



Taylor County Cooperative Youth Fair

Dept. 24 Mechanical Projects

Mechanical Project Exhibits.

1. Exhibitor is required to carry the project which he or she is exhibiting in their respective youth organization.
2. All posters to be no smaller than 11 x 14" or larger than 14 x 22." .

See website for entry due dates, rules, and judging schedule.

Premium Schedule Classes A-J: Blue - \$3.00 * Red - \$2.75 * White - \$2.50 * Pink - \$2.25

Class A - Tractor I: Grades 3-6

Lot numbers, Class A:

1. Draw a picture of a tractor and name the parts
2. Poster or display illustrating tractor safety
3. Poster with pictures of exhibitor completing routine maintenance with captions.
4. Any self-determined project not listed above

Class B - Getting Acquainted With Your Tractor – Grades 7-9

Lot numbers, Class B:

1. Periodic lubrication and maintenance chart.
2. Display panel of damaged parts caused by poor tractor maintenance, collected by member, with explanation of cause, and how it could be prevented.
3. Chart or poster with information on proper tractor care and adjustments as they relate to good tractor operation. Examples: spark plugs, batteries, tires, air cleaners, carburetors, etc.
4. Chart following the transmission of power in one piece of machinery. Sketch and further explain where and how the power goes to reach the job.
5. Poster illustrating tractor safety
6. Poster with pictures or display of tractor restoration project with captions.
7. Any self-determined project not listed above

Class C – Assuring Safe and Efficient Tractor Operation – Grades 10+

Lot numbers, Class C:

1. Periodic lubrication and maintenance chart.
2. Display panel of damaged parts caused by poor tractor maintenance, collected by member, with explanation of cause, and how it could be prevented.
3. Chart or poster with information on proper tractor care and adjustments as they relate to good tractor operation. Examples: spark plugs, batteries, tires, air cleaners, carburetors, etc.
4. Chart following the transmission of power in one piece of machinery. Sketch and further explain where and how the power goes to reach the job.
5. Poster illustrating tractor safety
6. Poster of engine types
7. Safety systems
8. Lubrication and care of tires
9. Poster with pictures or display of tractor restoration project with captions.
10. Any self-determined project not listed above

Class D - Engines

Posters or Models/Parts

Lot numbers, Class D:

Level One - Grades 3-5

1. Parts of a small engine
2. How to start a small engine.
3. Tools for working with small engines.
4. Engine oil grades.
5. Air filters or cleaners.
6. Cooling systems.
7. Spark plug maintenance.
8. Air cleaner maintenance.
9. Safety labels.
10. Safety rules when using small engines.
11. Comparison of tool prices.
12. Any self-determined project not listed above.

Level Two - Grades 6-8

13. Small engine types.
14. Internal small engine parts.
15. Specialty tools for working with small engines.
16. How to determine engine size.
17. Engine compression.
18. Carburetor adjustments.
19. Steps in disassembling a small engine.
20. Steps in seasoning a small engine.
21. Types of lawn mowers.
22. How to set lawn mower height.
23. Mowing safety rules.
24. Any self-determined project not listed above.

Level Three - Grades 9 +

25. Diagnostic tool.
26. How to disassemble and assemble an engine's base.
27. Lawn mower maintenance.
28. Engine replacement. cool-down routines when exercising
29. Comparison of small engine machine prices.
30. My small engine business plan.
31. Any self-determined project not listed above.

Class E - Aerospace

Lot numbers, Class E:

Model Airplanes

1. Model of homemade airplane – no kits.
2. Model of airplane made from kit only.
3. Poster showing the airport layout in your area.
4. Poster on basic parts of airplanes.
5. Set of 3 different paper airplanes.
6. Homemade Fighter kite
7. Homemade Diamond kite
8. Homemade flat-style kite
9. Any other flying or kite exhibit
10. Any self-determined project not listed above

Model Rocketry

11. Single stage rocket – 3 or 4 fin model.
12. Multi-stage rocket – 2 or 3 stage.
13. Exotic designed rocket.
14. Poster covering basic parts of rockets..
15. Any self-determined project not listed above

Flying

16. Poster on principles of flight.
17. Poster on the history of flight.
18. Poster on the airplane instrumental panel.
19. Poster on one aspect of air safety.
20. Drone video - (provide laptop for judging)
21. Drone pictures - set of 3
22. Poster showing the proper use of drones
23. Poster showing different types of drones
24. Poster with parts of a drone labeled
25. Any self-determined project not listed above. .

Class F – Bicycling

Lot numbers, Class F:

1. Identify bicycle parts.
2. Rules of the road for bicycles.
3. Exhibit of five traffic signs.
4. Comparing tire features.
5. Poster of bike maintenance
6. Poster showing different types of bicycles
7. Any self-determined project not listed above.

Class G – Scale Models

Lot numbers, Class G:

1. Display of scale model. (4x4' maximum)
2. Car model made from a kit
3. Ship model made from a kit
4. Truck model made from a kit
5. Any other model made from wood kit
6. Any other model made from metal kit
7. Homemade car model
8. Homemade ship model
9. Homemade truck model

10. Any other homemade model made from wood
11. Any other homemade model made from metal
12. Set up any scale 4x4' model railroad

13. Original robot, designed and built by a member.
14. Robot made from a kit
15. Any self-determined project not listed above.

Class H – Metal Work

Lot numbers, Class H:

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| <ol style="list-style-type: none"> 1. Useful article for use in farm or home workshop 2. Article for use out-of-doors 3. Article for use in storage | <ol style="list-style-type: none"> 4. Article for use in the home 5. Toy or homemade game 6. Project with up to 25% other material 7. Project showing different weld types 8. Any self-determined project not listed above. |
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Class I – Modular Construction Grades 3-5 **Class J - Modular Construction - Grades 6-8** **Class K- Modular Construction - Grades 9+**

Includes LEGOS K'nex, or similar construction kits
 Lot numbers, Class I-K:

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| <ol style="list-style-type: none"> 1. Vehicle, original design 2. Building, original design 3. Motorized model, original design 4. Scene constructed, original design 5. Any other model from your own original design. 6. Vehicle constructed from a kit 7. Building constructed from a kit | <ol style="list-style-type: none"> 8. Motorized model from a kit 9. Scene constructed from a kit 10. Any model from a kit 11. Any modified model from a kit (20% altered) 12. Any self determined project not listed above |
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Class L – Robotics

Class L - Robotics
 Lot numbers, Class L

1. Robotics Demo - Grades 3-8
2. Robotics Demo - Grades 9+