General

Teacher name: Karen Soenen & Ben Harden

Class name: SEA Semester - Oceans and Climate

Date of class: 2020-02-26

Title of class: Data Management in (Ocean) Sciences

Objectives, content:

- Data Life Cycle & Fair principles
- Data Management Plan (DMP)
- Data Management Practices
- Notion of Persistent Identifiers (ORCID, DOI), citations, vocabularies and repositories

Objectives, skills:

- Setting up a data management plan
- Apply good data management practices

HW to prep students for class: None

Lesson:

Introduction (5 - 10 min) - Hook

- Introduction of myself

- Why am I here, why is data management important for scientists? [Slide: Scientists are data creators]

- Why would you share your data? ***Think-Pair-Share exercise***

  - Transparency
  - People can check your data
  - Re-use of your data
  - Collaboration
  - New findings with your data
  - Knowledge sharing
  - Better informed decision making
- Data Life Cycle [Slide]

- Fair principles [Slide]

Exercise: Creating a data management plan (10 - 15 min)

- Orientation: Students are scientists that are going to sea and do field work, what would they write in a data management plan to ensure their data is FAIR in the end?
- ***Group discussion exercise*** : Divide up in groups of 4, discuss what would need to be in a DMP, class discussion afterwards.
- Goal is considering the different parts of data management, metadata generation, data preservation and analysis.

Exercise: Data management practices (20 min)

- ***Table discussion + Gallery walk***, need big tabloid papers, print out of dataset to pick apart and pens
- Orientation: Students can be a data manager themselves. They pick a dataset apart in groups of 4 and tape the table on a big piece of paper, annotate the mistakes. Afterwards they`ll do a gallery walk and try to find big "common topics"
- Class discussion and wrap up

Exercise: Improve current cruise files

- ***Table/ class discussion exercise*** + print out data management plan lay-outs for everyone
- Give top 3 recommendations to standardize the files currently used for cruises