County Fair adaptations

**Recommended County Fair rules**

*This is a reduced set of rules for use at county fairs. The use of these rules is optional and left to the discretion of the county fairs. These rules that cover the most common scenarios that are likely to appear a county fairs. Youth who are eligible for the Kansas State Fair should read the Kansas State Fair rules for this division as the State Fair rules expect more from youth and set a higher bar as it is a state wide event exhibiting the best from across the State of Kansas.*

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**2020 4-H SPACETECH ASTRONOMY**

#DATE#, 2020

1. The 4-H member must be currently enrolled in the 4-H Astronomy project to exhibit in this division.
2. Each exhibitor may enter one exhibit per class. Exhibit must have been completed during the current 4-H year.
3. Telescopes entered in this division may be built from a kit or by original design. Pre-finished telescopes, which require no construction or painting are not acceptable exhibits.
4. Telescopes are limited to no more than six feet in length. They must be placed on a stationary stand that does not allow the telescope to roll and/or fall over. The stand cannot extend past two feet in length or width.
5. Each telescope exhibit must include a “4-H Astronomy Exhibit Information Form,” which should be attached to the outside of a 10” x 13” manila envelope. You must also include construction plans (or a photocopy) for the telescope and place it inside the manila envelope. For notebooks, display boards, and posters, no additional exhibit information is required; no manila envelope is needed for these exhibits.
6. See the last section for full details about exhibiting posters, display boards and notebooks.
7. Two photographs showing telescope construction and operation are required. Photographs should be mounted on one side of an 8 ½” x 11” page. A brief caption should accompany each photograph. Place photos in the 10” x 13” manila envelope.
8. The telescope must be properly assembled and painted with a smooth and uniform finish.
9. Telescopes designed by the exhibitor must be original, not a modification of an existing kit.
10. Exhibitor’s name, county or district, age, and year(s) in project must be tagged or labeled in a prominent location on the telescope stand.
11. If a safety violation is noted by the judges, superintendent, or other staff, the exhibitor’s exhibit, at the judges’ discretion, will receive a participation ribbon.

- **5500** Telescope made from kit
- **5501** Telescope made from original design

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**2020 4-H SPACETECH COMPUTER SCIENCE**

#DATE#, 2020

1. The 4-H computer project teaches concepts related to computers, hardware knowledge, software programming and applications, internet safety, the building, maintenance and repair of computers and future career opportunities. Please note that the actual construction of computer hardware (i.e., building a computer, electronic devices with a mother-board based manipulation) will remain in the Energy Management division.
2. The 4-H members must be currently enrolled in the 4-H Computer project to exhibit in this division.
3. Each exhibitor may enter one exhibit per class. Exhibits must have been completed during the current 4-H year.
4. Exhibitor’s name, county or district, 4-H age, and year(s) in project must be tagged or labeled in a prominent location on the exhibit, educational display, notebook, and/or poster.
5. See the last section for full details about exhibiting posters, display boards, and notebooks.
6. If a safety violation is noted by the judges, superintendent, or other staff, the exhibitor’s exhibit, at the judges’ discretion, will receive a participation ribbon.

7. All exhibits other than posters, display boards, and notebooks must be:
   a. Self-contained on a USB drive (thumb drive, flash drive, jump drive, or other any other name for a small USB storage device; the rules will use “USB drive”). This means that a judge can plug in the USB drive into a computer and be able to run the exhibit as described below.
   OR
   b. System-On-A-Chip (SOC) (such as Raspberry Pi) or a Micro-Controller (such as an Arduino or Ozobot) AND is a compact (less than 8”X8”X8”) system, which can be programmed AND requires minimal assembly to operate (e.g. connecting power, display, and keyboard/mouse cables). Referred to as a “chip system” through the rest of the rules.

8. Physical computers such as tablets, smart phones, laptops, or personal computers (PCs) will not be accepted as an exhibit.

9. “Chip systems” may use/include GPIO bread boards or HATs (Hardware Attached on Top) the size of which is not included in the size of the chip system, however the total size of the chip system and GPIO devices may not exceed 24”X24”X24” including any protective enclosures.

10. Any attached GPIO devices are not judged for electrical construction or quality as this division is focused on the operational aspects of the systems that have automated articulated structures (arms, wheels, grippers, etc.) which the exhibitor constructed, can also be classified as a robot, and the exhibitor must decide which division to exhibit in as the exhibit may not be entered in the both divisions.

11. For chip systems, all electric components of the system must be adequately covered or concealed with a protective enclosure. Paper is NOT considered an adequate enclosure or covering for the electrical components.

12. All revisions of all forms previously released for the Computer division either undated or dated prior to current year are void for use and new forms must be obtained and used that are dated by the Kansas State 4-H Office for the current year. Use of old forms will result in the loss of one ribbon placing for exhibits.

13. For all computer system entries the following items are required as part of an exhibit packet:
   a. A manila envelope with the Computer Exhibit Form attached to the front, this form can be downloaded at www.KansasSpaceTech.com.
   b. A USB drive labeled with the 4-Hers name, county/district, and club; in a way that does not prevent it from being plugged into a computer.
   c. For exhibits that are entered on USB drives, at least one (1) graphic (picture, screen shot/capture, slide, etc.) of the project must be printed out on an 8.5” X 11” sheet of standard computer paper, placed in a plastic sheet protector, to allow for proper display and recognition at the Kansas State Fair. This is what will be displayed during the fair, all other materials will be sent back to the county/district office. On the back side of the graphic the 4-Her’s name, county/district, and club should be listed.
   d. Instructions to run any part of the exhibit on the USB drive. (There should be at least three (3) items in your manila envelope: USB drive, graphic and instructions).

14. Each exhibit must be accompanied by a “4-H Engineer’s Journal.” The engineer’s journal should be typed. It can either be included electronically on the USB drive (preferred) or printed and placed in the manila envelope.

15. The “4-H Engineer’s Journal” should start with a dated entry describing what the 4-H member is trying to accomplish/build.

16. The “4-H Engineer’s Journal” should conclude with a dated entry describing what the 4-H member achieved in creating. (The start and end many times will be different. The judges are interested in the journey).

17. Additional entries in the “4-H Engineer’s Journal” should be made as progress occur describing successes and failures; as well as the steps done and any sources of information including links used.

18. Pictures can also be included in the “4-H Engineer’s Journal” but should not be more than 50% of the entries.

19. The “4-H Engineer’s Journal” should contain at least one graphic.

20. The “4-H Engineer’s Journal” must be at least 3 pages in length.


22. The “4-H Engineer’s Journal” will comprise 50% of the overall exhibit score. Failure to include a “4-H Engineer’s Journal” will result in the exhibit being disqualified.

23. If the exhibit is a program, application, app, web site, or requires any coding, the source code must be included on the USB drive. Failure to include a copy of the “source code” may result in up to one ribbon place deduction.

24. Diagrams or decision trees showing the logical flow of the system must be included on the USB drive for all exhibits.

25. 4-Hers should bring a computer that will run their project to the fair for judging as judges typically do not bring computers with them. Operating instructions are still required. Instructions should be written as though you were helping a less techy person, (like a grandparent) use the USB drive with a computer similar to what is described in rule 9 below. An example of instructions can be found at www.KansasSpaceTech.com.

26. Each exhibit must accomplish a specific automated task using a computer, a chip system, or virtual machine (VM).
27. Check with the extension office to see if an Internet connection will be available at the fair. Internet based content may be included in exhibits. Exhibitors should take great care and only go on-line with their guardian’s permission. User names and passwords should not be included in exhibits. If they are required to view the content, a temporary user account and/or password should be created for judging at the fair, once judging is complete the user name and password should be disabled on the account. If a separate user account is not possible, the content should be included as part of the video. YOU SHOULD NOT SHARE YOUR USER NAME OR PASSWORD WITH OTHERS.

28. All licensing should be adhered to for any software used in the exhibit. Failure to do so will result in a reduction of one ribbon placing and may not be considered for best of show.

29. The creation of viruses, malware, malicious applications or code, defamatory language or graphics, bullying, or any material that is “mean,” “dangerous,” or harmful according to the judge’s opinion will result in the exhibit being disqualified.

30. Pictures or still graphics created are not eligible for entry as a project in this division, and should be entered in the appropriate photography division.

31. Judging will be based on a score sheet which can be found at www.KansasSpaceTech.com. There are four (4) areas each exhibit will be judged on. They are:

   32. 4-H Engineers Journal (what I learned to make it work), 50% overall score
   33. Instructions (how I help others make it work), 25% overall score
   34. Functionality (does it work), 12% overall score
   35. Diagrams (and code if applicable) (how I think it works), 13% overall score

Division A – Computer Systems

5590 Computer program, application, app, script, or coded system that is new and unique (not merely a file run in a program, such as a ‘word document’ or a picture drawn in ‘Microsoft Paint.’)

5591 Computer presentation (power point, web page/site, animated graphics, etc.)

5592 Single computer system (web server, database server, etc.)

5593 Networked system consisting of two or more computers

5594 Chip system- a small (4"X4"X4") programmed physical device that accomplishes a specific task

2020 4-H SPACETECH ROBOTICS

#DATE#, 2020

1. 4-H members must be currently enrolled in the Kansas 4-H Robotics project to exhibit in this division.
2. Each exhibitor may enter one robot per class. Exhibits must have been constructed and/or completed during the current 4-H year.
3. Each robot must be free-standing, without the need for additional supports in order to be moved or exhibited. Each exhibit must include a robot, information packets are not a sufficient exhibit.
4. Robots must have automated articulated structures (arms, wheels, grippers, etc.). Game consoles that display on a screen are not considered robots and should either be entered in computer systems division or energy management project. Robots requiring no assembly, just programming, such as Ozobots, are considered computer systems projects as the skill is focused on the programming not on the construction of the robot.
5. Robot dimensions should not exceed 2 feet high, by 2 feet wide, by 2 feet deep. Weight may not exceed 15 pounds. If displayed in a case (not required) the outside case dimensions may not be more than 26 inches in height, width, or depth.
6. Materials including but not limited to obstacles, spare batteries, and mats for testing the robot may be brought by the exhibitor on the day of judging and those materials not essential to the exhibit may be taken home following completion of judging.
7. All electric components of the robot must be adequately covered or concealed with a protective enclosure. Paper is NOT considered an adequate enclosure or covering for electrical components.
8. Robots may be powered by an electrical, battery, water, air or solar source only. Junk drawer robots may be powered by a non-traditional power source. Robots powered by fossil fuels/flammable liquids will be disqualified. Robots that include weaponry of any kind will be disqualified. Weaponry is defined as any...
instrument, possession or creation, physical and/or electrical that could be used to inflict damage and/or harm to individuals, animal life, and/or property.

9. Remote controlled robots are allowed under certain conditions provided that the robot is not drivable. Robotic arms (hydraulic or electric) are allowed. A remote is allowed provided more than a single action happens when a single button is pressed on the remote, for example “a motor spins for 3 seconds, at which point an actuator is triggered, then the motor spins for 3 more seconds.” Remote controlled cars, boats, planes and/or action figures, etc. are not allowed.

10. Each robot must be in working condition. The judges will operate each robot to evaluate its workmanship and its ability to complete its intended task. In the event the robot uses a phone, tablet, or similar device for programming AND control of the robot, a video can be used to evaluate the working condition of the robot.

11. Each exhibitor is required to complete the “4-H Robotics Exhibit Information Form” which is available through your local K-State Research and Extension office or at www.KansasSpaceTech.com. This form must be attached to the outside of a 10” x 13” manila envelope.

12. The exhibit must include written instructions for operation (the instructions should be written as if they were to tell a grandparent or elderly person how to operate the robot), construction plans, and one to three pages of project photographs. For robots that can be programmed, robot programming information must be included, this information should be placed inside the 10” x 13” manila envelope mentioned above.

13. In the event that the robot uses a device like a phone, iPad, or tablet for programming AND operation, DO NOT leave the device (phone, tablet, etc.) at the fair. The device’s safety cannot be insured. Bring it with you the day of judging.

14. Each exhibit should include a video of the youth following their instructions for operation. This allows judges to get a better understanding of the exhibit and allows the youth the opportunity to fully demonstrate their exhibit. The video should be no longer than 8 minutes and should be placed on the CD, DVD, USB drive, or similar.

15. Creativity, workmanship, and functionality will be strong criteria in judging the “Robot designed by Exhibitor” classes. All robots should have a purpose or intended function, examples include, but are not limited to: following a line, sweeping the floor, solving a rubix cube, sorting colors, or climbing stairs.

16. Exhibitor’s name(s) and county or district must be tagged or labeled in a prominent location on the robot.

17. There are no county or district boundaries that must be adhered to in order to form a Kansas 4-H Robotics team. However, as mentioned in #1, each team member must be currently enrolled in the Kansas 4-H Robotics project.

18. See the last section for full details about exhibiting posters, display boards and notebooks.

**JR Division – 7 and 8 year olds**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5505a</td>
<td>Robot made from a commercial (purchased) kit. (No Programming just assembly)</td>
</tr>
<tr>
<td>5506a</td>
<td>Robot designed and constructed by exhibitor. The robot must not be a mere modification of an existing robot kit or plan.</td>
</tr>
<tr>
<td>5507a</td>
<td>Programmable robot made from a commercial (purchased) kit.</td>
</tr>
<tr>
<td>5519a</td>
<td>Robot designed and constructed by exhibitor or from a commercial kit, that is operated by a remote controlled device</td>
</tr>
<tr>
<td>5543a</td>
<td>Junk Drawer Robotics</td>
</tr>
</tbody>
</table>

**Intermediate Division – 9 to 13 years old**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5509</td>
<td>Robot made from a commercial (purchased) kit. (No Programming just assembly)</td>
</tr>
<tr>
<td>5510</td>
<td>Robot designed by exhibitor. The robot must not be a mere modification of an existing robot kit or plan.</td>
</tr>
<tr>
<td>5511</td>
<td>Programmable robot made from a commercial (purchased) kit.</td>
</tr>
<tr>
<td>5546</td>
<td>Robot designed and constructed by exhibitor or from a commercial kit that is operated by a remote controlled device.</td>
</tr>
<tr>
<td>5544</td>
<td>Junk Drawer Robotics-based curriculum robot</td>
</tr>
</tbody>
</table>
Senior Division – 14 and up

5513 Robot made from a commercial (purchased) kit. (No Programming just assembly)
5514 Robot designed by exhibitor. The robot must not be a mere modification of an existing robot kit or plan.
5515 Programmable robot made from a commercial (purchased) kit.
5547 Robot designed and constructed by exhibitor or from a commercial kit that is operated by a remote controlled device.
5545 Junk Drawer Robotics-based curriculum robot

Team Robotics Project

5517 Robot designed and constructed by two or more 4-H Robotics project members. The robot must not be a mere modification of an existing robot kit or plan. The robot may be a programmable type that is made from a commercial (purchased) kit. This division is designed to encourage teamwork and cooperation among fellow 4-H Robotics members. As with many high tech projects today, no one person designs and builds a robot alone. It takes the brainstorming, planning, problem solving, and cooperation of an entire team to complete a given robotics project.

2020 4-H SPACETECH ROCKETRY

#DATE#, 2020

1. 4-H members must be currently enrolled in the 4-H Rocketry program to exhibit in this division.
2. All rockets displayed in this division must be constructed during the current 4-H year
3. If a rocket qualified for the Kansas State Fair, exhibitors should read the State Fair rules for the Rocketry division as they may be different from those at the county fair.
4. Each exhibitor may enter up to two rocket exhibits that have been constructed during the current year. If two rockets are entered, one rocket must be a "model rocket kit" or the second may be entered into any other applicable class. An exhibitor may not enter two rockets in the same class.
5. 4-Hers are to complete and sign the rocketry information form, available from www.KansasSpaceTech.com or your local extension office, and attach it to a 10”X13” “manila” envelope. The envelope should contain:
   • Instructions on how to construct the rocket
   • Up to 5 pages of pictures from both construction and launch
   • Documentation of any flight damage that occurred
   • Any modifications made to the rocket
   • An additional page for altitude calculations if the space on the form is not enough.
   Additionally for original design rockets, also known as “scratch built” rockets:
   • 5 additional pages of photos are allowed
   • Documentation of how the rocket was tested for stability.
6. If a safety violation is noted by the judges, superintendent, or other staff, the exhibitor’s rocket, at the judges’ discretion, will receive a participation ribbon.
7. Rockets are to be displayed upright on a display stand with a sturdy rod that does not extend past the top of the rocket or stand unassisted, unless the rocket is taller than 4 feet in which case no display stand is required and the rocket may be displayed on its side, rockets are not to be displayed on launch pads to save space and prevent someone from being poked in the eye.
8. Rockets ARE NOT to be displayed with used or unused rocket engines either in the rocket or as part of the stand, if rocket engines are included in the exhibit the judge may disqualify the exhibit.
9. Rockets should be flown, unless there is an active burn ban in the county or conditions are too dangerous to safely launch the rocket. Just flying the last stage (the part with the nose cone) of a multi-stage rocket is acceptable.
10. All rockets, except those in the JR division, are not to be "beginner's kits" or use prefabricated fin assemblies or pre-finished rockets requiring no painting, these are not acceptable outside the JR division, and should be disqualified.

11. Angles of fins must fall within a plus or minus 2 degree variation using an approved fin alignment guide (such as KSSTAC10). An official fin guide is available from www.KansasSpaceTech.com.

12. Fins and body tubes, except those in the introductory division, are to be filled and sealed with sanding sealer and/or primer or other suitable filler to eliminate the appearance of body grooves and wood grain.

13. Fins and launch lugs are to be filleted to reduce drag and properly secure them to the model.

14. Engine mounts are to be securely attached to the body tube.

15. Any seams on plastic parts are to be sanded smooth.

16. The recovery system (typically a parachute or streamer) should be attached according to the instructions.

17. The nose cone is to fit snugly but still allow for easy removal.

18. Exhibits, except "beginner's kits," must be uniformly painted and smoothly finished or finished as per rocket instructions, and have decals applied smoothly.

19. Models may not be judged based on their paint scheme (colors and placement on the rocket). Rockets do not have to follow the suggested paint scheme, allowing the 4-H'er to display maximum creativity in the finishing of their rocket. Under no circumstances is the weight given to the paint scheme to be sufficient enough, by itself, to move the model from one ribbon placing to another.

20. "Scale models" may be judged based on their paint scheme. The judge may deduct up to one ribbon placing for not following the paint scheme.

21. "Scale Model" Rockets are to be finished and completed with a majority (greater than 70%) of decals.

22. Original design rockets cannot be a modification of a pre-existing kit and must be of original design.

23. Original design rockets must be designed by the exhibitor(s).

24. Exhibitor(s) must be 11 years of age (4-H age) or older to enter an original design rocket.

25. Original design rockets must include detailed instructions, so that someone could construct the original designed rocket just like a kit purchased at a store. Instructions can be as many pages as needed to convey full and complete construction techniques.

26. For a rocket entered in the original design classes, describe in the summary how the rocket was tested for stability prior to flying. Swing testing of the rocket is required. Other tests and calculations are encouraged. Exhibitors must include documentation of the swing test. Failure to swing test a rocket will result in a deduction of TWO ribbon placings.

27. A minimum of one additional page must be added to the rocketry information pack detailing the tests performed to insure stability. 4-H'er's are strongly encouraged to provide as much detail as possible. Failure to provide adequate written documentation will result in a disqualification.

28. Rockets that use more than one 'D' engine or equivalent are considered mid or high power rockets in 4-H.

29. Mid and High Power exhibitors must be at least 14 years of age by January 1 of the current year.

30. In addition to the information packet completed for all rockets, a high power information form is to be completed and placed inside of the information packet. This may be downloaded from www.KansasSpaceTech.com

31. Exhibitors in the mid and high power divisions must hold memberships in either NAR or Tripoli organizations.

32. The NAR High Power Rocket Safety Code applies to the construction and launching of all rockets displayed in this division. As such all mid and high power rocketry exhibitors must comply with the NAR High Power Rocket Safety Code that is in effect as of October 1st of the current 4-H year.

33. All rockets in the mid and high power divisions are to be launched under adult supervision by the 4-H member who constructed the rocket.

34. For rockets launched using an engine(s) that have 160.1 ('H' engine or equivalent amount of smaller engines) Newton's-seconds or larger, adult supervision must be provided by an individual having at least a
level 1 high power certification. The 4-H member should also hold or be attempting to attain their level 1 high power certification if launching on this large of an engine.

* As defined by the National Association of Rocketry (NAR), a scale model is “any model rocket that is a true scale model of an existing or historical guided missile, rocket vehicle, or space vehicle.” The intent of scale modeling is, according to the NAR, “to produce an accurate, flying replica of a real rocket vehicle that exhibits maximum craftsmanship in construction, finish, and flight performance.” (NAR “Pink Book” 50.1 4-1)

Division JR - Exhibitors 7 and 8 years old

5520a Rocket made from kit, without pre-assembled fin units. Include plans.

5520b Rocket made from "beginner's kit." Include plans. Rockets in this class may have pre-assembled fin units. (This class is for first and second year 4-H members to explore the rocketry project.)

Division A - Exhibitors 9 through 13 years old

5520 Rocket made from kit. Include plans.

Division B - Exhibitors 11 through 13 years old (9-10 year olds may not enter in this class)

5521 Rocket designed by exhibitor: not merely a modification of an existing kit. Include original plans.

Division C - Exhibitors 14 years and older

5525 Rocket made from kit. Include plans.

5526 Rocket designed by exhibitor: not merely a modification of an existing kit. Include original plans.

Division D - Exhibitors 11 years and older

This class is designed to encourage teamwork among individuals and clubs to work on a rocket from the initial design to the finished product.

5530 Rocket designed by 2 or more exhibitors: not merely a modification of an existing kit. Include original plans.

Division E - Exhibitors 14 years and older

5536 Mid or high power rocket made from kit or original design.

2020 4-H SPACETECH UNMANNED AERIAL SYSTEMS

#DATE#, 2020

1. The 4-H members must be currently enrolled in the 4-H Unmanned Aerial Systems (UAS) project to exhibit in this division.
2. Each exhibitor may enter one exhibit per class. Exhibit must have been completed during the current 4-H year.
3. The information that accompanies the UAS must be limited to the 4-H UAS Exhibit Information Form which is affixed to a 10” x 13” envelope. This envelope should NOT be attached to the UAS. This may be downloaded from www.KansasSpaceTech.com. Any UAS exhibit not including this completed envelope will receive an automatic participation ribbon.
4. Each exhibit MUST include a video of the youth operating their UAS. This allows judges to get a better understanding of the exhibit and allows the youth the opportunity to fully demonstrate their exhibit. The video should be no longer than 8 minutes and should be placed on the CD, DVD, USB drive, or similar.
5. Exhibitor’s name, county or district, age, and years(s) in project must be tagged or labeled in a prominent location on the exhibit, educational display, notebook, and/or poster.

6. Unmanned Aerial Systems that include or depict weaponry of any kind will be disqualified.

7. See the last section for full details about exhibiting posters, display boards and notebooks.

8. If modifications are made to the exhibit a page should be attached noting those modifications.

9. If a safety violation is noted by the judges, superintendent, or other staff, the exhibitor’s exhibit, at the judges’ discretion, will receive a participation ribbon.

10. For exhibits “designed and constructed by the exhibitor” the UAS must not be a mere modification of an existing kit or plan. You may not exhibit a UAS that is purchased off the shelf in this class.

11. For “practical application” exhibits, the exhibit must include the UAS, plus one or more of the following: video, notebook, poster, display board, etc. This class is separate from educational exhibits. A tangible use would be mapping Russian olive trees, eroded soils, and bindweed in fields, etc. There are also many other non-agricultural UAS uses that would be appropriate for this class.

Junior Division A – 7-8 years old

5701a Unmanned Aerial System “designed and constructed by exhibitor” that is operated by a remote controlled device.

5702a “Practical application” of an Unmanned Aerial System constructed from a commercial (purchased) kit.

Intermediate Division – 9-13 years old

5701 Unmanned Aerial System “designed and constructed by exhibitor” that is operated by a remote controlled device

5702 “Practical application” of an Unmanned Aerial System constructed from a commercial (purchased) kit.

Division B – Senior, 14 years and older

5706 Unmanned Aerial Systems “designed and constructed by exhibitor” that is operated by a remote controlled device.

5707 “Practical application” of an Unmanned Aerial System constructed from a commercial (purchased) kit.

2020 4-H SPACETECH EDUCATIONAL EXHIBITS – POSTERS, NOTEBOOKS AND DISPLAY BOARDS

The General Exhibit rules for ALL SPACETECH categories apply.

For notebooks, display boards, and posters, no additional exhibit information is required; no manila envelope is needed for these exhibits.

Exhibits in posters, notebooks and display boards must contain substantial supporting educational materials.

Educational display boards, posters and notebooks should be creative and showcase details about the knowledge learned in the project during the current 4-H year. Value is placed on youth who can demonstrate how their skills have increased while completing the project. Each exhibit will be judged on uniqueness, creativity, neatness, accuracy of material, knowledge gained, and content. An exhibit judging score sheet is available at www.KansasSpaceTech.com. For example, a rocket that may have crashed and/or is highly damaged may be made into an educational display or poster that tells a great story with many lessons learned.

5. Follow copyright laws, citing all sources of information in a standard notation. Sources of information must be cited on the front of your exhibit, including all posters and educational display boards.

6. Educational displays are not to exceed a standard commercial 3’x 4’ tri-fold display board. No card table exhibits will be allowed. Care should be taken to use durable materials that will withstand fair conditions.

7. “Construction Kits” that are part of Educational displays must be contained in cases (tackle boxes, sealable containers, etc.) that may not be larger than 1’ X 2’ X 2’ and must have a latch which securely keeps all components contained in the “Construction Kits”. Other components are to adhere to appropriate dimensions as stated elsewhere.

8. Educational Project notebooks must be organized in a 3-ring binder.

9. Any three dimensional display exhibits may not be thicker than 1".
10. Engines and igniters for rockets ARE NOT permitted with the exhibit and constitute an immediate disqualification. This is for safety reasons and includes both spent and live engines.

11. Exhibitor’s name, county or district, age, and year(s) in project must be tagged or labeled in a prominent location on the, notebook, and/or “Construction Kit.” For education displays and/or posters the exhibitor’s name, county, or district, age, and year(s) in project must be tagged or labeled on the back of the exhibit. Failure to label an exhibit may result in one ribbon placing deduction.

12. Exhibits should possess the following qualities (in no particular order):
   a. A Central theme
   b. What you want others to learn
   c. Be designed and constructed in a manner befitting the exhibit
   d. Be something you are interested in
   e. Be related to Astronomy, Computer Systems, Robotics, Rocketry, or Unmanned Aerial Systems
   f. As well as those characteristics described above.

13. If a safety violation is noted by the judges, superintendent, or other staff, the exhibitor’s exhibit, at the judge’s discretion, will receive a participation ribbon.

**SpaceTech - Junior Division – 7-8 years old**
5731a Educational Display
5732a Educational Notebook
5733a Educational Poster

**SpaceTech – Intermediate Division – 9-13 years old**
5731 Educational Display
5732 Educational Notebook
5733 Educational Poster

**SpaceTech - Senior Division – 14 years and older**
5736 Educational Display
5737 Educational Notebook
5738 Educational Poster