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**SIP**  
MAKING DATA MATTER

# Data Management Training Clearinghouse

An Introduction

Karl Benedict (University of New Mexico) &  
Nancy Hoebelheinrich (Knowledge Motifs LLC)

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This project is made possible by a grant from the U.S. Institute of Museum and Library Services (IMLS). IMLS Grant LG-70-18-0092-18. The DMTC is managed by the Earth Science Information Partners, with development support provided by DataONE, and USGS. The views, findings, conclusions or recommendations expressed in this presentation do not necessarily represent those of the IMLS, or the other sponsor organizations.



## Today's Goals and Objectives

- Increase the visibility and use of the existing materials of the DMTC through hands-on work
- Enable interested participants to serve as contributors and reviewers
- Recruit participants in the IMLS project's *Metadata and Assessment Working Groups, and Editorial Team*

Image from Shutterstock

## Presentation Outline

1. Introduction to the DMTC
2. Demonstration of the DMTC search process and interface
3. Demonstration/tutorial of resource submission process

PLAN A

PLAN B

PLAN C

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# Data Management Training Clearinghouse

Background



Image from Shutterstock



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# Data Management Training Clearinghouse Background

- Work Started 2015
- First Content in 2016
- Funded by USGS, DataONE, and the Earth Science Information Partners (ESIP)

 **ESIP** Data Management Training

Home Browse Search Submit Help ▾ About Log in

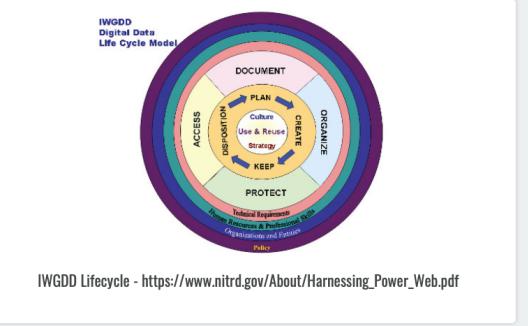
## Welcome to the DMT Clearinghouse

The Data Management Training (DMT) Clearinghouse is a registry for online learning resources focusing on research data management.

It was created in a collaboration between the [U.S. Geological Survey's Community for Data Integration](#), the [Earth Sciences Information Partnership \(ESIP\)](#), and [DataONE](#).

For questions or feedback, please contact [clearinghouseEd@esipfed.org](mailto:clearinghouseEd@esipfed.org)

[Read More](#)



IWGDD Digital Data Life Cycle Model

The diagram illustrates the IWGDD Digital Data Life Cycle Model as a circular process. The outermost ring is labeled "DISSEMINATE". The next ring inward is labeled "PROTECT". The middle ring is labeled "KEEP". The innermost ring is labeled "CREATE". The center of the circle is labeled "PLAN". Arrows indicate a clockwise flow from PLAN to CREATE, then through KEEP and PROTECT, and finally to DISSEMINATE. The center also contains the text "Culture", "Use & Reuse", and "Strategy".

IWGDD Lifecycle - [https://www.nitr.gov/About/Harnessing\\_Power\\_Web.pdf](https://www.nitr.gov/About/Harnessing_Power_Web.pdf)

**Search**

Find learning resources by keyword, name, date, license and cost

Your search terms  Search

**Browse**

See a list of learning resources by educational framework

[Browse](#)

**Submit**

Submit your learning resources to the Clearinghouse

[Submit](#)

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SEARCH  
this esip site

your search terms  [search](#)

Questions or issues with the website? Please contact [clearinghouseEd@esipfed.org](mailto:clearinghouseEd@esipfed.org)

ESIP is a collaboration among many partner organizations, activities are sponsored by [NASA](#) and [NOAA](#) and managed by the [Foundation for Earth Science](#).

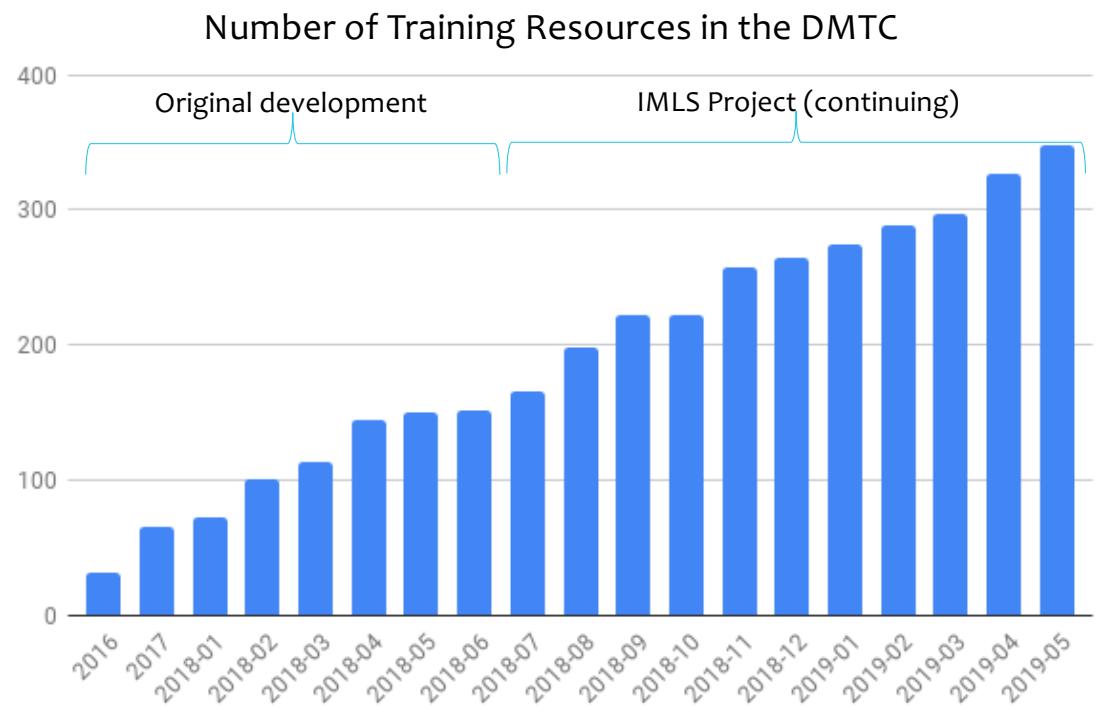
<http://dmtclearinghouse.esipfed.org>

 **ESIP** Data Management Training

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## Continued Development Supported by IMLS

- July 2018 – Start of 3 year project to enhance the DMTC
- *Metadata/Search*
- *Assessment*
- *Diversity of Content*
- *Quantity of Content*





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# Data Management Training Clearinghouse

Search Process Workflow to Education Publication Workflow



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# DMT Clearinghouse functionality...

 **ESIP Data Management Training**  
EXPLORE

Home Browse Search Submit Help - About Log in

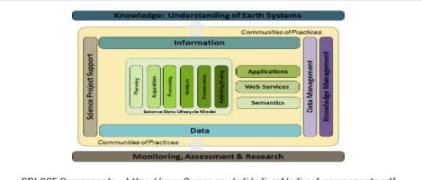
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[Read More](#)



CDI SSF Components - <https://www2.usgs.gov/cdi-ssf/cdi-ssf-components.pdf>

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Find learning resources by keyword, name, date, license and cost  
 [Search](#)

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See a list of learning resources by educational framework  
[Browse](#)

**Submit**   
Submit your learning resources to the Clearinghouse  
[Submit](#)

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**SEARCH**  
this esip site  
  [search](#)

Questions or issues with the website? Please contact [clearinghouseEd@esipfed.org](mailto:clearinghouseEd@esipfed.org)

ESIP is a collaboration among many partner organizations, activities are sponsored by [NASA](#) and [NOAA](#) and managed by the [Foundation for Earth Science](#).  
appropriate reward and career opportunities for RSEs. We organise regular events to

<http://dmtclearinghouse.esipfed.org/>

# Search Function

The screenshot shows the homepage of the DMT Clearinghouse. At the top, there is a navigation bar with links for Home, Browse, Search, Help, and About. A red circle highlights the 'Search' link. Below the navigation bar, there is a section titled 'Welcome to the DMT Clearinghouse' with some introductory text and a 'Read More' button. To the right of this section is a diagram titled 'DCC Lifecycle' with a URL below it. Below the welcome section are three main action buttons: 'Search', 'Browse', and 'Submit'. The 'Search' button is highlighted with a large red circle. The 'Search' button has a sub-section where users can enter search terms and click a 'Search' button. At the bottom of the page, there are sections for connecting with social networks, subscribing to updates, and a site search.

**Welcome to the DMT Clearinghouse**

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**Search**

Find learning resources by keyword, name, date, license and cost

Your search terms  Search

**Browse**

Create a list of learning resources by educational framework

**Submit**

Submit your learning resources to the Clearinghouse (login required)

**CONNECT WITH US**  
on social networks

**SUBSCRIBE**  
to the monday updates

your email  [join](#)

**SEARCH**  
this esip site

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# Search Function: Example approaches

You filter by pre-set categories (“facets”)



**Filter**

**Framework**

- ESIP Data Management for Scientists Short Course (33)
- USGS Science Support Framework (18)
- DataONE Education Modules (10)
- ICSU - World Data System Training Resources Guide (8)
- The Digital Preservation Network (7)

**Keywords**

- Data management (32)
- Data sharing (27)
- Data management planning (23)
- Data preservation (15)
- Data life cycle (11)
- Data citation (10)
- Data reuse - Core Trustworthy Data Repositories Requirements (10)
- Community standards (9)
- Data access methods (9)
- Metadata (9)

Show more

**Organizations**

- Federation of Earth Science Information Partners (ESIP Federation) (34)
- U.S. Geological Survey (16)
- DataONE (10)

Your search terms  Search

**Your search** 104 results Clear all

DataONE Data Management Module 02: Data Sharing May 2012

DataONE Data Management Module 03: Data Management Planning May 2012

DataONE Data Management Module 01: Why Data Management May 2012

DataONE Data Management Module 05: Data Quality Control and Assurance May 2012

DataONE Data Management Module 07: Metadata May 2012

Mozilla Science Lab's Open Data Primers

A red arrow points from the explanatory text 'You enter your own search terms' to the search input field in the search bar at the top of the search results page.

You enter your own search terms

# Search Process: Approach 1 = You search using your own terms

The screenshot shows a search results page with several highlighted elements:

- A red circle highlights the search bar at the top labeled "Your search terms".
- A red circle highlights the "Search" button at the top right.
- A red circle highlights the "104 results" text and the "Clear all" button on the right side of the search bar.

The page displays a list of search results:

- DataONE Data Management Module 02: Data Sharing (May 2012)
- DataONE Data Management Module 03: Data Management Planning (May 2012)
- DataONE Data Management Module 01: Why Data Management (May 2012)
- DataONE Data Management Module 05: Data Quality Control and Assurance (May 2012)
- DataONE Data Management Module 07: Metadata (May 2012)
- Mozilla Science Lab's Open Data Primers

On the left sidebar, there are filter sections for Framework, Keywords, and Organizations, each with a list of categories and counts. A "Show more" link is also present.

# Search Process: Approach 2 = You start by checking boxes within the pre-set categories ("filters")

**Filter**

**Framework**

- ICSU - World Data System Training Resources Guide (76)
- ESIP Data Management for Scientists Short Course (33)
- USGS Science Support Framework (19)
- FAIR Data Principles (12)
- DataONE Education Modules (10)
- The Digital Preservation Network (7)

**Keywords**

- Data management (82)
- Data management planning (59)
- Data sharing (55)
- Data access (49)
- Data reuse - Core Trustworthy Data Repositories Requirements (40)
- Data collection (32)
- Data preservation (31)
- Data publication (31)
- Accessible data - FAIR Data Principle (29)
- Open data (28)

Show more

Your search terms  Search

**Your search** 211 results Clear all

Creating Documentation and Metadata: Creating a Citation for Your Data More ▾ September 2012

Local Data Management - Data Formats: Using Self-describing Data Formats More ▾ January 2013

Responsible Data Use: Data Restrictions More ▾ February 2013

Preserving the Scientific Record: Establishing Relationships with Archives More ▾ October 2012

Preserving the Scientific Record: Preserving a Record of Environmental Change More ▾ October 2012

# Built-in Search Filters

**Filter**

**Framework**

- Data Management for Scientists Short Course (33)
- USGS Science Support Framework (18)
- DataONE Education Modules (10)
- ICSU - World Data System Training Resources Guide (8)
- The Digital Preservation Network (7)

**Keywords**

- Data management (32)
- Data sharing (27)
- Data management planning (23)
- Data preservation (15)
- Data life cycle (11)
- Data citation (10)
- Data reuse - Core Trustworthy Data Repositories Requirements (10)
- Community standards (9)
- Data access methods (9)
- Metadata (9)

Show more

**Organizations**

- Earth Science Information Partners (ESIP Federation) (34)
- U.S. Geological Survey (16)
- DataONE (10)

**People**

- Shirley J. Hoebelheinrich (33)
- Ruth E. Duerr (33)
- Matthew Mayernik (9)
- Robert R. Downs (7)
- Robert Cook (5)
- Chen Chiu (2)
- Curt Tilmes (2)
- Jason Kudulis (2)
- Kathy Martinolich (2)
- Lola Olsen (2)
- Mimi Tzeng (2)
- Suresh K.S. Vannan (2)
- Tyler Stevens (2)
- Zannah Marsh (2)
- Ben Wheeler (1)
- Dave Fearon (1)
- Dorothea Salo (1)
- Drew Ignizio (1)
- Elliot Metsger (1)
- Emily Fort (1)

Show more

**Publication Date**

- 2012 (17)
- 2017 (15)
- 2013 (13)
- 2015 (9)
- 2016 (5)
- 2014 (2)
- 2010 (1)

**License**

- Creative Commons Attribution 3.0 United States - CC BY 3.0 US (35)
- Creative Commons 0 - CC0 "No Rights Reserved" (Public Domain) (31)
- Creative Commons Attribution 4.0 International - CC BY 4.0 (15)
- Creative Commons Attribution-NonCommercial 4.0 International - CC BY-NC 4.0 (5)
- Creative Commons 1.0 Universal (Public Domain Dedication) (3)
- Creative Commons Attribution-ShareAlike 4.0 International License - CC BY-SA 4.0 (3)
- Creative Commons Attribution 3.0 Unported - CC BY 3.0 (1)

**Cost**

- No fee (101)
- Fee (3)

## Search Process: Approach 3: Combining Approach 1 & Approach 2 ...



## Demonstrating Approach 3: Start by entering your own search term...

A screenshot of a search interface. At the top, there is a search bar containing the text "sharing practices". To the right of the search bar is a blue "Search" button. Below the search bar, a green header bar displays the text "Your search sharing practices". To the right of this header bar is the word "Yikes!" in blue. Further to the right is a button labeled "89 results". At the bottom right of the green bar is a "Clear all" button.

... then limiting by Keyword filter...

A screenshot of a search interface showing a refined search. The search bar at the top now contains "Your search sharing practices". Below the search bar, a green header bar displays the text "Keywords - short phrases describing what the learning resource is about Data sharing [X]". To the right of this header bar is the word "More precise!" in blue. Further to the right is a button labeled "26 results". At the bottom right of the green bar is a "Clear all" button.

**Framework**

- ICSU - World Data System Training Resources Guide (11)
- DataONE Education Modules (2)
- ESIP Data Management for Scientists Short Course (2)
- FAIR Data Principles (2)
- USGS Science Support Framework (1)

**Keywords**

- Data sharing
- Data management (17)
- Data management planning (12)
- Data access (11)

## Demonstrating Search: finally, limiting even more by the Framework filter...

The screenshot shows a search interface with the following elements:

- Filter** sidebar:
  - Framework** (selected, circled in red):
    - (-) USGS Science Support Framework
  - USGS Framework Steps** (selected, circled in red):
    - Preserve (1)
    - Publish/Share (1)
  - Keywords**:
    - Data sharing
    - Data preservation (1)

Search bar: sharing practices

Results summary: Still more precise! 1 result

Your search: sharing practices

Result details:
  - Framework** - A community-based organization plan or set of steps for education or training USGS Science Support Framework [X] [Clear all](#)
  - Keywords** - short phrases describing what the learning resource is about Data sharing [X]

Result preview:

Best practices for preparing data to share and preserve  
... is to provide guidance on fundamental data management practices that investigators should perform during the course of data ... In addition, I will briefly discuss data curation practices that are done by archives to ensure that data can be discovered and used in the future. By following the practices, data will be less prone to error, more efficiently structured for ...

More ▾

Metadata:
  - [0] PUBLIC DOMAIN
  - USGS Science Support Framework
  - November 2015

**Demonstrating Search: however, if too precise, you can either *Clear all* to start over ... or uncheck filters / facets**

Filter

sharing practices

Search

Your search sharing practices 1 result

**Framework - A community-based organization plan or set of steps for education or training** USGS Science Support Framework

**Keywords - short phrases describing what the learning resource is about** Data sharing [X] **Clear all**

Best practices for preparing data to share and preserve More ▾

... is to provide guidance on fundamental data management practices that investigators should perform during the course of data ... In addition, I will briefly discuss data curation practices that are done by archives to ensure that data can be discovered and used in the future. By following the practices, data will be less prone to error, more efficiently structured for ...

Preserve (1) November 2015

USGS Framework Steps

USGS Science Support Framework

Keywords

Data sharing

Data preservation (1)



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# Search Results View -- What does it tell you?

You can either  
click on the  
Title  
or the  
More  
button  
to get  
more info

**ICSU**

- Open Teacher Information Management Courses** More ▾  
BY-SA ICSU - World Data System Training Resources Guide
- Essentials 4 Data Support** More ▾  
BY-SA ICSU - World Data System Training Resources Guide August 2017
- Open Teacher Data Management Courses** More ▾  
BY-SA ICSU - World Data System Training Resources Guide
- ISRIC Spring School** More ▾  
BY ICSU - World Data System Training Resources Guide
- ISRIC - World Soil Information Educational Videos** More ▾  
BY ICSU - World Data System Training Resources Guide
- NASA Earthdata Webinar Series** More ▾  
PUBLICDOMAIN NASA Earthdata Webinar Series
- ORNL DAAC Data Management Workshops** More ▾  
PUBLICDOMAIN ICSU - World Data System Training Resources Guide 
- Environmental Data Management Workshops** More ▾  
PUBLICDOMAIN ICSU - World Data System Training Resources Guide May 2014 

## Brief Description -- What does it tell you?



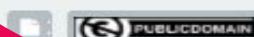
### ORNL DAAC Data Management Workshops

More ▾

Educational workshops on various scientific data management best practices designed to (1) introduce new data collectors to best practices in data curation and (2) enhance the skillsets of experienced data providers. New workshops are added as they are made available.

[View full description](#)

[View resource ↗](#)



ICSU - World Data System Training Resources Guide

# Brief Description -- you want to see more about this one! What next?

You can either  
...  
...

Click on the ***View full description*** to look at the full metadata ... or the ***View resource*** button to go directly to the “landing page” of the resource.

**ORNL DAAC Data Management Workshops** More ▾

Educational workshops on various scientific data management best practices designed to (1) introduce new data collectors to best practices in data curation and (2) enhance the skillsets of experienced data providers. New workshops are added as they are made available.

 [View full description](#)  [View resource](#)

  ICSU - World Data System Training Resources Guide

# Full Description – 1 of 2

## ORNL DAAC Data Management Workshops

### Key Info

**URL - the landing page for the learning resource:**

<http://daac.ornl.gov/workshops/workshops.shtml>



**Description - a brief synopsis, abstract or summary of what the learning resource is about:**

Educational workshops on various scientific data management best practices designed to (1) introduce new data collectors to best practices in data curation and (2) enhance the skillsets of experienced data providers. New workshops are added as they are made available.

**Authoring Organization(s) Name:**

NASA ORNL DAAC (Oak Ridge National Laboratory Distributed Active Archive Center)

**License - link to legal statement specifying the copyright status of the learning resource:**

Creative Commons 1.0 Universal (Public Domain Dedication)



**Access Cost:**

No fee



**Primary language(s) in which the learning resource was originally published or made available:**

English



### More info about

**Keywords - short phrases describing what the learning resource is about:**

Appraisal - Core Trustworthy Data Repositories Requirements  
Data discovery and identification - Core Trustworthy Data Repositories Requirements  
Data integrity and authenticity - Core Trustworthy Data Repositories Requirements  
Data quality - Core Trustworthy Data Repositories Requirements  
Data reuse - Core Trustworthy Data Repositories Requirements  
Expert guidance - Core Trustworthy Data Repositories Requirements  
Preservation plan - Core Trustworthy Data Repositories Requirements



# Full Description – 2 of 2

**Subject Discipline - subject domain(s) toward which the learning resource is targeted:**

Engineering: Aerospace Engineering

Physical Sciences and Mathematics: Earth Sciences

Physical Sciences and Mathematics: Environmental Sciences

**Publisher - organization credited with publishing or broadcasting the learning resource:**

NASA ORNL DAAC (Oak Ridge National Laboratory Distributed Active Archive Center)

**Media Type - designation of the form in which the content of the learning resource is represented, e.g., moving image:**

Collection - a group or set of items that comprise a single learning resource, e.g., a PDF version of a slide presentation, an audio file of the presentation and a textual representation of the oral transcription of the presentation.

**Contributor Organization(s):****Name:**

ICSU - World Data System (WDS)

**Type:**

Endorser

**Contact Organization(s):**

NASA ORNL DAAC (Oak Ridge National Laboratory Distributed Active Archive Center)

## Educational Info

**Purpose - primary educational reason for which the learning resource was created:**

Professional Development - increasing knowledge and capabilities related to managing the data produced, used or re-used, curated and/or archived.

**Learning Resource Type - category of the learning resource from the point of view of a professional educator:**

Lesson - detailed description of an element of instruction in a course, contained in a unit of one or more lessons, and used by a teacher to guide class instruction.

**Target Audience - intended audience for which the learning resource was created:**

Data supporter

Early-career Research Scientist

Research Scientist

**Intended time to complete - approximate amount of time the average student will take to complete the learning resource:**

More than 1 hour (but less than 1 day)

**Framework - A community-based organization plan or set of steps for education or training:**

ICSU - World Data System Training Resources Guide





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# Data Management Training Clearinghouse

## Resource Description & Publication Workflow



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# Current Publication Process

- We Invite community volunteers who wish to *submit* and/or *review* descriptions of educational resources to the DMTC using existing:
  - Selection Criteria:
    - [https://github.com/imls-dmt/resources-workflow/blob/master/Nov17\\_2018\\_SelectionCriteria.pdf](https://github.com/imls-dmt/resources-workflow/blob/master/Nov17_2018_SelectionCriteria.pdf)
  - Tutorial for Submitting Descriptions to the DMTC with suggested workflow:
    - <https://github.com/imls-dmt/resources-workflow/blob/master/Tutorial%20for%20Submitting%20Educational%20Resource%20Metadata.pdf>
  - Metadata input form – using the Dublin Core maintained, and Schema.org endorsed Learning Resource Metadata Initiative schema: <http://dublincore.org/specifications/lmi/>
  - Questions / Interest: email us at: [clearinghouseEd@dmtclearinghouse.esipfed.org](mailto:clearinghouseEd@dmtclearinghouse.esipfed.org)
  - Provide contact information and specific interest in the presentation feedback form:  
<http://bit.ly/2019-ESA-feedback>

# “Submit” Function

The screenshot shows the homepage of the DMT Clearinghouse. At the top right, there is a red circle around the "Log in" button. Below the header, there is a diagram titled "DCC Lifecycle" with a red circle around it. The main content area has three sections: "Search", "Browse", and "Submit". The "Submit" section is highlighted with a large red oval and contains the text "Submit your learning resources to the Clearinghouse (login required)" and a "Submit" button. At the bottom, there are sections for "CONNECT WITH US", "SUBSCRIBE", and "SEARCH".

**Welcome to the DMT Clearinghouse**

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[Read More](#)

**DCC Lifecycle** - <http://www.dcc.ac.uk/resources/curation-lifecycle-model>

**Search**  
Find learning resources by keyword, name, date, license and cost  
 [Search](#)

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# EZ “Submit” Form – no login required

Title \*

URL - the landing page for the learning resource

<https://oedbreeze.cr.usgs.gov/dm-value/>

Access Cost \*

- No fee
- Fee

Submission Contact Name \*

Email address of person submitting the information about the learning resources that is to be added to the DMT Clearinghouse. The person will not be contacted unless there is some question about the resource from a reviewer or editor, or to be notified that the submission has been accepted.

Submission Contact Email Address \*

Address will not be shared without permission.

---

---

## **“Submit” Recommended Information submitted, reviewed & published by logged in user:**

- ✓ Names, Personal & Organizational for Authors and Contributors
- ✓ Descriptive Information
- ✓ Educational Context for the Resource

## Current Clearinghouse publication process by role of logged-in user

Task	Submitter	Reviewer	Editor
ID resource	✓	✓	✓
Fill out Required Info	✓	✓	✓
Fill out Recommended Info	✓	✓	✓
Save	✓	✓	✓
Add to Controlled Vocabularies (varies by role)	✓	✓	✓
Submit	✓	✓	✓
Evaluate Appropriateness of Adding Resource		✓	✓
Review / Edit metadata submitted		✓	✓
Save (= Re-submit)			✓
Publish		✓	✓
Update/Maintain (e.g., correct URLs, typos, etc.)			

## Add to Controlled Vocabularies by role of logged-in user

Task	Submitter	Reviewer	Editor
Personal Names	✓	✓	✓
Organizational Names	✓	✓	✓
Keywords	✓	✓	✓
Save	✓	✓	✓
Subject Disciplines			✓
Target Audiences			✓
Media Type			✓
Learning Resource Type			✓

# Seeking Learning Resource Types, such as:

- + Course – series of units and lessons used to teach the skills and knowledge required by its curriculum.
- + Unit – long-range plan of instruction on a particular concept containing multiple, related lessons.
- + Lesson – detailed description of an element of instruction in a course, [could be] contained in a unit of one or more lessons, and used by a teacher to guide class instruction. Example: presentation slides on a topic.
- + Demonstration / Simulation – imitation or modeling of a real-world process.
- + Learning Activity – guided or unguided activity engaged in by a learner to acquire skills, concepts, or knowledge that may or may not be defined by a lesson. Examples: data exercises, data recipes.
- + Educator Curriculum Guide – document that defines what concepts should be taught and/or how a concept should be taught effectively.
- + Images / Visuals – media, including but not limited to pictures, graphics, diagrams, figures, illustrations, charts, and maps.
- + Primary Source – artifact, document, recording, or other source of information created at the time under study and provides first-hand testimony or direct evidence concerning a topic under investigation.
- + Rubric Scoring Guide – document or guide used to delineate consistent criteria for grading.
- + Text – body of a printed work, to include reading passages.
- + Textbook – digital or analog book used as a standard source of information on a particular subject

## Seeking educational resource types, continued:

- ↳ Assessment – the evaluation, measurement and documentation of the skills or knowledge about data management.

- ⊕ Interim / Summative Assessment – instrument used to evaluate student learning at the end of an instructional unit by comparing it against some standard or benchmark.
- ⊕ Self-assessment – in which a user gathers information about and reflects on his or her own knowledge, skills, learning, or attitudes.
- ⊕ Alternate Assessment – used to evaluate the performance of students who are unable to participate in general assessment even with accommodations.
- ⊕ Assessment Item – specific part of an assessment that, when answered by a learner, is used to determine whether a learning objective has been achieved.
- ⊕ Formative Assessment – process used during instruction to adjust ongoing teaching and learning activities and to improve students' achievement of intended instructional outcomes.



Knowledge Motifs LLC  
Mapping sensible data relationships



# Data Management Training Clearinghouse

Questions and Evaluation

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## How you can contribute

**Metadata & Search Working Group** - assessing the current metadata schema used in the Clearinghouse and the search and browse capabilities built upon those metadata.

**Assessment Working Group** - prioritizing areas for assessment of the Clearinghouse and the training resources.

**Editorial Team** - contributing to the publication workflow for submitted training material metadata.

**Contributing New Materials** - identifying and providing metadata for integration into the Clearinghouse.

**Presentation Evaluation:**  
<http://bit.ly/2019-ESA-feedback>