Multidimensional Arrays (/nDarrays/)

This lesson is a template for creating geohackweek (https://geohackweek.github.io) lessons.

It is based on the lesson template used in Data Carpentry () and Software Carpentry (https://software-carpentry.org) workshops,

Schedule

09:00	datasets for the xarray tutorial (/nDarrays/00-datasets/)	What sample datasets will we use in this tutorial?
09:00	Introduction to multidimensional arrays (/nDarrays/01-introduction/)	When do we need to use multidimensional arrays? What are current challenges is manipulating these datasets?
09:10	xarray architecture (/nDarrays/02-xarray-architecture/)	What functionality does the xarray library offer? What are the benefits and limitations of this library? What is the fundamental architecture of xarray data objects?
09:20	label-based indexing (/nDarrays/03-label-based-indexing/)	How does the labeling of dimensions enhance the xarray workflow?
09:30	plotting (/nDarrays/04-plotting/)	Does xarray have tools for visualizing the data?
09:35	arithmetic and aggregation (/nDarrays/05-aggregation/)	How do I perform simple arithmetic operations on xarray objects? How do I calculate statistics along a dimension of an xarray object?
09:55	Morning Coffee (/nDarrays/06-coffee/)	Break
10:00	groupby processing (/nDarrays/07-groupby-processing/)	What is groupby processing and in what cases is it useful for scientific analysis of multidimensional arrays?
10:15	out-of-core computation (/nDarrays/08-out-of-core-computation/)	How can we do computations on array datasets that are too large to fit into memory on a local machine?
10:25	masking (/nDarrays/09-masking/)	What is masking and how can it be used to analyze portions of a dataset
10:40	Wrap-Up (/nDarrays/10-wrap-up/)	What have we learned?
10:45	Finish	