DataONE
(Data Observation Network for Earth)

DataONE Users Group
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Community Engagement and Education

Working Group Activity: Development of Data Management Online Educational Materials

Working Group Leads:
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Data Management Online Education Materials

**Topic**: Data Management Education Modules based on best practices throughout the data lifecycle.

**Justification**: Advances in science will happen with greater ease if scientists take time to manage data well throughout the life of a research project.

**Audience**: Graduate-level Earth Science student; professors in Earth Science (for use in graduate-level courses); experienced researchers and scientists interested in brushing up on data management practices.
Data Management Education Materials

Data Lifecycle

- Collect
- Analyze
- Integrate
- Discover
- Preserve
- Describe
- Deposit
- Assure
Data Management Education Materials: Module Titles

1. What is the data lifecycle?
2. Data Management Planning
3. Data Collection, Entry, and Manipulation
4. Data Quality Control and Assurance
5. Data Protection: Data Backups
6. Data Preservation
7. Data Documentation: What is Metadata?
8. Data Documentation: The Value of Metadata
9. Data Documentation: How to Write Good Metadata
10. Data Delivery: Data Sharing
11. Data Citation Practices
12. Collaborative Science
13. Data Analysis: Workflows and Other Tools
Data Management Education Materials: 2 Formats

- Downloadable Power Point modules:
  - Introduction to the topic
  - Learning objectives
  - Summary of content
  - Quiz (to assess learning)
  - Survey link (for feedback)

- Power Points accompanied by a professional voice-over (optional for the user)

- User can approach the material as a continuous “course” or in smaller segments
Data Management Education Materials: Use Cases

• Scenarios:
  • A professor downloads several modules to accompany material in a pre-established course
  • A student engages with the modules 1 – 13 in order by listening to the voice-over as a means to learn data management best practices
  • A seasoned researcher is required to submit metadata for a funded project and needs to learn how to best do that. He selects the appropriate modules to learn about one area of the data lifecycle.
Data Management Education Materials: Feedback

• CEEWG is identifying several professors willing to try out modules in their classrooms and will provide feedback.

• Survey link at conclusion of each module.
Data Management Education Materials:
Feedback

• DataONE Users Group:
  • Does this overall approach work?
  • Are there other formats we should consider?
  • Suggestions for additional content?
  • Suggestions for next CEEWG project to benefit DataONE Community?
Thank you!