

STEM (Science, Technology, Engineering & Math) Projects

*Denotes Project is Eligible for State Fair

Project	Age Division	Type of Evaluation	Materials to Bring to Judging	Special Notes
490* Science with Dairy Foods	Junior Division (13 and younger) Senior Division 14 and older)	Judges will evaluate participants on the following: <ul style="list-style-type: none"> Knowledge, skill and understanding of the project The quality of their project records in documenting project accomplishments Interview performance Dress professionally 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge -A display representing their learning experience of the current project. The youth must be able to maneuver his or her own display.	If you are selected as a State Fair Delegate – additional information will be given to you by the 4-H Educator
493* Science Fun with Kitchen Chemistry	Junior Division (13 and younger) Senior Division 14 and older)	Judges will evaluate participants on the following: <ul style="list-style-type: none"> Knowledge, skill and understanding of the project The quality of their project records in documenting project accomplishments Interview performance Dress professionally 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge -A display representing their learning experience of the current project. The youth must be able to maneuver his or her own display.	If you are selected as a State Fair Delegate – additional information will be given to you by the 4-H Educator
500* Science Fun with Physics	Junior Division (13 and younger) Senior Division 14 and older)	Judges will evaluate participants on the following: <ul style="list-style-type: none"> Knowledge, skill and understanding of the project The quality of their project records in documenting project accomplishments Interview performance Dress professionally 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge -A display representing their learning experience of the current project. The youth must be able to maneuver his or her own display.	If you are selected as a State Fair Delegate – additional information will be given to you by the 4-H Educator
501* Rockets Away (Bottle Rocket)	Junior Division (13 and younger) Senior Division 14 and older)	Judges will evaluate participants on the following: <ul style="list-style-type: none"> Knowledge, skill and understanding of the project The quality of their project records in documenting project accomplishments Interview performance Dress professionally 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge -A display representing their learning experience of the current project. The youth must be able to maneuver his or her own display.	If you are selected as a State Fair Delegate – additional information will be given to you by the 4-H Educator At the state judging depending on local conditions, participants may be asked to launch their 2-liter bottle rocket. If a launch is conducted, all launch equipment will be provided.
502* Science Fun with Flight	Junior Division (13 and younger) Senior Division 14 and older)	Judges will evaluate participants on the following: <ul style="list-style-type: none"> Knowledge, skill and understanding of the project The quality of their project records in documenting project accomplishments Interview performance Dress professionally 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge -A display representing their learning experience of the current project. The youth must be able to maneuver his or her own display.	If you are selected as a State Fair Delegate – additional information will be given to you by the 4-H Educator
503* Rockets Away (Solid Fuel Rockets)	Junior Division (13 and younger) Senior Division 14 and older)	Judges will evaluate participants on the following: <ul style="list-style-type: none"> Knowledge, skill and understanding of the project The quality of their project records in documenting project accomplishments Interview performance Dress professionally 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge -A display representing their learning experience of the current project. The youth must be able to maneuver his or her own display.	If you are selected as a State Fair Delegate – additional information will be given to you by the 4-H Educator
503M* Solid Fuel Rocketry Master	Junior Division (13 and younger) Senior Division 14 and older)	Judges will evaluate participants on the following: <ul style="list-style-type: none"> Knowledge, skill and understanding of the project The quality of their project records in documenting project accomplishments Interview performance Dress professionally 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge -A display representing their learning experience of the current project. The youth must be able to maneuver his or her own display.	If you are selected as a State Fair Delegate – additional information will be given to you by the 4-H Educator



509* Robotics Essentials	Junior Division (13 and younger) Senior Division 14 and older)	Judges will evaluate participants on the following: <ul style="list-style-type: none"> Knowledge, skill and understanding of the project The quality of their project records in documenting project accomplishments Interview performance Dress professionally 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge -A display representing their learning experience of the current project. The youth must be able to maneuver his or her own display.	STEM Day: completed project book, display, interview, and tasks. Contestants are required to bring their own test surface to demonstrate their robot's completion of a task of their choosing along with a printout of the program.
512M* Robotics Master	Junior Division (13 and younger) Senior Division 14 and older)	Judges will evaluate participants on the following: <ul style="list-style-type: none"> Knowledge, skill and understanding of the project The quality of their project records in documenting project accomplishments Interview performance Dress professionally 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge -A display representing their learning experience of the current project. The youth must be able to maneuver his or her own display.	If you are selected as a State Fair Delegate – additional information will be given to you by the 4-H Educator At the state competition contestants are required to bring their own test surface to demonstrate their robot's completion of a task of their choosing (in less than 10 minutes) along with a printout of the program.
544* Ready, Set,...Now!	Junior Division (13 and younger) Senior Division 14 and older)	Judges will evaluate participants on the following: <ul style="list-style-type: none"> Knowledge, skill and understanding of the project The quality of their project records in documenting project accomplishments Interview performance Dress professionally 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge -A display representing their learning experience of the current project. The youth must be able to maneuver his or her own display.	If you are selected as a State Fair Delegate – additional information will be given to you by the 4-H Educator
550* Young Engineers in Solar Energy	Junior Division (13 and younger) Senior Division 14 and older)	Judges will evaluate participants on the following: <ul style="list-style-type: none"> Knowledge, skill and understanding of the project The quality of their project records in documenting project accomplishments Interview performance Dress professionally 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge -A display representing their learning experience of the current project. The youth must be able to maneuver his or her own display.	If you are selected as a State Fair Delegate – additional information will be given to you by the 4-H Educator
365 Self Determined - 3D Printing - Astronomy - Genetics - Viruses, bacteria, & fungi	Junior Division (13 and younger) Senior Division 14 and older)	Judges will evaluate participants on the following: <ul style="list-style-type: none"> Knowledge, skill and understanding of the project The quality of their project records in documenting project accomplishments Interview performance Dress professionally Depth and thoughtfulness of project idea Sample of Project work 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge -A display on a 36" high by 48" wide cardboard trifold display board with 12" wings. The display must include Title of the Project Background historical or general information about your topic, Areas of interest areas of your project you chose to focus on Results what you did Conclusion what did you learn.	If you are selected as a State Fair Delegate – additional information will be given to you by the 4-H Educator
527* Magic of Electricity	Junior age 13 and under Senior age 14 and older	Judges will evaluate participants on the following: <ul style="list-style-type: none"> Knowledge, skill and understanding of the project The quality of their project records in documenting project accomplishments Interview performance Dress professionally Depth and thoughtfulness of project idea Sample of Project work 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge -Displays should be less than 48" wide, 24" deep and 36" tall showing a completed activity from the project book to demonstrate for the judge - A poster, trifold etc to representing the learning experience of the project year.	If you are selected as a State Fair Delegate – additional information will be given to you by the 4-H Educator
528* Investigating Electricity	Junior age 13 and under Senior age 14 and older	Judges will evaluate participants on the following: <ul style="list-style-type: none"> Knowledge, skill and understanding of the project The quality of their project records in documenting project accomplishments Interview performance Dress professionally Depth and thoughtfulness of project idea Sample of Project work 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge -Displays should be less than 48" wide, 24" deep and 36" tall showing a completed activity from the project book to demonstrate for the judge - A poster, trifold etc to representing the learning experience of the project year.	If you are selected as a State Fair Delegate – additional information will be given to you by the 4-H Educator



529* Wired for Power	Junior age 13 and under Senior age 14 and older	Judges will evaluate participants on the following: <ul style="list-style-type: none"> • Knowledge, skill and understanding of the project • The quality of their project records in documenting project accomplishments • Interview performance • Dress professionally • Depth and thoughtfulness of project idea • Sample of Project work 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge -Displays should be less than 48" wide, 24" deep and 36" tall showing a completed activity from the project book to demonstrate for the judge - A poster, trifold etc to representing the learning experience of the project year.	If you are selected as a State Fair Delegate – additional information will be given to you by the 4-H Educator
530* Entering Electronics	Junior age 13 and under Senior age 14 and older	Judges will evaluate participants on the following: <ul style="list-style-type: none"> • Knowledge, skill and understanding of the project • The quality of their project records in documenting project accomplishments • Interview performance • Dress professionally • Depth and thoughtfulness of project idea • Sample of Project work 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge -Displays should be less than 48" wide, 24" deep and 36" tall showing a completed activity from the project book to demonstrate for the judge - A poster, trifold etc to representing the learning experience of the project year.	If you are selected as a State Fair Delegate – additional information will be given to you by the 4-H Educator
531* Science Fun with Electricity	Junior age 13 and under Senior age 14 and older	Judges will evaluate participants on the following: <ul style="list-style-type: none"> • Knowledge, skill and understanding of the project • The quality of their project records in documenting project accomplishments • Interview performance • Dress professionally • Depth and thoughtfulness of project idea • Sample of Project work 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge -Displays should be less than 48" wide, 24" deep and 36" tall showing a completed activity from the project book to demonstrate for the judge - A poster, trifold etc to representing the learning experience of the project year.	If you are selected as a State Fair Delegate – additional information will be given to you by the 4-H Educator
540* Not Just Knots	Junior age 13 and under Senior age 14 and older	Judges will evaluate participants on the following: <ul style="list-style-type: none"> • Knowledge, skill and understanding of the project • The quality of their project records in documenting project accomplishments • Interview performance • Dress professionally • Depth and thoughtfulness of project idea • Sample of Project work 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge (youth may be asked to demonstrate their ability to tie a specific knot). -Displays should be less than 48" wide, 24" deep and 36" tall showing a completed activity from the project book to demonstrate for the judge - A poster, trifold etc to representing the learning experience of the project year.	If you are selected as a State Fair Delegate – additional information will be given to you by the 4-H Educator
541* Crank It Up	Junior age 13 and under Senior age 14 and older	Judges will evaluate participants on the following: <ul style="list-style-type: none"> • Knowledge, skill and understanding of the project • The quality of their project records in documenting project accomplishments • Interview performance • Dress professionally • Depth and thoughtfulness of project idea • Sample of Project work 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge -Displays should be less than 48" wide, 24" deep and 36" tall showing a completed activity from the project book to demonstrate for the judge - A poster, trifold etc to representing the learning experience of the project year.	If you are selected as a State Fair Delegate – additional information will be given to you by the 4-H Educator



542* Warm It Up	Junior age 13 and under Senior age 14 and older	Judges will evaluate participants on the following: <ul style="list-style-type: none"> • Knowledge, skill and understanding of the project • The quality of their project records in documenting project accomplishments • Interview performance • Dress professionally • Depth and thoughtfulness of project idea • Sample of Project work 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge -Displays should be less than 48" wide, 24" deep and 36" tall showing a completed activity from the project book to demonstrate for the judge - A poster, trifold etc to representing the learning experience of the project year.	If you are selected as a State Fair Delegate – additional information will be given to you by the 4-H Educator
543* Tune It Up	Junior age 13 and under Senior age 14 and older	Judges will evaluate participants on the following: <ul style="list-style-type: none"> • Knowledge, skill and understanding of the project • The quality of their project records in documenting project accomplishments • Interview performance • Dress professionally • Depth and thoughtfulness of project idea • Sample of Project work 	-Completed Project Book (based on the stated guidelines in the project book) -Be prepared to discuss your project with the judge -Displays should be less than 48" wide, 24" deep and 36" tall showing a completed activity from the project book to demonstrate for the judge - A poster, trifold etc to representing the learning experience of the project year.	If you are selected as a State Fair Delegate – additional information will be given to you by the 4-H Educator