Data Activities Portfolio:
A Research Based Approach for Infusing 21st Century Physics into the High School Classroom

Deborah Roudebusch
QuarkNet Education Specialist
droudebusch@cox.net
Engaging Teachers

Making 21st Century Physics Approachable

- Connect to traditional content topics
- Clearly address standards
- Overcome fear of complexity
Engaging Teachers

Guiding Philosophy of the Portfolio

• Public Access
• Searchable
• Guided Inquiry
• Data Driven
• Claim – Evidence – Reasoning
• Making Sense from Data
Engaging Teachers

Overcoming Fear of Complexity

• Teacher Notes
  • Standards
  • Prior Knowledges
  • Resources
  • Implementation Guide
  • Assessment Suggestions
• Student Pages
• Links to Data

Deborah Roudebusch, DSECOP Workshop, June 23, 2022
Activities Incorporating 21st Century Physics

- [https://quarknet.org/data-portfolio](https://quarknet.org/data-portfolio)
Evidence of Effectiveness

Effectiveness

• Half of the QuarkNet teachers surveyed report using DAP activities.
• Anecdotal reports of use of skills and strategies.
• Sustained virtual contact during Covid.
Conclusion

Impacting Curriculum

- Provide access to vetted activities available on public web site.
- Reach out to existing programs & organizations to develop relationships.
  - Science teacher organization
  - State, local physics teacher groups
- Share data to support additional activity development.