

2021 Massachusetts FIRST State STEAM Festival

Welcome to the first Massachusetts 4-H STEAM Festival!

CS Partnership/Google capstone and in celebration of our 4-H Makers
Special Categories in recognition of COVID-19 Heroes

What Classes are Offered:

- Art: Mission Patch, Challenge Coin, Hero Poster, Planet Design, STEAM Collage
- Computer Science: Coding, Hackathon, Web page Design, 3-D printing
- Craft: Analog Game, Wearable Art, Space Project, Truck Model
- Engineering & Design: Rube Goldberg, Catapult, Cardboard Arcade, Paper Chair Design
- Horticulture: Garden Design, Indoor Gardening/Greenhouse
- Performing Arts: Video
- S.E.T.: Robot original or kit, Science Experiment
- Sewing & Textiles: Upcycling, Wearable Technology, Cosplay, Quilt Design, Quilt

Join us for the Awards Ceremony on Pi Day March 14th, 2021

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2021 FIRST MASSACHUSETTS 4-H STEAM Festival



GENERAL RULES:

**Exhibitors must be enrolled and in good standing in the Massachusetts 4-H Program.
All entries must have been completed after September 1, 2020**

AGE REQUIREMENTS - No child under 5 years old as of January 1, 2021 is allowed to exhibit.

- **Cloverbud** - Youth 5 to 7 years old as of January 1, 2021 will enter non-judgement clinics or classes with the same ribbon presented.
- **Junior** - Youth 8 to 13 yr. old as of January 1, 2021
- **Senior** - Youth 14 to 18 yr. old as of January 1, 2021

Rules and Instructions

- ✿ Cloverbuds may enter any department and lot and will receive comments
- ✿ Juniors and Seniors may enter any department and lot and will be judged by age group in each department
- ✿ Each exhibitor may enter each Lot only once
- ✿ Exhibitors may enter any department whether work is a result of a 4-H project or other project.
- ✿ Work must have been completed in the current 4-H year
- ✿ Ribbons are awarded based on quality and judges' decisions are final.
- ✿ Videos should be uploaded to YouTube or Facebook and link provided where indicated.

✿ **ELIGIBILITY:** This festival is open to **all youth** enrolled in the Massachusetts 4-H Program between the ages of 5 and 18 years as of January 1, 2021. 4-H is committed to serving the best interests of youth. Research in youth development indicates that young children under age 8 should not be in competitive situations. This 4-H Fair will follow the guidelines developed for Massachusetts in regards to Cloverbuds (youth age 5 to 7 years) in competition.

✿ **SYSTEM OF JUDGING:** The Danish system of judging will be used. Cloverbuds will receive a special Cloverbud ribbon. No premiums will be paid. Superintendents and judges reserve the right to reject any and all exhibits that are not on the premium list or are of undesirable quality. The judge's decision is final.

TO ENTER

- You will enter your exhibits in Fair Entry. The Link is: <http://www.fairentry.com> The system will open for entries in February and will be announced and close on February 25. Click "Find Your Fair".
 - Filter by your state, click Search, and then click on the correct fair. Look for 2021 First Massachusetts Virtual STEAM Festival. (*Fair entry to be updated by Feb 1st so we can set up our fair.*)
 - Sign in with your 4-H Online sign in and password. You can also create a Fair Entry account to sign in.
1. You will need to upload the required photos and or video link to fairentry website
 2. Your entry will be judged over the next few weeks and you will be able to access your results after March 14th

READ REQUIREMENTS CAREFULLY

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-----CLASS LIST BY ORDER IN BOOK-----

Mission Patch- Create your own Mission Patch for the 4-H Marsbound Challenge. Here is a video link to learn from NASA how to create a mission patch. <https://airandspace.si.edu/.../meaning-mission-patches>

Challenge Coin - Challenge Coins are a physical symbol of appreciation and recognition of a job well done or exemplary service. It has been a challenging year and for the 2020-2021 4-H year so create your design. It needs to include the 4-H clover and the year 2021

Hero Poster - Make a poster or yard display to show your thanks to the truckers, nurses and other heroes during COVID-19 and take a picture.

Planet Design - Create a Planet video

<https://drive.google.com/.../1ziniCg5FeazN4iBApSWQyK.../view> Planets are all unique. In this activity you are going to create your own planet using art materials you have at home. Explain: What kind of features (topography) does your planet have? (Ex. craters, flat plains, canyons, mountains). Does your planet have an atmosphere? Is the gravity stronger or weaker than earth? Would we expect to find life on your planet?

STEAM Collage – Using magazine, pictures or drawing create a collage representing what STEAM means to you.

App or Coded game like Scratch - What will you create? The MA 4-H SET Facebook page has resources and also the 2018; 2019 NYSD under past challenges and 2020 SET Challenge- at www.4-H.org/NYSD on scratch.

Webpage – Submit a webpage you have created using HTML code or designed using a platform like drupal.

Hackathon - Using scratch try your hand at "Insight to Mars" part of this year's STEM Challenge. <https://4-h.org/.../4-h-stem.../insight-from-mars-activity/>

3-D Printing Design- any object you made using a 3D printer. one of the most common platforms to use is Tinkercad. Here's a video to learn more. <https://www.youtube.com/watch?v=sh4o9k599pQ...>

Game Design - Remake a classic card or boardgame using your art skills, or create your own unique card or board game. Must include rules and instructions on how to play the game if it is a game you made up. <https://www.facebook.com/MA4HSET/videos/542963933308267>

Wearable Art - Any form of art that can also be worn and serves a purpose, ex. A hat (fashionable and keeps the heat in).

Space Project- Submit your projects from Winter Workshops such as: rover, straw rocket, parachute or other project that relates to space.

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Model - Make your own model of a truck. Could be Fire, EMT, delivery using recycled and/or repurposed materials.

Rube Goldberg - named after American cartoonist [Rube Goldberg](#), is a machine intentionally designed to perform a simple task in an indirect and overly complicated way. Usually, these machines consist of a series of simple unrelated devices; the action of each triggers the initiation of the next, eventually resulting in achieving a stated goal." Wikipedia definition.

<https://www.youtube.com/watch?v=V8VFTKZHlrk> example of some Rube Goldberg elements

Cardboard Arcade - A working arcade game created by you using cardboard and mainly recycled materials. Must include rules and instructions as to how to play the game. (Caine's cardboard arcade can also provide you with some inspiration <http://cainesarcade.com/>)

Paper Chair Design - Take a SEAT by creating a chair out of only newspaper/magazines and masking tape to support a gallon of water. Keep track of how much newspaper/magazines/tape you use. <https://stemactivitiesforkids.com/2017/06/19/3-amazing-newspaper-stem-challenges/>

Catapult/Trebuchet - Using a kit or not, create a working catapult.

Indoor Gardening/Greenhouse – Show us your set up for starting seeds indoors or greenhouse you designed.

Garden Design – In the design include it's measurement and the types of crops/flowers.

Video – Videos must be 2 minutes or less. They can be demonstration, stop animation, promotional or another genre. Please include, title, 4-H Clover, MA 4-H and credits. Sample storyboard and resources at: <https://ag.umass.edu/mass4h/programs/science-engineering-technology/movie-making>

Robot – Two categories for kit and non-kit.

Science Experiment – Using the scientific method to design and conduct an experiment following safety and ethical guidelines.

Upcycling – Use thrift shop clothes or clothes/fabric you currently own to create something new to wear or use repurposed items into something such as a bag, blanket or bookmark.

Wearable Tech – Add some technology to something you wear. LED lights on shoes, hat or sewn into a skirt. Go further and use sensors like the voice activated tie.

Cosplay – Create a costume that you might wear to a convention featuring your favorite superhero or animated character. Must include reference picture and creation.

Quilt Design – Submit your design with dimensions, patterns and either drawn or fabric swatches as needed.

Finished Quilt – When submitted include if a pattern was used or inspiration for design.

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ART

Rules and information

- ✿ Art must be original, created by you, not paint by numbers or traced. Please provide a photograph of your artwork, description of your work that includes the materials used and the dimensions of your piece. Cover any signature.
- ✿ Submit one photo of entire piece and one close up photo that demonstrates stroke work and shading.

Drawing 01: Cloverbud Mission Patch Design
Drawing 02: Junior Mission Patch Design
Drawing 03: Senior Mission Patch Design
Drawing 04: Cloverbud Challenge Coin Design
Drawing 05: Junior Challenge Coin Design
Drawing 06: Senior Challenge Coin Design
Poster 01: Cloverbud Covid-19: Hero Poster
Poster 02: Junior Covid-19: Hero Poster
Poster 03: Senior Covid-19: Hero Poster
Mixed Media01: Cloverbud Planet Design
Mixed Media02: Junior Planet Design
Mixed Media 04: Senior Planet Design
Mixed Media 05: Other
Mixed Media 06: Cloverbud STEAM Collage
Mixed Media 07: Junior STEAM Collage
Mixed Media 08: Senior STEAM Collage



COMPUTER SCIENCE

Rules and Instructions

- ✿ All General Rules apply
- ✿ Upload a video showing your project in action (optional: add audio or voice over that explains what is occurring).
- ✿ Include brief written description of your project.

01: Cloverbud Scratch coded game or App
02: Junior Scratch coded game or App
03: Senior Scratch coded game or App
04: Cloverbud Webpage design
05: Junior Webpage Design
06: Senior Webpage Design
07: Cloverbud Hackathon "Insight to Mars"
08: Junior Hackathon "Insight to Mars"
09: Senior Hackathon "Insight to Mars"
10: Cloverbud 3-D Printed Design
11: Junior 3-D Printed Design
12: Senior 3-D Printed Design

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CRAFTS

Rules and Instructions

- ✿ Enter only one item in each category
- ✿ Enter a minimum of 1 clear color photo, (a maximum of 2 photos may be used to enter an item).
- ✿ Photos should clearly show any detail needed for clarity for judges
- ✿ A description of up to 200 words may accompany photos if exhibitor feels it is needed. Can include:
 - Materials, methods, and if made from a kit

01: Cloverbud card or board game
02: Junior card or board game
03: Senior card or board game
04: Cloverbud wearable art
05: Junior wearable art
06: Senior wearable art
07: Cloverbud Space Project
08: Junior Space Project
09: Senior Space Project
10: Cloverbud COVID-19 Hero Model
11: Junior COVID-19 Hero Model
12: Senior COVID-19 Hero Model



ENGINEERING & DESIGN

Rules and Instructions

- ✿ Include a sketch and description of design.
- ✿ Upload the following;
 - Picture showing overall Design and or
 - Video showing how it works with narration.

01: Cloverbud Rube Goldberg Invention
02: Junior Rube Goldberg Invention
03: Senior Rube Goldberg Invention
04: Cloverbud Cardboard Arcade Game
05: Junior Cardboard Arcade Game
06: Senior Cardboard Arcade Game
07: Cloverbud Chair Challenge
08: Junior Chair Challenge
09: Senior Chair Challenge
10: Cloverbud Catapult/Trebuchet - indicate kit or non-kit
11: Junior Catapult/Trebuchet - indicate kit or non-kit
12: Senior Catapult/Trebuchet - indicate kit or non-kit

HORTICULTURE

Rules and Instructions

- ☘ Enter only one item in each category
- ☘ Enter 1 clear color photo, no more than 2 may be used to enter an item – (ex. front and side view or front and top view)

01: Cloverbud Indoor Greenhouse
02: Junior Indoor Greenhouse
03: Senior Indoor Greenhouse
04: Cloverbud Garden Design
05: Junior Garden Design
06: Senior Garden Design

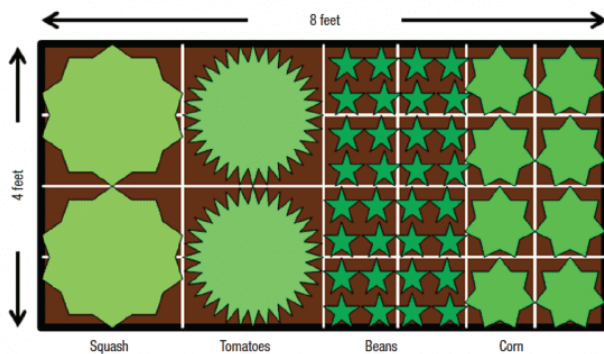


Image: aces.edu



PERFORMING ARTS VIDEO

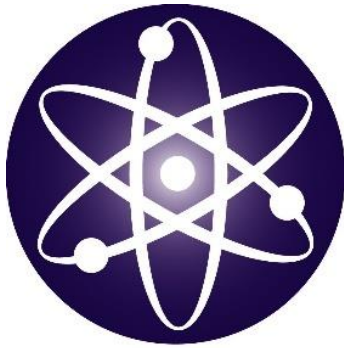
Rules and Instructions

- ☘ When submitting your entry make sure to create your video according to requirements
 - Time limit of 2 minutes
 - 4-H Clover used correctly
 - Follow 4-H Code of Conduct
- ☘ Submissions will be judged on
 - Creativity, content, costumes, and format
 - adherence to time limit

01: Cloverbud video, 2 minutes
02: Junior video, 2 minutes
03: Senior video, 2 minutes
Stop Animation, 4-H Promotion and/or other video topic/genre.

*Don't forget there is a 4-H Filmfest each summer you might consider entering your work.

<https://extension.missouri.edu/programs/missouri-4-h/4-h-projects-opportunities/4-h-opportunities/4-h-filmfest>



SCIENCE, ENGINEERING, TECH

Rules and Instructions

- ✿ All General Rules apply and safety guidelines.
- ✿ Upload a picture or video showing your project in action (optional- use audio or a voice over explaining what is occurring, or a detailed written description).
- ✿ Also, include the following in your submission:
 - a. Materials/Sensors used
 - b. A brief explanation of your methods

01: Cloverbud Robot from Kit
02: Junior Robot from Kit
03: Senior Robot from Kit
04: Cloverbud Robot Kit - electronic-non kit
05: Junior Robot Kit - electronic-non kit
06: Senior Robot Kit - electronic-non kit
07: Cloverbud Robot Kit - non electronic-non kit
08: Junior Robot Kit - non electronic-non kit
09: Senior Robot Kit - non electronic-non kit
10: Cloverbud Science Experiment
11: Junior Science Experiment
12: Senior Science Experiment

SEWING & TEXTILES

Rules and information

- ✿ Please provide a brief description.
- ✿ Submit one photo of entire piece and one close up photo that demonstrates stitching and/or components

01: Cloverbud Upcycling
02: Junior Upcycling
03: Senior Upcycling
04: Cloverbud Wearable Technology
05: Junior Wearable Technology
06: Senior Wearable Technology
07: Cloverbud Cosplay
08: Junior Cosplay
09: Senior Cosplay
10: Cloverbud Quilt Design
11: Junior Quilt Design
12: Senior Quilt Design
13: Cloverbud Quilt
14: Junior Quilt
15: Senior Quilt



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