STEM Geospatial

STEM Geospatial is a diverse category that includes a variety of exhibits 4-H'ers can get involved in. Through participation in this category, 4-H'ers will gain more knowledge about Nebraska's rich history and diverse geography. Take close note of the rules to ensure your exhibit qualifies. For more resources and materials in this category refer to the resource section at the bottom of the page.

Rules

1. The name and county of each exhibitor should appear separately on the back of each board, poster, or article and on the front cover of the notebooks so the owner of the exhibit may be identified if the entry tag is separated from the exhibit.

2. Reports should be written using the scientific method whenever possible (Background, the Question or hypothesis, what you plan to do and what you did, Method used and observations, Results: what you learned. All reports should be computer generated and enclosed in a clear plastic cover. The reports should be attached securely to the display.

3. Please refer to the General Rules for the policy regarding firearms, items with a blade, and other related items.

4. Please refer to the General Rules for the policy regarding use of copywritten images.

Scoresheets, Forms, and Contest Study Materials

Scoresheets, forms, contest study materials, and additional resources can be found at
https://go.unl.edu/ne4hgeo.

Special Awards

Premier 4-H Science Award is available in this area.

Divisions

Geospatial

Class

H880001 - Poster - (SF299) **-** Create a poster (not to exceed14 inches x 22 inches) communicating a GPS theme such as How GPS or GIS works, Careers that use GPS or GIS, how

to use GPS, What is GIS, GPS, or GIS in Agriculture, Precision Agriculture, or a geospatial topic of interest.

H880002 - 4-H Favorite Places or Historical Site Poster - (SF299) **-** The 4-H exhibitor identifies a favorite place or historical site (including gravesites) in Nebraska. The exhibit should include latitude and longitude, digital picture, and local area map. Poster size should not exceed 14 inches X 22 inches.

H880003 - GPS Notebook - (SF300) **-** Keep a log of at least 5 places visited using a GPS-enabled device. At least one site should be from a community other than where you live. For each site, record the latitude, longitude, and elevation. Also include a description of the site, a paragraph explaining what was interesting about the site or finding it. Photos of each site and/or cache are optional but encouraged.

H880004 - Geocache - (SF301) - Assemble a themed geocache **(physical geocache is REQUIRED with exhibit)**. Each geocache should be a water-tight container. It should include a logbook and pencil for finders to log their visits and may include small trinkets, geo-coins, etc. for the finders to trade. Documentation should include a title, teaser description, and the geographic coordinates of the intended placement. Register the site at geocaching.com, including a print-out of its registry. The entry may include a photograph of the cache in its intended hiding place.

H880005 - Agriculture Precision Mapping - (SF302) - 4-Hers will assemble a notebook that will include a minimum of 2 digital copies of various data layers that can be used in precision agriculture to identify spatial patterns and/or correlations (printed copies of websites were applications can be purchased is acceptable) A report of how the analysis of the various data will be used to make a management decision.

H880006 - 4-H History Map/Preserve 4-H History (SF 303) – Nominate a Point of Interest for the 4-H History Map Project. Include a copy of the submitted form in a folder or notebook. To nominate a site for the 4-H history map please go to http://arcg.is/1bvGogV. For more information about 4-H history go to: http://www.4-hhistorypreservation.com/History_Map. For a step-by-step video on nominating a point, please go to this link: http://tinyurl.com/nominate4h. Write a brief description of the historical significance of the 4-H place or person. (a minimum of one paragraph)

H880007 - GIS Thematic Map (SF302) – Using any GIS software, create a thematic map. Thematic maps can utilize any subject of interest to the 4-H'er. Example map would be Amelia Earhart's or Sir Francis Drake's voyage, population density maps, water usage maps, or 4-H project in Nebraska. Create GIS maps using data from books and/or the internet. Use reliable data, (U.S. Center or U.S. Census Bureau, etc.) Map any size from 8.5 inches x 11 inches up to 36 inches x 24 inches, which should include Title, Base Map, Neat Line, North Arrow, and Legend. Identify the source of your information on the back of the map.

H880008 – Virtual Geocache (SF300) – Keep a log of at least 5 places visited using a virtual geocache platform. At least one site should be from a community other than where you live. For

each site, record the latitude, longitude, and elevation. Also, include a description of the site, a paragraph explaining what was interesting about the site or finding it. Photos of each site, and/or cache area optional, but highly encouraged.

Resources

Geospatial

Learn about Geography; Learn about Geographic Information Systems (GIS); Learn about Global Positioning Systems (GPS)

URL: https://4hcurriculum.unl.edu/index.php/main/program_project/132