FFA Agriculture Technology Rules.

1. Exhibits from individual students, groups, classes, or FFA chapters.
   A. **Eligibility.** Open to Minnesota students, grades 7-12, who are currently enrolled in an agricultural education program during the 2021-2022 school years, and who are active members of a FFA chapter in good standing with the state FFA association.
      1. FFA members enrolled in new or reestablished programs are not eligible to exhibit until the fair following the first academic year of operation.
      2. Exhibitors who have not graduated from high school must have been enrolled in at least one agriculture class during the current year.
      3. Must be current, paid member in good standing of the State FFA and National FFA.
      4. Exhibits must have been completed since the close of the 2021 Minnesota State Fair.

2. A committee will evaluate projects to determine if they are the type, kind and quality to be representative of agricultural technology.

3. **Entries.**
   A. **All exhibits must be registered online; no unregistered exhibits will be accepted at the door.** One entry per individual per class.
   B. **Entries close Friday, Aug. 12, 2022 at 4:30 p.m.**
   C. Entries must be made by the FFA advisor.

4. **Exhibit delivery.** Exhibits should be brought to the Agriculture-Horticulture Building on the delivery dates and times indicated.
   A. **Delivery dates and times.** Monday, Aug. 15, 2022 8 a.m. to 2 p.m. and Friday, Aug. 19, 2022 8 a.m. to noon.
      1. Exhibits to be brought to the Agriculture-Horticulture Building. Very large projects MUST be approved before registration; contact Joel Larsen at jmmbl@bevcomm.net for assistance.
      2. Please contact Joel Larsen if your county fair conflicts with delivery dates and times.
   B. **Exhibits may not be dropped off at any other time,** unless prior arrangements have been made for staff from FFA Agriculture Technology to be present to accept exhibits.
      1. Only FFA Agriculture Technology staff (and volunteers approved by FFA Ag-Tech staff) may accept FFA Agriculture Technology exhibits.

5. **Identification.**
   A. **Exhibit tags.** Will include the following information: Class description, student name, student grade and FFA chapter name.
      1. Tags will be mailed to the address of the advisor who registered the entries no later than 10 days prior to entry closing date.
      2. For entries that are registered within 10 days of entry deadline, tags will be held and attached at entry delivery.

6. **Judging.** In classes where entries exceed 10, classes may be split at the discretion of the superintendent.
   A. **After judging, entries will be selected for display.**
   B. Points are calculated on: quality of workmanship, design, fabrication, finish and overall appearance, functionalism, selection of materials, and safety.

7. **Removal of exhibits.** Tuesday, Sept. 6, 2022 from 10 a.m. to 6 p.m. and Wednesday, Sept. 7, 2022, 3-6 p.m.
   A. Appointments for exhibit removal for dates/times other than above must be made by contacting the Competition Department at 651-288-4417.
Division A: Leadership

Leadership

1. **Exhibits.** Include education materials, science display or projects relating to Leadership.
   
   A. Educational materials defined as projects or displays allowing individuals to read, learn, and understand a concept or standard.
      1. Term papers and reports are not included in educational materials.
   
   B. Must be student made, and reflecting an activity carried out in any Leadership subject area. May be the work of an individual student, or a group of two or more students.
   
   C. Working models, graphic, or three dimensional presentations.
   
   D. Exhibits should be mounted on plywood, masonite or other sturdy material for display.
   
   E. **Judging.**
      1. Basis for judging design and functionalism will be the effectiveness of the project or teaching aid in illustrating or clarifying a principle or idea.
      2. Special consideration given to workmanship and suitability for public display in judging.
      3. Exhibits determined to NOT be related to Leadership will not be judged.

**Premiums for Leadership**

Divisions A-F (except champions)

$13 $10 $8 $6 $3

**Class Listing for Leadership**

<table>
<thead>
<tr>
<th>Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Educational Materials, Individual, Grade 7-9</td>
</tr>
<tr>
<td>2 Educational Materials, Individual, Grade 10-12</td>
</tr>
<tr>
<td>3 Educational Materials, Group</td>
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<tr>
<td></td>
</tr>
<tr>
<td>15 Champion; Leadership</td>
</tr>
</tbody>
</table>
Division B: Power, Structures & Technical Systems

Power, Structures and Technical Systems

1. **Exhibits.** Include education materials, science display or science fair projects relating to Power, Structures and Technical Systems.
   A. Educational materials defined as projects or displays allowing individuals to read, learn, and understand a concept or standard.
      1. Term papers and reports are not included in educational materials.
   B. Must be student made, and reflecting an activity carried out in any Power, Structures and Technical Systems subject area. May be the work of an individual student, or a group of two or more students.
   C. Working models, graphic, or three dimensional presentations.
   D. Exhibits should be mounted on plywood, masonite or other sturdy material for display.
   E. **Judging.**
      1. Basis for judging design and functionalism will be the effectiveness of the project or teaching aid in illustrating or clarifying a principle or idea.
      2. Special consideration given to workmanship and suitability for public display in judging.
      3. Exhibits determined to NOT be related to Power, Structures and Technical Systems will not be judged.

Premiums for Power, Structures & Technical Systems

Divisions A-F (except champions)

$13 $10 $8 $6 $3

Class Listing for Power, Structures & Technical Systems

Power, Structures & Technical Systems

1  Educational Materials, Individual, Grade 7-9
2  Educational Materials, Individual, Grade 10-12
3  Educational Materials, Group
   *Two or more individuals.*

15  Champion; Power, Structures & Technical Systems
Division C: Natural Resource & Environmental Systems

Natural Resource and Environmental Systems

1. **Exhibits.** Include education materials, science display or science fair projects relating to Natural Resource and Environmental Systems.
   
   A. Educational materials defined as projects or displays allowing individuals to read, learn, and understand a concept or standard.
      
      1. Term papers and reports are not included in educational materials.
   
   B. Must be student made, and reflecting an activity carried out in any Natural Resource and Environmental Systems subject area. May be the work of an individual student, or a group of two or more students.
   
   C. Working models, graphic, or three dimensional presentations.
   
   D. Exhibits should be mounted on plywood, masonite or other sturdy material for display.
   
   E. **Judging.**
      
      1. Basis for judging design and functionalism will be the effectiveness of the project or teaching aid in illustrating or clarifying a principle or idea.
      
      2. Special consideration given to workmanship and suitability for public display in judging.
      
      3. Exhibits determined to NOT be related to Natural Resource and Environmental Systems will not be judged.

Premiums for Natural Resource & Environmental Systems

Divisions A-F (except champions)

$13 $10 $8 $6 $3

Class Listing for Natural Resource & Environmental Systems

**Natural Resource & Environmental Systems**

1 Educational Materials, Individual, Grade 7-9

2 Educational Materials, Individual, Grade 10-12

3 Educational Materials, Group

*Two or more individuals.*

15 Champion; Natural Resource & Environmental Systems
Division D: Animal Systems

Animal Systems

1. **Exhibits.** Include education materials, science display or science fair projects relating to Animal Systems.
   A. Educational materials defined as projects or displays allowing individuals to read, learn, and understand a concept or standard.
      1. Term papers and reports are not included in educational materials.
   B. Must be student made, and reflecting an activity carried out in any Animal Systems subject area. May be the work of an individual student, or a group of two or more students.
   C. Working models, graphic, or three dimensional presentations.
   D. Exhibits should be mounted on plywood, masonite or other sturdy material for display.
   E. **Judging.**
      1. Basis for judging design and functionalism will be the effectiveness of the project or teaching aid in illustrating or clarifying a principle or idea.
      2. Special consideration given to workmanship and suitability for public display in judging.
      3. Exhibits determined to NOT be related to Animal Systems will not be judged.

Premiums for Animal Systems

Divisions A-F (except champions)

$13 $10 $8 $6 $3

Class Listing for Animal Systems

**Animal Sciences**

1. Educational Materials, Individual, Grade 7-9
2. Educational Materials, Individual, Grade 10-12
3. Educational Materials, Group
   *Two or more individuals.*

15. Champion; Animal Systems
Division E: Plant Systems

Plant Systems

1. **Exhibits.** Include education materials, science display or science fair projects relating to Plant Systems.
   
   A. Educational materials defined as projects or displays allowing individuals to read, learn, and understand a concept or standard.
      
      1. Term papers and reports are not included in educational materials.
   
   B. Must be student made, and reflecting an activity carried out in any Plant Systems subject area. May be the work of an individual student, or a group of two or more students.
   
   C. Working models, graphic, or three dimensional presentations.
   
   D. Exhibits should be mounted on plywood, masonite or other sturdy material for display.
   
   E. **Judging.**
      
      1. Basis for judging design and functionalism will be the effectiveness of the project or teaching aid in illustrating or clarifying a principle or idea.
      
      2. Special consideration given to workmanship and suitability for public display in judging.
      
      3. Exhibits determined to NOT be related to Plant Systems will not be judged.

Premiums for Plant Systems

<table>
<thead>
<tr>
<th>Divisions A-F (except champions)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$13 $10 $8 $6 $3</td>
<td></td>
</tr>
<tr>
<td>Grand &amp; Reserve Champions</td>
<td>$0 $0</td>
</tr>
</tbody>
</table>

Class Listing for Plant Systems

**Plant Sciences**

1. Educational Materials, Individual, Grade 7-9
2. Educational Materials, Individual, Grade 10-12
3. Educational Materials, Group
   
   *Two or more individuals.*

15 Champion; Plant Systems

20 Grand and Reserve Champion (divisions A-E)
Division F: Directed Activities

Directed Activities

1. **Exhibits.** Reflect introductory learning experiences, which develop skills that will be transferred to advanced project construction.
   
   A. Must be the work of an individual student.
   
   B. Must have an appropriate finish, and display quality workmanship.

Premiums for Directed Activities

- Divisions A-F (except champions)
  - $13 $10 $8 $6 $3
- Grand & Reserve Champions
  - $0 $0

Class Listing for Directed Activities

**Introductory Wood**

1. Introductory wood project
2. Nesting box
3. Tool box
4. Bird House
5. Nail or tool carrier
6. Plant stand
7. Bird feeder
8. Wood shelf
9. Champion; Directed Activities, Introductory Wood

**Intermediate Wood**

10. Sawhorse
11. Wood duck house
12. Feeder
    - *Pheasant, deer, livestock.*
13. House, other
14. Plant stand
15. Tray or folding table
16. Miscellaneous wood project
17. Lawn or garden furniture
18. Table
    - *Picnic, lawn or garden.*
19. Finished furniture stand without drawer
20. Finished furniture table
21. Finished furniture stand with drawer
22. Champion; Directed Activities, Intermediate Wood

**Introductory Metal**

26. Miscellaneous metal project
27. Laser design project
28. C-clamp
29. Hitch pins, chisels and punches

Rev: 3/23/2022
| 30 | Eye bolt, nut and bolt  
     | *Using tap and die.* |
| 31 | Sheet metal project |
| 32 | Drill bit gauge |
| 33 | Metal stand or chair |
| 34 | Metal tool box |
| 35 | Champion; Directed Activities, Introductory Metal |

**Intermediate Metal**

| 45 | Welded shop stand |
| 46 | Adjustable work stand |
| 47 | Safety stand |
| 48 | Implement ramps |
| 49 | Portable light extension cord |
| 50 | Shop stool or chair |
| 51 | Two-wheel utility cart |
| 52 | Shop or fence specialty puller |
| 53 | Garden arbor |
| 54 | Mail box or landscape post |
| 55 | Tool gauge |
| 56 | Tool box |
| 57 | Shop work bench |
| 58 | Fire pit / tools |
| 59 | Miscellaneous metal project |
| 60 | Metal display sign |
| 61 | Welded art |
| 62 | Champion; Directed Activities, Intermediate Metal |

**Natural Resources & Outdoor Environment Projects**

| 70 | Forestry and natural resources, metal |
| 71 | Forestry and natural resources, wood |
| 72 | Fishing rod |
| 73 | Ice fishing rod |
| 74 | Wildlife feeder |
| 75 | Antler mount |
| 76 | Tree stand |
| 77 | Gun rack / cabinet |
| 78 | Champion; Directed Activities, Natural Resources & Outdoor Environment Projects |

**Advanced Construction**

| 80 | Special wood project  
     | *With agricultural application.* |
| 81 | Special metal project  
     | *With agricultural application.* |
82  Special concrete project
   With agricultural application.
83  Special electronics project
   With agricultural application.
84  Special hydraulics project
   With agricultural application.
85  Patio deck furniture, wood
86  Patio deck furniture, metal
87  Miscellaneous advanced project
88  3D printed project
89  3D model/part(s)

90  Champion; Directed Activities, Advanced Construction
92  Grand and Reserve Champion (division F)
93  Grand Prize - Acme Tool
   Acme Tool will present a grand prize of drill/driver set.
Division G: Large Construction Project

Large Construction Project

1. **Exhibits.** Entries in this division are projects too large or expensive to transport and display. No small projects.
   A. Exhibits will consist of plans, pictures, and an explanatory informational paragraph of the project.
   B. Exhibits should be mounted on tagboard for display.
   C. **Judging.** Judged on uniqueness of design, utility, and workmanship.

**Premiums for Large Construction Project**

Divisions G-I (except champions)

$30 $24 $20 $15 $10

**Class Listing for Large Construction Project**

<table>
<thead>
<tr>
<th>Large Construction Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Permanent agricultural building</td>
</tr>
<tr>
<td>2 Portable agricultural building</td>
</tr>
<tr>
<td>3 Large projects primarily of wood, wood planter box</td>
</tr>
<tr>
<td>4 Large projects primarily of metal, portable welding table</td>
</tr>
<tr>
<td>5 Large energy conservation project, portable light stand</td>
</tr>
<tr>
<td>6 Mechanization using sensing controls</td>
</tr>
<tr>
<td>7 Champion; Large Construction Project</td>
</tr>
</tbody>
</table>
Division H: Misc Ag & Home Equipment

Miscellaneous Agriculture and Home Equipment

1. Must be the work of an individual student.

Premiums for Misc Ag & Home Equipment

Divisions G-I (except champions)

<table>
<thead>
<tr>
<th>Premiums</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>$30</td>
<td>$24</td>
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<tr>
<td>$20</td>
<td>$15</td>
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<td>$10</td>
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</tbody>
</table>

Class Listing for Misc Ag & Home Equipment

### Miscellaneous Agricultural & Home Equipment Construction

1. Designed Adirondack wood chair
   *Using Wood Craft Project plan 412186.*

2. Designed welding project, individual
   *Sponsored by Fastenal Manufacturing and McNeilus Steel, Inc. Refer to pages 14-17 for rules and registration details.*

3. Designed welding project, team
   *Sponsored by Fastenal Manufacturing and McNeilus Steel, Inc. Refer to pages 14-17 for rules and registration details.*

4. Shop equipment
   *examples: work benches, tool cabinets, etc.*

5. Equipment, largely of wood
   *examples: self feeders, holding pens, chutes*

6. Equipment, largely of metal
   *examples: gates, feed carts, post drivers.*

7. Equipment, metal, recreational
   *examples: patio, barbecue units, etc.*

8. Wood splitting machine or tool
   *May utilize a small gasoline engine or tractor as power source.*

9. Hydraulic press

10. Motor stands

11. Work bench

12. Alternate energy related project

13. Engine hoist

14. Champion; Misc. Agricultural & Home Equipment
Division I: Major Ag Equipment

Major Agricultural Equipment

1. **Exhibits.** Must be able to pass through an eight foot door.
   A. **Restored tractors.** Must be unloaded. Displayed in Agriculture-Horticulture Building.

Premiums for Major Ag Equipment

Divisions G-I (except champions)

<table>
<thead>
<tr>
<th>Place</th>
<th>Premium</th>
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<tbody>
<tr>
<td>1st</td>
<td>$30</td>
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<tr>
<td>2nd</td>
<td>$24</td>
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<tr>
<td>3rd</td>
<td>$20</td>
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<tr>
<td>4th</td>
<td>$15</td>
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<tr>
<td>5th</td>
<td>$10</td>
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</tbody>
</table>

Class Listing for Major Ag Equipment

**Major Agricultural Equipment**

1. Tandem wheel implement trailer
2. Two wheel trailer
   *Must include the running gear and box or rack.*
3. Carpentry
   *Construction largely of wood. Examples: wagon or trailer boxes, large feeders, farrowing crates, brooder houses, etc.*
4. Metal construction
   *Construction largely of metal. Examples: garden tractors, grain or bale elevators, livestock crate, etc.*
5. Large alternate energy project
6. Project utilizing hydraulic components
7. Tractor restoration, individual
8. Tractor restoration, chapter
9. Multipurpose application of sensing and automatic controls
10. Miscellaneous major agricultural equipment
11. Lawn sprayer
12. Champion; Major Agricultural Equipment
20. Grand & Reserve Grand Champion Divisions G-I
21. Best of Show
2022 MN FFA Welding Design & Fabrication Contest

1/27/22

The FFA Welding Design & Fabrication contest at the State Fair is BACK!

This year will bring some changes to the project that we expect will add some challenges, allow for a wider range of project possibilities, and help students develop and hone a highly in demand set of skills for today’s manufacturing sector.

This year since each project will be unique, teams / individuals will be responsible for securing their own material for the project from a local welding shop or business partner. Fastenal Manufacturing and McNeilus Steel have donated $10,500 to go towards this contest. A small part of that will be used to purchase the prizes and the remaining balance will go towards reducing the cost of materials for the project. Grants will be available for 75% of material costs up to a total of $300 per individual or team.

We will again have an Individual as well as a Team division (limited to three participants). The GRAND PRIZE Welder will go to the top individual with members of the top Team competing for a prize package of Welding Helmets, Gloves, and Cash prizes.

Judging will take place on Friday August 19th, 1-4PM. Contestants should attend in person and plan to interview with the judges. If participants cannot be in attendance arrangements will need to be made to do an interview via Zoom prior to August 19th. Projects can be dropped off anytime between 8-12PM on August 19th. As always, we will bring additional prizes for all participants!

Good luck with the project. If there are any questions, please contact Willie Lubahn by emailing wlubahn@fastenal.com or calling 507-313-7271

Contest registration is online at https://forms.gle/Cve9P857nS5XMjeK6 and open until 5/31/22

Sincerely,

Willie Lubahn               Travis Bretzman
Material Grant Details

Grants for materials will be awarded to individuals and teams participating to help keep costs down. Individuals and Teams will be eligible for a reimbursement of 75% of their material costs up to a maximum grant of $300 per team or individual. There is $7500 allotted for material grants. Grants will be awarded on a first come basis we anticipate this will be plenty but register early to ensure you can get access to the material reimbursement grants.

Fastenal Manufacturing and McNeilus Steel have made this opportunity available by each donating $5250 towards the 2022 contest. The donation will be deposited with the MN FFA Foundation and distributed to contestants via a check payable to the individual or school (team entries). The material grant will only be available to individuals and teams who enter their project for competition at the state fair. If a project is started and does not compete at the State Fair, the grant is not available for reimbursement of material costs.

Participants should track their costs and document them within their summary of the project build. Actual costs will be noted at the time of judging and payment will be based on what is documented. Checks will be available for pick up during the FFA awards ceremony at the State Fair on Labor Day. Any checks not picked up at that time will be mailed out.

As sponsors of this contest, we are very excited about the new format and hope that it will encourage more participation. We also encourage participants to engage with local resources for assistance and securing materials. If you have a local welding / fab shop work with them to get your materials and if you need specialized equipment, see if they would be able to assist.

Finally, a question that was proposed to me at the Ag Tech Conference was can students use a preexisting plan or does it have to be their own. For this year we will allow either. We’ll see what the break down is after this year’s contest it may be something we consider making into two different divisions. Our main goal is to have students follow a plan and execute that plan to produce their project.
This year’s welding design & fabrication contest allows you to pick your own project to design, build, and enter. Contestants can participate as individuals for a chance at the Grand Prize Welder or participate as a team for a chance to win new Welding Helmets and Prize Money!

- Participants can create their own plan, or a preexisting plan may be used
- A bill of materials & dimensional drawing must be submitted with contest registration
- Contestants should plan to present a project portfolio detailing project progress, along with the bill of materials, dimensional blueprints, actual costs, and a project synopsis at the time of judging.

Individual Prizes
1st Prize - Welding Helmet + $150
2nd Prize - Welding Helmet + $100
3rd Prize - Welding Helmet + $75

Team Prizes (per team member)
1st Team - Welding Helmets + $100
2nd Team - Welding Helmets + $75
3rd Team - Welding Helmets + $50

SPONSORED BY

McNeilus Steel, Inc.
WELDING DESIGN AND FABRICATION

1. Select project you would like to build.

2. Research your project and develop a proposed plan for your build. Plans should include a dimensioned drawing, bill of materials, and cost estimates.

3. Register for the contest and submit your plan for approval. Registration can be found at https://forms.gle/Cve9P857nS5XMjeK6 or you can scan the QR code below.

4. You will hear back from the contest superintendent who will approve your project. If your project is not approved, you can make recommended adjustments and resubmit your project.

5. Build your project! Have fun with this and make your project something that is functional for you! Keep a build journal, track costs, and take pictures as you go.

6. Put together a portfolio detailing how your project came together. Include photos, what went well and what didn’t, detail your expenses, include your dimensioned blueprint, and finally what did you learn from this project.

7. Enter your project in the MN State Fair Welding Design and Fabrication Contest.

8. Judging will take place on Friday August 19th, 1-4PM. Contestants should attend in person and plan to interview with the judges. If participants cannot be in attendance arrangements will need to be made to do an interview via Zoom prior to August 19th. Projects can be dropped off any time between 8-2PM on Monday, August 15th or from 8-12PM on Friday, August 19th.

9. Awards will be handed out on Monday, September 5th at Compeer Arena during the FFA Awards Ceremony. Reimbursement checks for materials will be handed out at the Awards Ceremony on September 5th. Checks not picked up will be mailed out during the week of September 5th.

CONTEST CONTACTS:

WILLIE LUBAHN
FASTENAL MANUFACTURING
TRAINER/RECRUITER
WLUBAHN@FASTENAL.COM
507-313-7271
https://sites.google.com/view/fnl-mfg/home

JOEL LARSEN
CONTEST SUPERINTENDENT
JMMBL@BEVCOMM.NET
612-309-3046

Scan code or visit URL listed above to register