels. For information specific to county and state-level projects contact your county 4-H agent.

### **Forestry Projects**

The purpose of the 4-H forestry project is to develop the 4-Hers appreciation of forest plants and a basic understanding of forest values and forestry practices. Evidence of growth in these areas is the value to be judged in forestry projects. Consider the following as you judge:

#### Leaf Collection and Leaf Print Collections

- Correct number of leaves
- Correct identification by common name
- Correct identification by scientific name
- Condition of mounted leaf or quality of print
- Correct arrangement of the leaf (simple leaf vs. Compound leaf)
- Correct placement of identification label
- Correct identification label

#### Educational Exhibit

- 2<sup>nd</sup> Year exhibit /poster topic should be about forest products.
- 3<sup>rd</sup> Year exhibit/poster topic should be about forest health.
- Information should be factually correct.
- References or sources used for factual information should be cited on the poster on the bottom right side.
- Overall exhibit/poster should be neat and organized.



## Entomology

Begin by noting the age and experience of the 4-H member and reviewing the exhibit requirements. Keep in mind that the objective of the show is to recognize the exhibitor for the effort that has been made, and to encourage them to continue in their pursuit of knowledge.

The following steps may be helpful.

Review basic exhibit requirements.

- Number of insects
- Number of orders

Rate the exhibit for overall impression.

- Attractive alignment of rows and columns
- Consistent orientation of specimens and labels
- Insects are in good condition (no broken or missing parts)
- Attractiveness of the display box

Pinning and mounting.

- Pinned in the correct location.
- Correct height on the pin.
- Butterfly and moth wings are properly spread.
- Insects mounted with points are on the left of the pin.

Labeling.

- Printing is neat and legible.
- County, state, date, and name of collector are on the label.
- The label is parallel with the orientation of the insect.
- The label is readable from the left side of the box.

Correct identification of specimens.

- Generally, the insects are organized by order.

## Entomology Collection Instructions

- Ten points for each order or other arthropod class represented and correctly identified. No points for misidentified orders or classes. The taxonomy will be judged consistent with 4-H Entomology materials.
- Two points for each species represented and correctly identified. No points for species identified to an incorrect arthropod class or insect order. The opposite sex of the same species is counted by no extra points for the excess specimens beyond 2 of a species.
- One point for each correct or acceptable common name below the rank of order common name. For example, a specimen under Diptera correctly labeled 'house fly' will receive 1 point, but if it is only labeled 'fly' it would get no point because all Diptera are flies. The common name 'ant' under Hymenoptera would receive 1 point – although there are many kinds of ants, Hymenoptera also includes bees, wasps, and sawflies.
- 100 possible points; average collection 50 points, consider:
  - ✧ The labels are neat and accurate.
  - ✧ The labels are straight and of uniform height on the pin.
  - ✧ The labels are placed on pins according to 4-H project book directions.
- 200 possible points; average collection 100 points, consider:
  - ✧ Correct pinning
  - ✧ Lepidoptera wings properly spread.
  - ✧ Specimens are not broken or tattered.
- 100 possible points; average collection 50 points, consider:
  - ✧ A variety of insect types, not primarily a butterfly collection with a minimum of other insects
  - ✧ Specimens in neat columns
  - ✧ All insects of the same order are placed in a single grouping, i.e. not some beetles, then some flies, and then more beetles
  - ✧ Pinning bottom condition – not stained or peppered with old pin holes.
- 100 possible points; average collection 50 points, consider:
  - ✧ Completeness of the cycle stages
  - ✧ Examples of damage, nest, or other material that explain the interest in or importance of the insect.
  - ✧ Adequate titles and text to explain life cycle display.
  - ✧ Neat and accurate
- 20 points for including an Insect Collection Catalogue.
- No extra points will be awarded for the number of specimens exhibited beyond the number listed in the project manuals.

## Honey

EXTRACTED HONEY	Available Points	
Container Appearance	15	90-100 Points Grade A
Uniformity of Color	5	80-89 Points Grade B
Accuracy and Uniformity of Fill	10	70-79 Points Grade C
Cleanliness of Honey	30	Less than 70 Points Grade D
<ul style="list-style-type: none"> <li>Without Foam</li> <li>Without Lint</li> <li>Without Dirt</li> <li>Without Wax</li> </ul>		(*Based on USDA Standard Grade A Fancy Honey)
Freedom from Crystals	15	
Density (% of moisture/refractor)	15	
<ul style="list-style-type: none"> <li>13.5-15.0</li> <li>15.1-17.5</li> <li>17.6-18.0</li> <li>18.1-18.6</li> <li>18.7 and above</li> </ul>	Disqualified	
Taste: Free from Fermentation/Burnt Flavor	10	
Total Available	100 Points	

CHUNK HONEY	Available Points	
Neatness of Cut	20	90-100 Points Grade A
Smooth Edges/Parallel Cut		80-89 Points Grade B
Absence of Watery Cappings or Uncapped Cells or Pollen	20	70-79 Points Grade C
Cleanliness of Honey:	20	Less than 70 Points Grade D
<ul style="list-style-type: none"> <li>No Travel Stain</li> <li>No Foreign Material</li> <li>No Foam</li> <li>No Crystallization</li> </ul>		(*Based on USDA Standard Grade A Fancy Honey)
Uniformity of Appearance:	20	
<ul style="list-style-type: none"> <li>Includes capping structure, color, comb, accuracy, and fill.</li> </ul>		
Density (% of moisture/refractor)	15	
<ul style="list-style-type: none"> <li>13.5-15.0</li> <li>15.1-17.5</li> <li>17.6-18.0</li> <li>18.1-18.6</li> <li>18.7 and above</li> </ul>		
Taste: Free from fermentation/burnt flavor.	5	
Total Available	100 Points	



CUT OR SECTION HONEY	Available Points
Neatness of and Uniformity of Cut (Attachment of Wood) <ul style="list-style-type: none"> <li>Absence of Liquid Honey</li> </ul>	20
Absence of Watery Cappings or Uncapped Cells or Pollen	20
Cleanliness of Honey: <ul style="list-style-type: none"> <li>No Travel Stain</li> <li>No Crushed Wax</li> <li>No Crystallization</li> </ul>	20
Uniformity of Appearance: <ul style="list-style-type: none"> <li>Includes capping structure, color of comb, and comb thickness.</li> </ul>	20
Uniformity of Weight	20
Total Available	100 Points

90-100 Points    Grade A  
80-89 Points    Grade B  
70-79 Points    Grade C  
Less than 70 Points  
Grade D  
*(\*Based on USDA Standard  
Grade A Fancy Honey)*

OBSERVATION HIVE	Available Points
Uniform Color of Bees	15
Queen: Size, Shape, and Behavior (must be marked)	15
Brood Pattern (Compact pattern showing all stages of brood development.)	15
Variety: Presence of queen, workers, drones, brood, honey, pollen, etc.	15
Correct number of bees for interest and frame.	10
Cleanliness and Suitability of Combs	15
Appearance, Cleanliness, and Suitability of Hive	15
Total Available	100 Points

90-100 Points    Grade A  
80-89 Points    Grade B  
70-79 Points    Grade C  
Less than 70 Points  
Grade D  
*(\*Based on USDA Standard  
Grade A Fancy Honey)*



## Geology Exhibits

4-H members interested in geology can create a geology collection featuring rocks, minerals, and fossils. The purpose of the 4-H geology project is to develop the members' appreciation of geology, including a basic understanding of rocks, fossils, minerals, and geologic formations and their implications. Evidence of growth in these areas is the value to be judged in these exhibits.

### Mounted Specimens

- Correctly identified fossils from the 4-H member's collection.
- Correctly identified minerals from the collection.
- Correctly identified rocks.
- Condition of mounted specimens.
- Arrangement of specimens.
- Completeness of exhibit

Fossil Specimen #	Common Name 1 Point	Scientific Name 1 Point	Rock Unit/Type 1 Point	Source 1 Point	Geological Age 1 Point	Labels 1 Point per Specimen	Found on Site 1 Point	Neatness, Arrangement, and Background (Up to 20 Points)
Mineral Specimen #	Common Name 1 Point	Hardness 1 Point	Chemical Formula 1 Point	Source 1 Point	Use(s) 1 Point	Labels 1 Point per Specimen	Found on Site 1 Point	Neatness, Arrangement, and Background (Up to 20 Points)
Rock Specimen #	Common Name 1 Point	Classification 1 Point	Mineral(s) 1 Point	Source 1 Point	Use(s) 1 Point	Labels 1 Point per Specimen	Found on Site 1 Point	Neatness, Arrangement, and Background (Up to 20 Points)
1.								
2.								
3.								
4.								
5.								
6.								
7.								



## Wood Science

4-H Wood Science projects vary from woodworking projects made with and without kits featuring different skill levels (from simple designs such as a small birdhouse to more elaborate items such as a coffee table). The following items should be considered when judging 4-H Wood Science project work.

<b>Skills</b>	<b>Excellent</b>	<b>Very Good</b>	<b>Good</b>	<b>Fair</b>	<b>Needs Improvement</b>
Proper selection of wood for the intended use					
Accurate cutting					
Proper fasteners and use (nails, glue, screws, etc.)					
Preparation of surface					
Application of suitable finish					
<b>Originality</b>					
The more advanced the project, the more weight the item should be given.					
<b>Kits Only</b>					
Alignment of parts					
Accurate assembly					







## *Family Consumer Sciences*

### **Foods**

If judging is to be a learning experience for the 4-H member, they must learn the cause of failures and ways to improve. The suggested foods scorecard and the specific information about judging food items may help evaluate items.

#### Tips for Food Judges

Determine what equipment and supplies will be available to you for judging and determine what you may want to bring on your own. The following tools are helpful, depending on the category:

- Tableware – knife, fork, spoon
- Sharp, long-bladed knife
- Long serrated knife.
- Paring knife
- Pie server
- Towel or apron
- Paper goods – plates, towels, cups
- Damp sponge
- Drinking water

Avoid using hand lotions and perfumes.

Use all senses – seeing, touching, smelling, hearing, and tasting – in food judging. Taste is the most subjective. It can be the deciding factor when all other conditions are equal.

Be consistent in the methods you use for judging. This ensures fairness to all exhibitors.

To check the tenderness and texture of products:

- Break open biscuits, muffins, rolls, and cookies.
- Cut loaves of yeast bread and quick bread from one-third to one-half the way in from one end. Cut out a thin slice to view the grain, moisture, blending of ingredients, etc.

Cut and remove wedges from cakes and pies. Cut wedges large enough to provide optimum evaluation. Avoid cutting corners of cakes. Cakes that are to be judged on decoration only are not to be cut.

Judge food preservation items from observation as much as possible, for example looking for the appropriate amount of head space in the canning jar. Is the canning jar the appropriate type and size?

Use the following tables to judge food items.



Muffins		
Points to Consider	Common Defects	Probable Cause
<u>Flavor</u> : Delicate, slightly sweet	Off flavor	Too much baking powder or soda (bitter); too much salt or fat (salty or greasy); not enough salt (flat); strong or sour (poor quality ingredients, especially fat)
<u>Appearance</u>		
<u>Shape</u> : Gently rounded pebbly top with smooth sides	Peaks, cracks, smooth crust	Uneven heat; insufficient leavening; overmixed; too much flour or egg; too hot an oven; placed too high in the oven.
	Brownish Spots	Too much baking powder or salt or not evenly mixed
	Oversize	Too much batter in the pan; too much baking powder
	Undersize	Too much liquid; too little baking powder; overmixed; uneven oven temperature; wrong size pan or not filling pan enough
	Uneven sizes	Carelessness in filling pans
	Rough surface (sharp edges, horny-like)	Undermixed; too much flour
<u>Crust</u> : Evenly browned, medium thick	Unevenly browned	Oven too hot; oven does not heat uniformly; pans filled too full; wrong proportions; too much heating
	Pale	Overmixed; too slow an oven; not well-placed in oven
	Hard crust	Overbaked; oven temperature too high; too slow an oven
<u>Internal Characteristics</u>		
<u>Texture</u> : Light and tender; breaks easily without crumbling; slightly moist	Tough and compact	Overmixed; too much flour
	Waxy, shiny	Insufficient mixing of egg and milk
	Too moist	Too much liquid; underbaked; steamed in the pan after removal from the oven
	Too dry	Baked too long; oven temperature too high; too much flour
<u>Grain</u> : Uniform, medium-sized cells, free from tunnels	Very compact, heavy	Overmixing; insufficient leavening
	Crumbly	Too much shortening
	Tunnels; tough	Overmixed, too much flour
	Waxy, shiny	Insufficient mixing of egg and milk (yet batter may be overmixed)

Rolled Biscuits		
Points to Consider	Common Defects	Probable Cause
<u>Flavor</u> : Pleasant and mild	Off flavor	Stale ingredients (rancid fat); too much leavening (bitter); too much salt or fat (salty or greasy); not enough salt (flat or tasteless); improper mixing
<b>Appearance</b>		
<u>Size and Shape</u> : Uniform with level tops and straight sides	Uneven shape	Carelessness in handling; uneven pressure when cutting; twisting cutter; uneven heat; overmixing
<u>Volume</u> : Light to size	Low volume	Not enough leavening; too much shortening; too much or too little mixing or handling; too hot or low an oven; oven not preheated; allowed to stand too long before baking
<u>Crust</u> : Evenly browned, smooth, medium thick	Pale top crust	Too low oven temperature; too deep pans; underbaking; flour on the surface
	Too dark crust	Too high oven temperature; used of dark cookie sheet or pans
	Brown on top and bottom but not on the sides	Too deep pans
	The bottom crust is too dark	Baked on a darkened pan; baking rack too low in the oven
	Yellow or brown spots	Too much baking powder or soda; ingredients not well mixed; poor grade of flour
	Unevenly browned	Oven temperature too high or too low; flour on surface; uneven heat
<b>Internal Characteristics</b>		
<u>Texture</u> : Flaky and moist but not too gummy	Too dry	Overbaking; improper oven temperature; too much flour or dough too stiff; under measurement of liquid
	Tough	Not enough fat; too much liquid of flour; too much mixing or handling
	Hard crust	Baked too long; incorrect oven temperature
	Coarse, uneven cells	Too much leavening; too little mixing
	Not flaky	Not enough shortening; too much or too little mixing of shortening with flour mixture; not enough kneading
	Soggy	Underbaked
	Crumbly	Too much shortening; too much leavening
	Streaks	Careless mixing, adding more flour after liquid and dry ingredients are combined
<u>Grain</u> : Even and medium fine; uniform; small gas holes without tunnels	Heavy, compact	Not enough leavening; too much mixing or handling; too slow an oven; too much flour; too much liquid; oven not preheated
	Tunnels and holes	Overmixing

Points to Consider	Quick Bread Common Defects	
	Common Defects	Probable Cause
<u>Flavor:</u> Generally bland and pleasantly sweet	Off Flavor	Overbaked, Underbaked, poor quality shortening, too much baking powder, baking soda, or salt.
<u>Appearance:</u> Well-proportioned shape with an even round top	Fallen or dipped in the center	Underbaking, too large pan, batter too deep, or oven door opened too soon.
	Excessive lumping or peaking in the center	Too high oven temperature. Too small a pan. Pans are too close together, too close to the oven wall, over measurement of liquid, extreme over beating.
<u>Volume:</u> Appropriate for the size	Low or undersized volume	Incorrect proportion or inaccurate measuring. Improper mixing, incorrect pan size. The oven temperature is too high. The pan is not in the center of the oven.
<u>Crust:</u> Medium to deep brown, depending on the type of bread, shiny and thicker than a cake crust.	Sticky top crust	Underbaking (too low oven temperature and/or too short baking time) Covering bread while still warm, over measure of liquid.
	Too pale or too brown in color	Incorrect baking time or temperature. Uneven heat, wrong-sized baking pans.
<u>Internal Characteristics</u>		
<u>Texture:</u> Firm Boady; Thin slices Hold together well, Moist but not gummy	Falls apart when cut	Too much flour, not enough liquid.
	Coarse crumbly grain	Incorrect proportions
	Dry; top cracked or peaked	Too stiff batter, over mixed, baked too long or at too high temperature.
	Soggy and compact	Underbaked, incorrect measure, underbaked, poor mixing.
<u>Grain:</u> small air cells and medium thick cell walls without tunnels	Holes and tunnels	The oven temp too high, improper placement in the oven. Improper measurement, no consideration for the type of pan used.



<b>Cookies</b>		
<b>Points to Consider</b>	<b>Common Defects</b>	<b>Probable Cause</b>
Flavor: Blended flavor of well-baked ingredients, characteristic of the type	Bitter taste	Too much baking soda
	Outstanding flavor of one ingredient	Poor measurement
<b>Appearance</b>		
Shape: regular even top and nearly smooth	Irregular shape and size	Dough too thick or too thin Improper molding of dough
Size: correct according to recipe	Excessive spreading	The dough is too warm, the baking sheet is hot when placing the dough, too much fat
	Uneven	Not consistent in the amount of dough used
Color: evenly browned	Too brown	Over baked
	Not browned on top yet burned on the bottom	Not in the correct position in the oven, a dark baking sheet is used.
	Dark crusty edges	Overbaked, the pan is too large for the oven
	Visible flour	Too much flour used
Crust	Shiny or sticky	Too much sugar, underbaked
<b>Internal Characteristics</b>		
Texture: thin cookies- crisp and tender thick cookies – moist and tender	Soft	Too thick
	Tough	Excessive flour, overworked
	Dry hard	Over baked
Grain: Even cells not too coarse or crumbly	Coarse	Too much baking powder, not mixed properly
Color: Uniform in color	Streaks	Not mixed properly



Cakes with Fat		
Points to Consider	Common Defects	Probable Cause
<u>Flavor</u> : Delicate, sweet, well-blended; characteristic of ingredients	Bitter	Too much baking powder or baking soda
	Flat	Too little salt
	Unpleasant flavor	Strong or rancid shortening; poor quality eggs or flavoring
<u>Appearance</u>		
<u>Shape</u> : Level, slightly rounded top; free from cracks or peaks	Rises higher on one side	Uneven heat; oven grate not level; batter spread in pan unevenly
	Runs over top of pan	Too much batter in pan; oven not hot enough; too much leavening
	Peaked or cracked	Oven too hot; too much flour; not enough liquid; too much batter in pan; pan placed too high in the oven; overmixing
<u>Volume</u> : light in weight in proportion to size	Low	Not enough baking powder or baking soda; baked in too large a pan; wrong oven temperature; improper handling
	Falls	Too much shortening; baking powder, or baking soda; insufficient baking; oven door opened too soon; moved in over too soon
<u>Surface</u> : Smooth, uniform, evenly browned	Cracked crust	Too much sugar
	Sticky crust	Too much sugar, insufficient baking
	Tough crust	Not enough shortening or sugar; too much flour; oven too hot; cake baked too long
	Hard crust	The oven too hot; the cake baked too long
	Sticks to pan	Pan not properly prepared; left in the pan too long
	Pale color	Too little sugar; too little leavening or shortening; wrong type pan; underbaked
	Too brown	Too much sugar; oven too hot; overbaked
	Crust soggy or doughy	The cake was allowed to steam in the pan while cooling
<u>Internal Characteristics</u>		



Points to Consider	Cakes with Fat Common Defects	
	Common Defects	Probable Cause
<u>Texture:</u> Tender, moist crumb, velvety feel to the tongue, springs back when pressed lightly with a finger	Tough cake	Not enough shortening, sugar, baking powder, or baking soda; too little or too much mixing; overbaking; oven too hot
	Dry cake	Too much flour or leavening; too little shortening; liquid, sugar; overbeaten egg whites; overbaked; baked too long at too low temperature
	Too light, crumbly, and dry	Too much leavening; oven too hot
	Falls apart as it comes from the pan	Too much shortening, sugar, or leavening; cake removed from pan too soon, insufficient mixing; insufficient baking
<u>Grain:</u> Fine, round, evenly distributed cells; thin cell walls; free from tunnels	Heavy and compact	Overbeaten batter; too much shortening or liquid; too little sugar or leavening; incorrect baking temperature
	Soggy layer or streak at the bottom	Undermixing; shortening too soft; not enough leavening; too much liquid; damp flour that prevents blending; lower part of the oven not hot enough
	Coarse grain	Too much leavening; insufficient creaming; use of liquid shortening; use of bread flour; oven too slow
	Large, uneven cells; thick cell walls	Too little liquid; insufficient mixing; too much shortening; too cool oven
<u>Color:</u> Uniform; characteristic of the kind of cake	Overbeaten batter; too much shortening or liquid; too little sugar or leavening; incorrect baking temperature	Overbeaten batter; too much shortening or liquid; too little sugar or leavening; incorrect baking temperature
	Undermixing; shortening too soft; not enough leavening; too much liquid; damp flour that prevents blending; lower part of the oven not hot enough	Undermixing; shortening too soft; not enough leavening; too much liquid; damp flour that prevents blending; lower part of the oven not hot enough



Pie Crust		
Points To Consider	Common Defects	Probable Cause
<u>Appearance:</u> Golden brown color, blistery surface, uniform edge with no shrinkage,	Uneven browning	Improper bake time
	Uneven edge	Not rolled in an even circle
	shrinkage	Stretched when placed in the pan
	Large blisters	Not docked enough
	Pale color	Underbaked
<u>Texture:</u> Flakes layered throughout, crisp, flakey	Smooth surface	Overhandling, too much flour or water
<u>Tenderness:</u> cuts easily, tender, crisp	Tough rubbery	Overhandling, too much water
	Fall apart	Too much shortening, too thin,
	Compact doughy	Too much liquid underbaked
	Dry mealy	Too much flour, shortening not cut in properly
<u>Flavor:</u> pleasant and bland flavor, no raw or burned taste	Rancid	Shortening has expired
	Raw	Underbaked

Pie Filling		
Points To Consider	Common Defects	Probable Cause
<u>Appearance:</u> fruit cut for suitable proportions		
<u>Color:</u> Natural color retained, appetizing		
<u>Consistency:</u> Holds shape, runs when lukewarm temperature	Gummy, too firm	Too much thickening
	Too thin	Not enough thickening
	Filling spilling out of the crust	Crust shrinkage, crust layers not sealed properly.
<u>Texture of Fruit:</u> Tender but holds its shape	Mushy fruit	Overcooked, or cut into too-small pieces
<u>Taste:</u> Pleasing Flavor, not raw, too sweet.	Filling raw	Undercooked
	Too sweet	Proportion to fruit and sugar is incorrect
	Overpowering spices	Too much spices

Yeast Bread		
Points to Consider	Common Defects	Probable Cause
<u>Flavor:</u> Slightly sweet, nutty flavor and odor, free of off-flavors	Flat tasting	Too little salt
	Rancid	Expired fat or another ingredient
	Musty	Old Flour
	Sour	Old yeast, too much yeast
<u>Appearance</u>		
<u>Shape:</u> Well- proportioned, evenly rounded, tender,	Irregular shape	Poor technique in shaping, not raised properly



Yeast Bread		
Points to Consider	Common Defects	Probable Cause
smooth, free from cracks and bulges	Cracks and bulges	Kneaded improperly, dough too stiff, improper oven temperature
	Higher on side	Uneven heat
<u>Volume:</u> Light in weight proportion and size	Too large	Too much time rising
	Too small	Expired yeast, yeast killed in mixing, kneading, not incorporated well
<u>Crust:</u> Even golden brown	Too dark	Oven too hot, baked too long
	Too light	Too much salt, not enough sugar, dough dried out during rising
	Tough or hard	Baked too slowly, too much salt, not enough fat
<u>Internal Characteristics</u>		
<u>Texture:</u> tender, spongy crumb, not dry	Dry	Too much flour, over-baked, wrong flour, not kneaded enough
	Tough	Over-kneaded, improper rising
<u>Grain:</u> Evenly distributed holes with thin cell walls	Coarse	Over-rising, or chilled when rising
	Dark streaks, soggy	Uneven mixing, expired yeast, wrong flour, improper rising
	Large holes	Over raised
	Compact on the bottom	Baked at too low a temperature
<u>Color:</u> Even characteristics throughout, white in color	Dark	Poor ingredients, wrong rising temperature, expired yeast
	Steaked	Over-greased, dough dried out on top



## Food Preservation

National Center for Home Preservation University of Georgia Cooperative Extension Service, College of Agriculture and Environmental Sciences, Judging Home Preserved Foods

[https://nchfp.uga.edu/publications/nchfp/tech\\_bull/OJudging\\_Preserved\\_full.pdf](https://nchfp.uga.edu/publications/nchfp/tech_bull/OJudging_Preserved_full.pdf)

August 2003

### ■ Processing Method and Recipe

The first thing to consider is the processing method and choice of foods.

Low-acid foods must be pressure-canned. These foods include vegetables and salsa.

- ✧ Acid and appropriately acidified foods (expected pH less than 4.6) such as pickles may be processed in a boiling water canner.
- ✧ Jams, jellies, and fruit preserves should be processed in a boiling water canner.
- ✧ Paraffin should not be used to seal jams, jellies, or any food.
- ✧ Open kettle canning (putting hot food in a jar, putting the lid on it, and giving it no further processing) is unacceptable for any “canned” product. (National Center for Home Food Preservation Judging Home Preserved Foods, p. 11).

### ■ Containers

Clear, clean standard home canning jars in good condition with two-piece metal canning lids (flat lid and band) must be used. Regular or wide-mouth styles may be used. The jar size should match available processing recommendations.

The pint jar canning process time is to be used under current USDA recommendations. Commercial jars such as the ones used for mayonnaise, peanut butter, coffee, tomato sauces, pickles, and jelly should not be allowed in the entry rules. Many of these jars cannot be recommended for home canning. Irregular shapes and volumes of jars can cause inadequate heat penetration during processing and an unsafe product may result. In addition, many of these jars are more likely to break during processing and are less likely to seal properly. If a product is canned in an unacceptable container, it should not be judged.

The home canning two-piece lid system consists of a flat metal lid held in place by a metal band. The flat lids must be brand new each time a jar is filled. It should show no signs of rusting, or food and liquid dried onto the outside. Dried food or liquid residues can mean the jar and lid were not washed and dried after processing. They also might mean the jar is not sealed properly and leaked during transport to or during the competition. While an unwashed jar and lid may not indicate unsafe food, it does show lack of attention to detail and makes a poor appearance, which are important considerations in a competitive event.

Bands should be clean and free of rust. They should not be bent or misshapen. The judge needs to loosen the band to check under it for cleanliness. Removing the band also allows the judge to see that there is a proper amount of headspace in the jar. If a band is rusted or corroded into place so that it cannot be removed, the jar should not be judged. (National Center for Home Food Preservation Judging Home Preserved Foods, p. 12)

### ■ Determine Seal

To determine whether a jar has been properly sealed, press the middle of the lid with a finger. If the lid springs up when the finger is removed, the lid is not sealed. Another way to test the seal is to



hold the jar at eye level and look across the lid. A sealed lid should appear curved down in the center, not flat or bulging upwards. If a lid is bulging as if there is unnatural pressure inside the jar pushing it upwards, the jar should not be opened, even if sealed. Breaking the seal of a bulging lid could force the contents, especially liquids, to come spraying out onto the judge and other surfaces. A lid bulging in this way is a sign of potentially unsafe food and the jar should not be judged.

A buckled lid is one that is sealed but has a crease across a section or edge. Buckled lids do not occur with good canning practices, but are a sign that jars were not filled properly and/or lids were not properly tightened. These vacuum seals are likely to loosen during storage.

If jars are opened in the competition, the underside of flat lids can be analyzed for potential problems with canning practices. Rusting is not desirable; neither is the presence of small, corroded areas, called "pin holing." A small amount of staining may be acceptable, particularly in tomatoes, berries, and other highly colored foods. These stains should be completely on the surface of the enamel, and not signs of something eating away the enamel. Any deposits that do not match the food in the jar, which appear to be building up on the surface of the enamel, or that trail from the lid down onto the food surface are undesirable and could be signs of spoilage.

Jars must be clean and free of mineral deposits. Recognize that handling in transit may also have resulted in smudges on the jars. It should be easy to distinguish between jars that were cleaned but now have fingerprints and jars that were not cleaned at the start.

- Pack

Headspace is the empty space between the food in a jar and its lid. It is important to maintain proper headspace because it can affect safety as well as the quality of the food. If adequate headspace was not allowed, food could expand enough during processing to be squeezed out between the jar and lid. National Center for Home Food Preservation Judging Home Preserved Foods - p. 13.

How the food is packed in the jar is important. The most important consideration in judging the pack of canned food is its safety. Food must be packed into the jar in a way that allows heat to easily penetrate throughout the jar's contents.

The appearance of a sealed lid in these jars may result from sticky or dried food holding the lid in place. Also, when very acidic foods remain in contact with the underside of the lid, pin holing or corrosion might be the result. A jar with absolutely no headspace, or an extremely small headspace compared to recommended allowances (see below), may be disqualified, or have points deducted. Too much headspace may mean excess air (oxygen) has remained in the jar. This can lead to excessive darkening during storage. It can also lead to a reduced vacuum level in the jar, which means a weaker seal. It is at least a waste of jar space and contributes to a loss of quality. Points should be deducted for poor headspace control even in sealed jars.

- Recommended headspace allowances are as follows:

- ✧ ¼ inch for jams and jellies.
- ✧ ½ inch for other fruit products, pickles, and tomatoes processed in a water bath canner.
- ✧ 1 inch for vegetables processed in a pressure canner.



- Appearance of Contents

The product should be canned when it is young and tender. It should have no defects such as blemishes, decayed spots, or sunburned spots. Over-mature produce can result in mushy or discolored canned food. The canned food should be in piece sizes and shapes that are appropriate to the particular product (recommended in processing directions). The pieces should be uniform in size.

If processing recommendations call for peeled fruit or vegetables, food with peels and skins should be disqualified. Peels and skin can carry high numbers of microorganisms. Including them in recipes where this practice is not recommended can lead to the survival of potentially harmful microorganisms. The texture of the product should appear tender but not mushy. The product should hold its shape and show no signs of overcooking. Edges of food pieces can be examined carefully to detect signs of mushiness or excessive softness. Any liquid in the canned product should be clear and free of cloudiness or sediment. It is acceptable for the liquid in foods with dark-colored water-soluble pigments, such as tomatoes and berries, to have a color characteristic of the product rather than being colorless. The color of the canned product should be that of a well-cooked product. Foods that look raw or just cut most likely have not been processed at all. The color should be uniform and should show no signs of over- or under-processing. Darkening of food pieces is undesirable and can result from too much air being trapped in the headspace, using raw packs, excessively tight bands during canning, or poor-quality raw food. (National Center for Home Food Preservation Judging Home Preserved Foods, p. 15).

There should be no foreign particles or sediment in the jar. Foreign matter that should be rated as defects include strings, pits, seeds, skins, stems, and cores.

There should be a minimum amount of air bubbles present. The acceptable quantity and size of air bubbles will vary with the product. This is an instance where a judge needs to be knowledgeable about the typical appearance of high-quality canned foods. Finally, there should be no bubbles that appear to be gas produced by active microorganisms or other signs of spoilage.

- Attractiveness

An exhibitor in a competitive event can, and should, expect the judges to make subjective decisions about the attractiveness of the display – especially if competition is close. The cleanliness of the containers and lids will influence subjective decisions. Neatness and cleanliness of labels will also play a role in the overall impression of the entry. Exhibitors should consider the following as contributions to attractiveness of the entry: naturalness and brightness of the color, good proportions of solids to liquids, absence of excessive air, no darkening of food at the top of the jar, headspace, and shininess of the lid and band.

- Judging by Appearance vs. Tasting

No food should be tasted except for jams, jellies, or flavored vinegars. Consequently, a judge must rely on visual inspection of the food inside the jar to judge characteristics like flavor and texture. The descriptions above have shown just how much can be judged by appearance.



Desirable General Characteristics for Dried Foods	
Trait	Characteristic
Color	Characteristic of product and uniform throughout the container. Not excessive discoloration. * Light colored foods will brown when exposed to air. Discoloration can also be caused by drying at too high a temperature for too long.
Size and Shape	Pieces are uniform in size and shape. No ragged edges.
Texture	Pieces are uniformly dry.
Container	No foreign matter, no visible moisture. Proper sized container for the amount of food. Not too big or too small.

Tomato Products	
Points to Consider	Causes
Liquid Loss	Jars packed too full. Pressure fluctuated during processing time.
Jar Sediment	Bacteria spoilage, minerals in hard water, over ripe vegetables.
Dark Food	Temperature not high enough during processing, or over processing
Poor Seal	Jars or lids not clean, processing instruction not followed

Pickle Products	
Points to Consider	Causes
Hollow Pickles	Cucumbers waiting too long before processing. Improper curing process.
Soft Pickles	Vinegar brine is too weak.
Shriveled	Too much salt, sugar, or vinegar added at one time. Too much time between harvest and pickling.
Dark	Minerals in hard water, spices, iron, or copper utensils.

Low Acid Foods	
Points to Consider	Characteristic
Product	Prime stage of maturity, tender not tough
Liquid	Clear and free of cloudiness, bubbles, or extra sediment.
Pack	Firm but not tight pack, proper headspace, liquid covers vegetables.
Container	Clean, standard jar, perfectly sealed, free from cracks or rust.



## Home Environment

A variety of articles are made and evaluated in the 4-H home environment division. There are many ways of completing these projects. Therefore, encourage creativity, and focus on the progressive experiences of the 4-H member.

### Wall Hanging, Decorative Item or Arrangement, Bulletin Board

#### *Appearance*

- Overall effect
- Condition
- Originality

#### *Design Principles*

- Color selection
- Texture
- Line and shape
- Rhythm, movement
- Balance
- Suitable emphasis
- Harmony of ideas and material used.

#### *Selection of Materials*

- Suitable for purpose
- Skillful use of materials
- Appropriate frame and mat
- Finishing details-backing, hanger, etc.
- Worth the investment in time, effort, and money

#### *Workmanship*

- Neat
- Techniques suitable to materials and objects
- All edges finished.

#### *Item Made of Cloth*

- General appearance
- Design
- Condition – clean, ironed.
- Originality

#### *Design*

- Scale to the size of the article
- Scale to space in the room
- Printed or woven on grain.
- Decorative design

- Color
- Line and shape
- Balance, rhythm, emphasis
- Enhances structural design.

#### *Selection of Material*

- Suitable for purpose
- Color
- Ease of handling
- Durability, ease of care
- Trim appropriate for fabric and item

#### *Workmanship*

- Cut on grain.
- Construction process-skillful, suitable
- Seams finished if necessary.
- Selvages clipped or removed.
- Matching stitching even, proper length, well-adjusted tension

### Item Made of other material, such as wood or metal. The items can be refinished or recovered.

#### *General Appearance*

- Color
- Finish
- Hardware
- Originality

#### *Design*

- Line and design
- Proportion

#### *Selection*

- Suitable for purpose
- Ease of care
- Durable
- Suitability
- Hardware
- Worth investing time, effort, and money.

## Needlework

### General

#### *Appearance*

- Neat.
- Properly blocked and pressed, not matted, not flat, but have the natural “luster look” of the fabric.
- Color combination – harmonized, pleasing, has rhythmic unity that is interesting.
- Design placed accurately.
- When there are decorative lines, they should strengthen the shape of the article, be suited to the purpose of the article, and show simplicity and dignity.
- Material used is suitable for the project and article.

#### *Workmanship*

- Stitches – tension uniform and even, not too tight, or too loose; stitches and color arranged harmoniously, and enough stitches used to give variety.
- Needlework on the wrong side is as neat as the right side. Start a thread on the wrong side with a few running stitches toward the starting point and take a back stitch. Finished in the same manner. Do not carry thread from one design to another.
- Cross stitch – all first stitches slant in the same direction throughout the design.

### Crochet

#### *Appearance*

- The purpose of the article must be apparent.
- The article must be properly shaped or blocked.
- The article must be clean and attractive.
- The color scheme must be pleasing and appropriate.

#### *Workmanship*

- Stitches to be uniform in size and form a well-defined pattern.
- The size of the crochet hook, thread, and type must be suited to the project.
- Gauge must be accurate; tension should be uniform.

### Embroidery, Crewel Stitchery, Needlepoint

- Materials used should be suitable for the design, type of stitchery, and the intended use.
- Design suited to the item on which it is used and not to interfere with the intended use of the article.
- Design should not include too much detail or too many colors.
- Stitches and colors should be arranged harmoniously.
- Tension should be even in stitches, no evidence of puckers in the finished article.
- General appearance is neat, workmanship on the back side should be almost as neat as on the design side, clean, and a pressed finished look.
- If the exhibit is framed, workmanship should be evaluated without removing the frame, backing, or hoop.

## Knitting

### *Appearance*

- Clean and neat.
- Properly blocked.
- Buttons – second in interest, proper size for the garment.
- Pattern uniform.
- Garment size accurate.
- Color combination is pleasing and appropriate.
- Selection – yarn suitable for garment and size of needles; type suitable for age/ person.
- Notions of suitable size, type, and color.
- End product suitable for intended use.

### *Workmanship – skills*

- Cast-on stitches – have elasticity.
- Bound-off stitches – uniform.
- Gauge accurate (correct number of stitches per inch).
- Tension – uniform throughout the article.
- Needle/hook size correct for the type of stitch used.
- Free of mistakes or split yarn/thread.
- Edges straight and correctly shaped for style.
- Corresponding selections match in size and shape.
- Yarn ends well concealed – spliced, worked into seams with no knots.
- Change from one color to another is not noticeable.
- Uniform construction details (buttonholes, fringes, etc.).
- Seams are free of puckers and bulk.



## Sewing

There are no exact rules regarding construction methods. Do not eliminate unfamiliar ways of doing things if the results obtained are satisfactory. Remember not all of these statements will apply to every garment -- refer to the statements that relate to the item you are evaluating.

When using a clothing scorecard, be certain to give specific comments about what is done well and what needs improving. Because there are so many new fabrics and sewing aids available, it is impossible to have all of them described in this manual or in 4-H projects. If you are in doubt about any sewing method or procedure, consult some commercial sewing books or Extension bulletins.

### General

#### Appearance

- The garment should be pressed and mended with no evidence of over-pressing.

#### Materials Used

- The fabric and trim should be appropriate to the garment constructed.
- Interfacing should be the correct weight.
- Color, type, and size of thread should be a good choice for the fabric.
- The type of fastener, its color, and size should be right for placement and use.
- All fabrics and trims used should require the same care.

#### Style

- The style of the garment should be becoming to the individual and suitable to the occasion for which it is intended. The garment should fit well and it should be neat. Suits and coats should have a well-tailored look.

#### Fabric

- The fabric should be suitable to the style of the garment and the purpose for which the garment is intended. Lined garments should be lined with a quality fabric equal to that of the garment. Lining and interfacing should be compatible with the outer fabric.

#### Construction

- Grain - Garments should be cut on grain. Lengthwise grainline should be perpendicular to the floor and crosswise grainline should be parallel to the floor.
- Machine Stitching - The machine should be properly adjusted so that the stitches are well-balanced. The stitch length should be suitable for the fabric. Stitches should be straight and even. Threads should be tied or backstitched at the beginning and end of seams and darts.
- Hand stitch - Hand stitching should be even with no knots showing. Stitches should be invisible from the right side unless stitches are part of the design details.
- Seams – The standard width of seams on most patterns is 5/8". Side seams may be increased to 1". The depth of the seam and finish should be suitable to the fabric. Junction of seams – The location where seams meet, should form right angles. When the item is worn, the seams should be perpendicular to the floor. Enclosed seams should be trimmed to prevent bulk.



- Darts – Darts should have straight even stitches with the last three or four stitches on the edge of the fold. Vertical darts are ironed toward the center; horizontal seams should be ironed downward.
- Plackets – plackets should be neat, smooth, and discrete. Zippers should be covered well.
- Fasteners - Fasteners such as snaps and hooks should be securely attached and of appropriate size and color.
- Buttons - Buttons should be well-spaced and suitable for fabric and the intended use of the garment.
- Facings - Bias facings should be cut on the true bias and either slip-stitched to the garment or top-stitched.
- Fitted facing – The edges should be finished in a manner suitable for the fabric and tacked in place. The Under stitching helps to prevent the facing from rolling.
- Buttonholes - Buttonholes should be uniform in size and appropriate length for the button. Bound buttonholes should have narrow, even lips and square corners. Opening on the facing side should be neat and even with little or no hand stitches showing. Machine buttonholes should have small stitches that are close together. There should be no raveling, and the opening cut carefully so as not to cut into the permanent stitches.
- Set-in Sleeves - The ease of set-in sleeves should be well distributed with little or no evidence of fullness. The distribution of fullness depends on the style of the sleeve.
- Hems - The type of hem and depth of hem should be suitable to the fabric and style of the garment. The fullness of the hem should be well distributed or, in the case of woolen garments, steamed out completely. When worn, the hem should hang so that the bottom edge is parallel to the floor. Hemming stitches should be invisible from the right side.
- Pockets - Pocket size should be in proportion to the garment. Pockets should be flat and securely attached with even stitching.
- Plaids, Checks & Stripes – Properly matched.
- Napped and One-Way Designed Fabrics – All garment sections are cut in the same direction.

## Consumer Education Judging – Refer to 4-H Posters





*Leadership*

**Leadership Projects** – Refer to 4-H Scrapbooks

**Life and Work Force Readiness**– Refer to 4-H Posters

**Civic Engagement** – Refer to 4-H Posters





## Communication and Expressive Arts

### Speech and Demonstrations

Effective speakers are not necessarily polished or perfect. Instead, they are energetic, direct, and warm human beings who are knowledgeable about their subject matter and involved with their audiences. Good speakers are not born, they are developed. Each speech or demonstration should be a learning experience. As a judge, you can encourage by commending work that is well done, and help members improve by offering suggestions for making the speech even better.

Participating in 4-H public speaking and demonstrations helps youth develop their ability to:

- Organize their thoughts and ideas.
- Communicate information to someone else confidently and convincingly.
- Problem-solve and be flexible, such as in overcoming stage nerves or adapting information to different audiences and situations.
- Use resources, such as time allotted for a speech, wisely.
- Develop useful, marketable skills.
- Manage stress and feelings.
- Evaluate their work and set goals for improvement.

Criteria to consider when judging:

Subject:

- Is the information accurate?
- Is the topic narrow enough for the message to be given completely?
- Is the information current? Or is the information seemingly out of date, too broad to be covered completely, or incorrect?

Organization

- Does the introduction catch the interest of the audience while presenting both the purpose and subject of the speech?
- Are the main points clearly stated? Does the speaker follow through with the purpose of the speech? Do ideas center around a central theme in a logical order, easily followed and understood by listeners?
- Does the conclusion tie the main points of the speech to the purpose in an interesting way

that makes the audience remember the speech?

Delivery

- Is the speaker poised and confident?
- Does the speaker maintain eye contact with the audience?
- Are movements and gestures natural, purposeful, and spontaneous?
- If note cards are used, are they used effectively?
- Does the speaker present a friendly, conversational attitude? Does the speaker use facial expressions, eye contact, and other gestures to his/her advantage?
- Does the speaker vary the force of his/her voice?
- Is the speaker pleasant to listen to and loud enough to be heard?
- Is the speaker's voice clear, steady, rich, and full?
- Does the speaker vary the pitch of his/her voice for interest?
- Does the speaker use the rate at which he/she speaks effectively?
- Are all words pronounced clearly and correctly?

General

- Does the speaker maintain good posture throughout the presentation?
- Does the speaker keep both feet solidly on the floor?
- Did the speaker maintain the attention of the audience?

## Arts

### General Appearance, Impact, Color, and Design Principles

When judging in the arts divisions, not only should the 4-H member consider the project curriculum objectives, but also basic design elements and principles. These elements are the basic standards to be used when working with any of the various craft mediums. Below is a list of design elements and principles and their definitions.

**Structural Design** - The basic shape of the article that provides length, width, height, depth, or thickness. When the original shape has surface enrichment, it is called decorative design.

**Decorative Design** – Design that appears to be a part of the original structure and should strengthen the design. Simple objects often have beauty of shape, color, or texture and need no extra decoration.

Elements of Design	
<b>Color</b>	Color - A pleasant balance of hues, values, and intensities will result in color harmony. It means a good proportion of light to dark, bright to dull, and warm to cool to give balance to the color. One color dominates the design but also gives background space.
<b>Line</b>	Lines can create movement or direction. Lines can be used to create impressions. Eyes move along the lines of the object – across on a restful horizontal line, upward on a vertical line, across on a diagonal line, or around and over on a curved line. Straight lines are stiff and severe. Gently flowing curved lines are graceful and beautiful. Line weight can also be considered when making an object appear closer or farther away.
<b>Value</b>	The lightness or darkness of a particular color.
<b>Space</b>	Space may be occupied or used for a purpose. Space can be crowded, well-filled, or sparsely filled. Not every space needs to be filled – the eye needs plenty of open space around objects or designs. The shape and size of empty spaces are as important as the filled space.
<b>Shape/ Form</b>	A shape is when enclosed lines form a boundary. Shapes are described as geometric, organic, and abstract. They can be one, two, or three-dimensional.
<b>Texture</b>	A perceived physical appearance to a design. Texture is the surface of a material that can be seen or felt. It is divided into three categories: fine, medium, and coarse. Like textures go together well. Coarse textures may be combined with medium textures but not with fine. Fine textures may be used with the medium.
<b>Balance/ Harmony</b>	Balance presents an impression of equal distribution of weight in an arrangement. Formal balance is the placement of objects of the same size and color at equal distances from the central point. Informal balance uses different objects with the larger or heavier objects placed nearer the center. Balance from top to bottom is also important. Designs that have considerable weight toward the top and little or no weight at the bottom appear top-heavy.



Elements of Design	
<b>Variety</b>	Variety results when the design is pleasant there is diversity which prevents monotony. The design “belongs together” – it is a consistent, orderly, and pleasing arrangement of all parts to create a whole. There is just the right amount of each element and principle.
<b>Emphasis</b>	Emphasis indicates the focal point of the object. It attracts the eye first to the center of interest and then to the other elements of the design. An uneven number of objects (3,5, etc.) are often more interesting than even numbers of items placed together.
<b>Contrast</b>	A visible difference between two objects in the composition.
<b>Rhythm</b>	Rhythm is related to movement. It creates a path for your eye to follow. Rhythm may be created by a repetition of spaces, a progression of sizes, continuous line movement, or radiation from a central point.
<b>Repetition</b>	The visual combination of elements used repeatedly with variation gives the feeling of organized movement.
<b>Pattern</b>	The repetition of more than one design element. Pattern refers to multiple elements repeated throughout a design.
<b>Proportion</b>	Proportion deals with the relationship of each part to each other and to the whole. The square, with its equal proportions, is uninteresting, and a rectangle too narrow for its length seems thin.
<b>Movement</b>	A path the viewer’s eye takes through a composition.

## Workmanship for Various Media

Calligraphy: Legibility is most important. Letters slant uniformly. Letters even in size and in most cases, width. The sides of the letters are straight and parallel to each other. Letters sit on the lines.

Ceramics: Painting is accurate and attractive. Brush marks do not show. Decals are undamaged, with no ridges on the edges. Seam lines removed. Glazed completely and evenly. Glaze free from bubbles, cracks, crazing, pitting, and lumps on the bottom.

Decoupage: Glued picture(s) onto a background and finished with layers of varnish - print suitable to the size of the article. No ripples or bubbles in the print. Varnish smooth, even, without bubbles or drips. Use a similar glue water mixture but instead use fabric strips to cover an article (often plastic or paper mâché base). Varnish to finish.

Dyeing: Silk Painting - Large areas and backgrounds have no rings or lines. Dyes restrained. Attractive shading. Batik: cracking does not obscure design. Free from accidental drips.

Tie-Dye: symmetry of design, visible fold resists.

Baskets: Must hold shape when used. Construction is sturdy and durable. Trims, decorations, lids, and handles, if used, are attached securely. Symmetrical. Lids fit. No glue is visible.

Leatherwork: Lacing even. Ends worked in. Beveled edges are preferred where two sides are joined together. Accuracy in carving or tooling design.

Painting, Drawing: Skillful use of media and tools. Perspective accurate. The shading is gentle. Good contrast between lights and darks.



Brush marks do not show. Skill in painting. Appropriately framed. Oil is never under glass. No accidental spots of paint.

Pottery: Even thickness of walls. Thrown are usually symmetrical. Stability is important, especially for tall pots, where lips and edges are uniform and smooth. Lids fit. Handles straight, usable size, attached securely. No fingerprints. No cracks. Glaze even, no bumps, bubbles, crazing, pitting.

Stained Glass: Structurally sound, no cracks. Pieces fit together tightly. Soldering even with few bumps. Copper foil tape was applied so the same amount showed on both sides of the glass. Beading around edges smooth and

rounded. Boxes square with well-leaded hinges. Lids open smoothly.

Stenciling, Screen Printing: Smooth, clean edges. The paint has not run under the stencil. Accurate placing of stencil or screen. Shading skillful.

Textile Painting: Includes fabric paints, glitter, shiny, puff, metallic, and liquid embroidery. Fabric color is often an integral part of design. The fabric should not appear scrubbed. Free from streaks, blobs, missed parts, and mistakes. Edges smooth. Shading is gradual. The stamped pattern is not visible. Squeeze-on paint lines smooth and joined invisibly.

## Photography

### General Considerations

- The subject should be in focus.
- The center of the subject should be slightly off to the side.
- The background should not be too cluttered.
- The subject should be close enough to see details.
- Lighting should be appropriate. It should not be too dark or washed out.
- The angle from which it is taken should work with the subject.
- Scenic photos should also be a center of interest. Some foreground is good for showing depth.

### Multiple Photograph Submissions

- Should only contain one to five photos.
- Photos should be mounted and labeled appropriately.
- The photos should be able to tell a story.
- Use guidelines in “general considerations” to evaluate the photos. However, not every photo needs to be perfect.

### Enlarged Photos

- Use guidelines in “general considerations” to evaluate the photograph.
- No photo can be larger than an 8”x12”.
- The rule of thirds should be followed. Think of the picture as a tic-tac-toe board.
- The center of interest should be placed on one of the four intersecting lines.
- Lines of the composition should draw the viewer’s eye to the subject.
- The background should be simple and uncluttered.
- The subject of the photo should be obvious. Often being close to the subject makes the picture better. In scenic photos, an item in the foreground helps give depth. Usually, the subject is in sharp focus.
- Composition should be interesting. The angle, the arrangement, the distance, the vertical or horizontal view, etc. all combine to make good composition.
- The photograph should send a message, tell a story, show an idea, or create a feeling.





## Science Engineering and Technology

### Electricity

Judges will be judging the quality of work done in planning and carrying out an electricity project, and how well the 4-Her understands the project and the subject areas. Consider the age and level of experience of the 4-Her as you judge the type of project and the work involved.

#### General Judging Criteria

- Inspect for wire wrapping around the screw in the direction that the screw tightens down.
- If using stranded wires, check to be sure all strands are under the screw head.
- Proper wire type and size for the particular load the project requires.
- Weatherproof equipment and connections for projects that will be used outside or in damp locations.
- Terminals and connections that utilize household voltages should be enclosed.
- Connections – wire-to-wire connections must be soldered and taped OR have proper size wire-nut OR squeezed connector.
- Wiring should be protected from sharp edges (grommets, silicon seal, etc.).
- Ground – electrical materials and metal parts must be grounded.
- Electrical materials and equipment should be U.L. approved.
- Proper color coding and polarization for conductors – black for positive and white for negative (DC) or neutral (AC).
- For demonstration display of wire types. Must include at least 12 types of wire, and an example of each recommended use.
- Table lamps for any purpose. Judging will be done mainly on electrical components, connections, and safety. No pop-can lamp kits are allowed.







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