Teaching the Weather Merit Badge: STEM Education in the Boy Scouts of America
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Background

- The Boy Scouts of America (BSA) is one of the nation’s largest values-based youth development organizations.
- In 1927 the weather merit badge was introduced to the BSA as an elective.
- To earn the weather merit badge scouts must identify cloud types, explain fundamental weather phenomenon, learn safety rules for different types of dangerous weather, and learn about weather related careers.
- Scouts fulfill the requirements under the guidance of a volunteer instructor or counselor.

BSA is one organization that provides STEM education outside of formal schooling by offering many merit badges in STEM subjects such as weather.

BYU Pow Wow

- The BSA Merit Badge PowWow at Brigham Young University (BYU) has been held for more than 57 years and is one of the largest PowWows in the United States.
- Occurs on two Saturdays each fall and spring.
- Nearly 40 different merit badges are offered.

Teaching a Class

- Wide age group: 11-18 year old audience.
- Prepare a worksheet for scouts to complete.
- Show clean PowerPoint slides for each requirement (see examples below).
- Keep the scouts involved. Ask questions and have scouts share personal weather stories.
- Show weather instruments used by meteorologists: rawinsonde, tipping rain bucket, anemometer, temperature sensor, etc.
- Give a homework assignment, preferably related to requirement 9 or 10.

Volunteers Needed

- Teaching youth comes with challenges, but an effective instructor can spark a scout’s interest in a STEM field.
- Scouts learn more effectively when taught by an enthusiastic instructor who has background in the subject.
- Without a knowledgeable volunteer, this merit badge is taught by someone less interested in meteorology or is not taught at all.
- Contact your local BSA district or council for volunteer opportunities.

Weather Merit Badge Requirements

- Define meteorology.
- Explain to your counselor what training and education are required for such a position.
- Find out about a weather-related career opportunity that interests you. Discuss with and explore to your counselor what training and education are required for such a position, and the responsibilities required of such a position.

Volunteers Needed

- More than 7,000 scouts attend the BYU Merit Badge PowWow each spring and fall.

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