Presenting Your Data: VT EPSCoR Student Research Symposium

All participants of the BREE High School program commit to presenting their research findings at the annual Vermont EPSCoR Student Research Symposium. A symposium is a great way for researchers to present and discuss their work and it provides an important channel for the exchange of information between researchers. At the Vermont EPSCoR Student Research Symposium, participants have the option to choose whether they present their research through a poster or an oral presentation. Both are great ways to share your work!

Posters versus Oral Presentations

Although it can be challenging to present a year's worth of work in 10 minutes, oral presentations can be a rewarding experience because you are the only one front of an audience whose attention you know you have. Oral presentations are brief and consequently the presentation must be clearly and succinctly presented.

Posters are a visual presentation of information that is understandable to the viewer without verbal explanation. Poster presenters have the opportunity to share their work with one person at a time, over an extended period of time. This allows the presenter to describe and discuss their research in greater detail than would be possible in an oral presentation to significantly more people, and allows for dialogue with poster viewers.

Posters

A research or academic poster provides a means of communicating your research at a conference or research symposium. Posters printed by Vermont EPSCoR are 3' x 4' (or 36'' x 48"), horizontally or vertically aligned. Upload your final poster file when registering for the symposium by the deadline announced in early January, 2018. The CWDD will print and set up your poster at the symposium.

How to Create a Poster Using PowerPoint

For many, this is the first time creating a research poster. Here are some tips for making an informative and attractive research poster:

1. Open PowerPoint
2. Click the 'Design' menu/tab at the top of the screen and select 'Page Setup'
    i. Change the dimensions of the slide from the default setting to: Width=48, Height=36 (for a horizontal poster), or Width=36, Height=48 (for a vertical poster). This is an important **FIRST** step – if you change the dimensions after putting content on the slide, you will have to re-format all text boxes, graphs, tables, photos, etc.
3. Critical poster elements:
    i. Title, Author(s) and affiliation(s)
    ii. Abstract/Summary (*optional*)
    iii. Introduction/Background: a brief but important overview to secure the viewer's attention
    iv. Materials and Methods: a brief description of the processes and procedures used, photos (*optional*) should be >300dpi
    v. Results: outcomes, findings and data displayed through text, tables, graphs, photos, etc.
        - Bulleted lists (rather than paragraphs) may help the reader understand the most important findings
        - Tables, graphs and photos should have captions. Graphs should have a legend, avoid 3-D graphs as they are hard to interpret
    vi. Discussion/Conclusions: summary or discussion of the significance and relevance of the results, identify possible future research
    vii. References
    viii. Acknowledgements
    ix. You **MUST** include the following text somewhere on the poster: Funding provided by NSF Grant OIA-1556770
4. Upload final poster file when registering for the symposium

Tips:

A. Use the "Designing Conference Posters" website to get ideas on poster layout and to download poster templates: http://colinpurrington.com/tips/academic/posterdesign
B. Choose a background and text color scheme. No need to go crazy: a white/light poster with black/dark text is often much easier to read than a multi-colored poster. Use cool/muted colors, solid colors, a color gradient, etc.

C. Lettering can make a difference in how easy-to-read your poster is. Here are some suggestions:
    - Title: at least 72 pt., bold preferred
    - Section Headings: at least 48 pt., bold preferred
    - Body Text: at least 24 pt.
    - Avoid using all capital letters
    - Use sans serif (Arial) for titles & headings
    - Use serif (Times New Roman) for body text
    - Use bulleted lists where possible instead of paragraphs
    - Use *italics* instead of underlining
    - White or light colored lettering is hard to read on a dark background when printed. Use black lettering instead on a light colored background
D. Logos: Do not forget to include the logos for the organization(s) that helped make the research possible!
    - Funding source: The National Science Foundation's (NSF) logo can be used by recipients of NSF support for the sole purpose of acknowledging that support: https://www.nsf.gov/policies/logos.jsp. You **MUST** include the following text somewhere on the poster: Funding provided by NSF Grant OIA-1556770
    - VT EPSCoR, BREE, CWDD and others if they were important contributors. Logos are available on the "Resources" website: http://www.uvm.edu/~epscor/new02/?q=node/900
    - Your school logo!

Example posters from the 2017 VT EPSCoR Student Research Symposium:

http://epscor.w3.uvm.edu/2/node/3631

Oral Presentations

A research talk provides a means of communicating your research at a conference or research symposium. Oral presentations at the VT EPSCoR Student Research Symposium are limited to 10 minutes: 8 minutes to present your research, 2 minutes for the audience to ask questions. Presenters often use the general rule of "1 slide per minute"; however the number of slides needed varies based on the complexity of the content of the slides. Upload your final PowerPoint file when registering for the symposium by the deadline announced in early January or bring the file to the symposium on a USB drive. The CWDD will provide the computer, screen, podium, microphone and laser pointer for your use.

Oral Presentation Structure (*suggested*):

- Title, Author(s), Affiliation (1 slide)
- Outline, *optional* (1 slide): overview of the structure of your talk, some speakers prefer to put this at the bottom of their title slide, audiences like predictability
- Introduction/Background
    - Motivation and problem statement (1-2 slides): Why should anyone care? Most researchers overestimate how much the audience knows about the problem they are addressing
    - Related Work (0-1 slides)
    - Methods (1 slide): Cover quickly in short talks
- Results (4-6 slides): Present key results and key insights. This is the main body of the talk. Its structure varies greatly as a function of the research conducted. Do not superficially cover all results; cover key result well. Do not just present numbers; interpret them to give insights. Do not put up large tables of numbers as your audience will not have time to take in that much information at once
- Discussion/Conclusions (1 slide): summary or discussion of the significance and relevance of the results, identify possible future research
- References
- Acknowledgements
- You MUST include the following text somewhere on your slides: Funding provided by NSF Grant OIA-1556770

Logos: Do not forget to include the logos for the organization(s) that helped make the research possible!

- Funding source: The National Science Foundation's (NSF) logo can be used by recipients of NSF support for the sole purpose of acknowledging that support: https://www.nsf.gov/policies/logos.jsp. Please include the following text somewhere on your slides: Funding provided by NSF Grant OIA-1556770
- VT EPSCoR, BREE, CWDD and others if they were important contributors. Logos are available on the "Resources" website: http://www.uvm.edu/~epscor/new02/?q=node/900
- Your school logo!

Example posters from the 2017 VT EPSCoR Student Research Symposium:

http://epscor.w3.uvm.edu/2/node/3626

Resources

BREE High School Resources: http://www.uvm.edu/~epscor/new02/?q=node/900

- Includes links to datasets available online, including:

  Data and Data Analysis

  - VT Department of Environmental Conservation Lake Champlain Long Term Monitoring
  - VT Department of Environmental Conservation Volunteer Monitoring
  - USGS Stream Gauge Data
  - Vermont Water Quality Data
  - NOAA Quality Controlled Local Climatological Data
  - VT EPSCoR Data Analysis Tutorials
  - Data Analysis in Excel

- Helpful hints on posters and oral presentations

- High resolution logos to include on your poster, etc.

Data Analysis Videos by Dr. Declan McCabe:

https://www.youtube.com/watch?v=3QByp-83ceQ

- Gets you started on data analysis. When you compare two groups, will it be significant or not?

http://www.uvm.edu/~epscor/new02/?q=node/1237

- Walks you through how to find different data sources online, how to groom and present your data using Excel, and how to use PowerPoint to create a presentation

Video Tutorials
http://www.uvm.edu/~epscor/new02/?q=node/1686

- Uploading Macroinvertebrate Data
- Programming the iButton Temperature Sensor
- Downloading Data from the iButton Temperature Sensor