

Federal Education Digital Resources Library



An ENC Digital Library Collection

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Grant Number: DUE-0226228

Timeline: Oct. 1, 2002 – March 1, 2005

Scope of Collection

Outstanding K-12 math and science digital resources

- Described at learning object level, e.g., individual lesson plans, applets, or video clips
 - Featuring learning activities and professional development materials produced with NSF or U.S. Department of Education funds
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Product Creation

- 1. Content Specialists** select high-quality resources
 - Not yet part of the NSDL at the learning object level
 - Fit collection scope and selection criteria
-

Product Creation


2. **Content Specialists & Bibliographic Catalogers** build catalog records

- Using customized IEEE Learning Object Metadata (LOM) schema
- Examples of fields: Description, Ideas for Use, Grade Level, Learning Resource Type, and Relation


3. **Editors** review metadata in open text fields



Web-Based Cataloging Tool: View 1


	FEDRL INTERNAL
[Best Practices] [Resource List] [Claim List] [Search] [Import from ENC] [Live] [Rejected] [Reports] [Workflow]	<h2>Workflow Links</h2> <p>You are currently listed as:</p> <ul style="list-style-type: none">• Content Specialist - you have permission to add content metadata to suggested resources.• Cataloger - you may add catalog information to both suggested and submitted resources.• Editor - you have permission to edit resource metadata and make resources live. <p>The pages you have access to are:</p> <ul style="list-style-type: none">• My Resources - Resources that I am working on; no one else can modify them.• Unclaimed 'Suggested' resources - Resources that have been Suggested and need metadata added.• Unclaimed 'Need cataloged' resources - Resources that need to be cataloged.• Unclaimed 'Need edited' resources - Resources that need edited.

Web-Based Cataloging Tool: View 2


FEDRL INTERNAL

General	<h2 style="margin: 0;">Educational - FEDRL #: 8924</h2> <hr/> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"><u>Interactivity Type:</u></td> <td>Expositive</td> </tr> <tr> <td><u>Interactivity Level:</u></td> <td>Low</td> </tr> <tr> <td><u>Difficulty Level:</u></td> <td>Medium</td> </tr> <tr> <td><u>ENCdl Web Resource Type:</u></td> <td>Course materials:[Lessons and activities]</td> </tr> <tr> <td><u>End User Role:</u></td> <td>Learner</td> </tr> <tr> <td><u>Learning Context:</u></td> <td>Middle school,Informal education</td> </tr> <tr> <td><u>Grade Level:</u></td> <td>6,7,8</td> </tr> <tr> <td><u>Typical Learning Time:</u></td> <td>PT30M</td> </tr> <tr> <td><u>Description:</u></td> <td>Teachers can use a printable version of this activity to enliven a lesson about problem-solving strategies. The printable version, which contains a small image of the western United States for coloring, is available from the web site's Challenge Index page. Teachers can emphasize to students that their work with the four-color problem mirrors the mathematical analysis and problem-solving struggles of professional mathematicians. This activity offers an engaging way to help students see how mathematics is applied to a real-world question.</td> </tr> <tr> <td><u>Language of user:</u></td> <td>English(en-US)</td> </tr> </table>		<u>Interactivity Type:</u>	Expositive	<u>Interactivity Level:</u>	Low	<u>Difficulty Level:</u>	Medium	<u>ENCdl Web Resource Type:</u>	Course materials:[Lessons and activities]	<u>End User Role:</u>	Learner	<u>Learning Context:</u>	Middle school,Informal education	<u>Grade Level:</u>	6,7,8	<u>Typical Learning Time:</u>	PT30M	<u>Description:</u>	Teachers can use a printable version of this activity to enliven a lesson about problem-solving strategies. The printable version, which contains a small image of the western United States for coloring, is available from the web site's Challenge Index page. Teachers can emphasize to students that their work with the four-color problem mirrors the mathematical analysis and problem-solving struggles of professional mathematicians. This activity offers an engaging way to help students see how mathematics is applied to a real-world question.	<u>Language of user:</u>	English(en-US)
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Lifecycle																						
Technical																						
Edit Educational																						
Rights																						
Relation																						
Classification																						
Special Projects																						
Upload																						
Best Practices																						

Practical teaching ideas





Best Practices in Cataloging Tool

General	Lifecycle - FEDRL #: 12161	
Edit Lifecycle		
Technical		
Educational		
Rights		
Relation		
Classification		
Special Projects		
Upload		
Best Practices		

Contributors:	<u>Role</u>	<u>Entity</u>
	1. Author:	Kristen Carvell
	2. Publisher:	University of Illinois at Urbana-Champaign (UIUC). Office for Mathematics, Science, and Technology Education (MSTE)

Version:

Res. Posted Date: 8/3/2001

Initiator: National Science Foundation (NSF)

Element 2 Lifecycle

2.3 Contribute

2.3.1 Contributor Role

Promote consistent entering of metadata

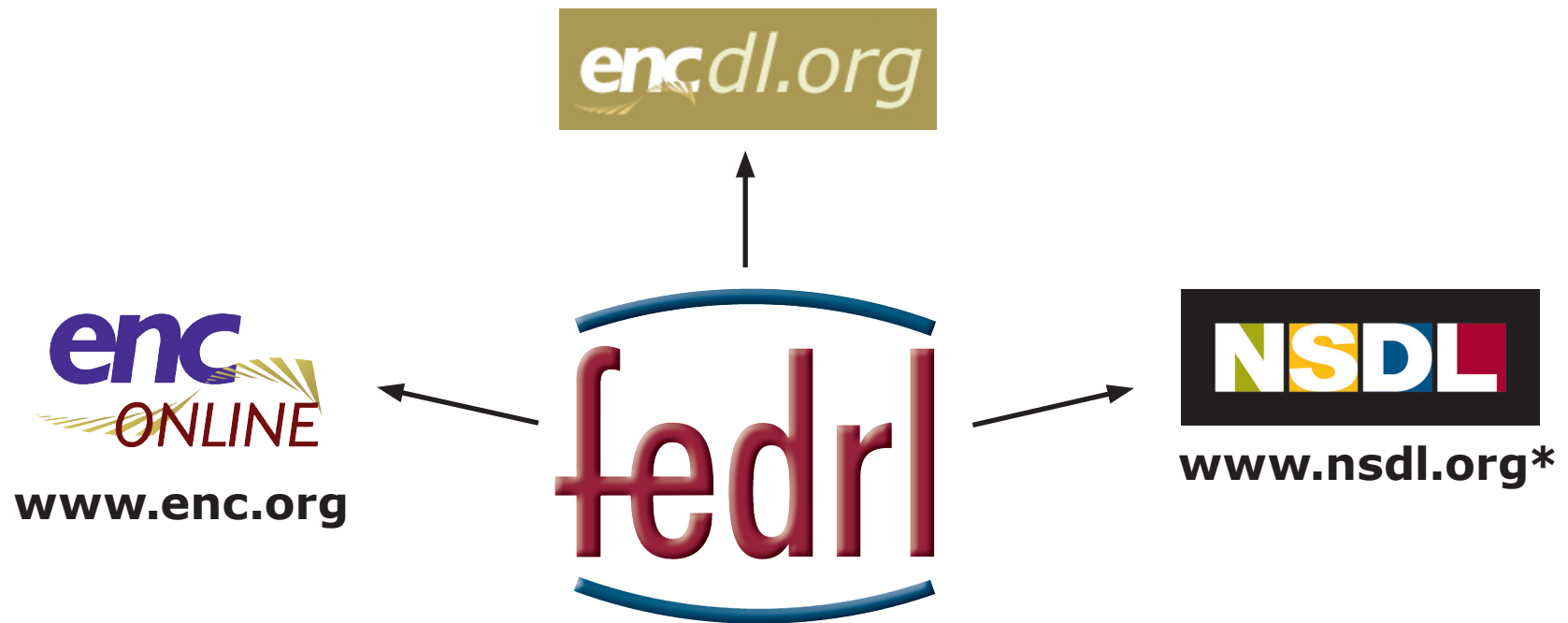
Required field: Yes

ENCdl definition: This field defines the function of the person or entity in terms of their contribution to the creation of the resource.

Author:
This is the person or entity primarily responsible for creating or developing the intellectual content of the resource. Examples of an author include a person, an organization, service, or other entity. Note that this element should be used for the entity making the intellectual content of the resource, not its presentation (i.e. not the designer or webmaster). Check under Credits, About, Contact, or a copyright statement for pertinent information regarding authorship.

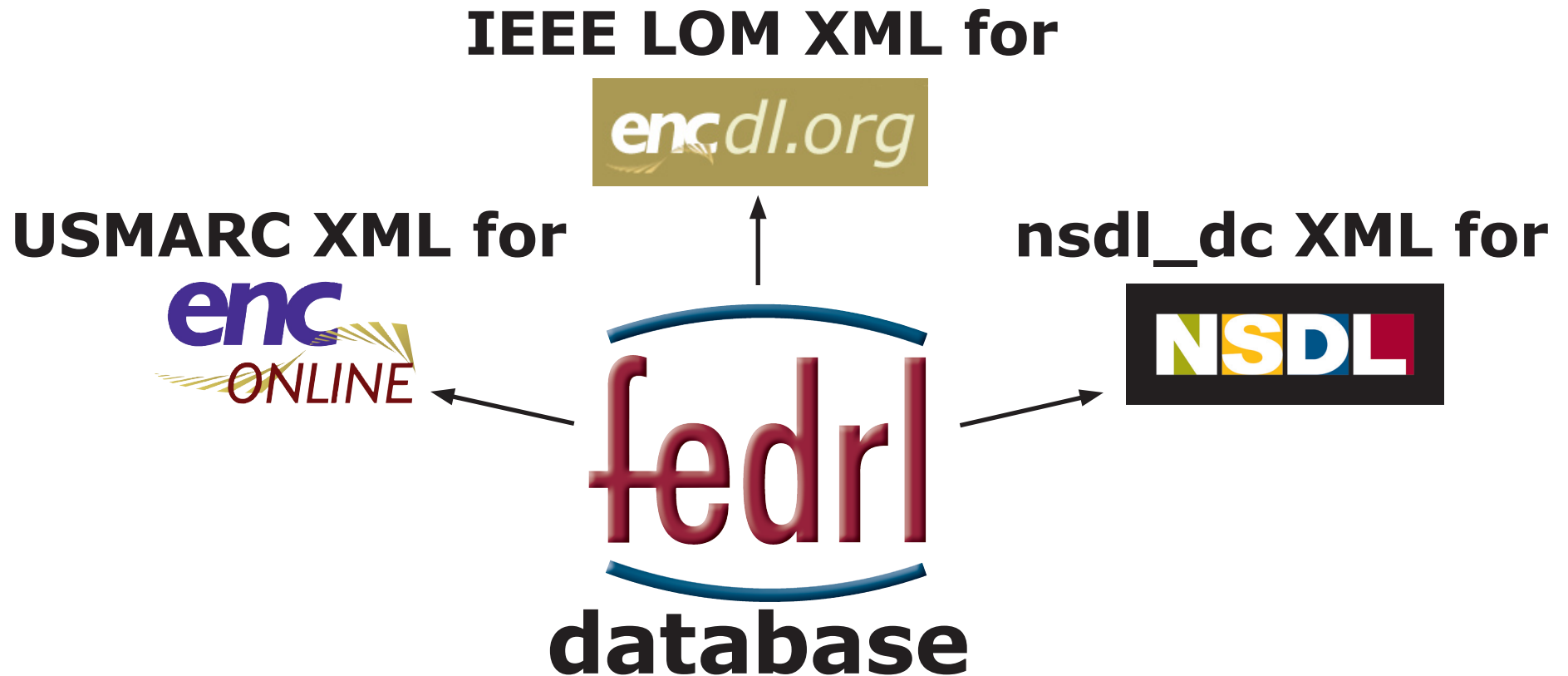
Product Display

Find our catalog records on these sites:



* Through participation in the Open Archives Initiative (OAI), FEDRL makes more than 1400 item-level records available for NSDL and others to harvest.







Types of XML Records



Native metadata is in IEEE LOM



Portal to ENC's Collections

		<input type="text"/>
		<input type="button" value="Search"/>
		Advanced Search
<p>Click an icon to search individual libraries. About encdl.</p>		
	ENC Online: Resources that support exemplary K-12 math and science teaching.	
	Federal Education Digital Resources Library: Outstanding K-12 math and science resources featuring learning activities and professional development materials produced with NSF or U.S. Department of Education funds.	
	Gender and Science Digital Library: Resources that support equitable teaching and learning of science, technology, engineering and mathematics in formal and informal K-16 learning environments.	
	Innovation Curriculum Online Network: Resources that support technology and innovation in K-12 classrooms.	
	The Learning Matrix: Resources that support exemplary teaching in undergraduate math and science courses.	

Benefits to Teachers

1. Vetted collection of granular resources

Significance: Teachers can access high-quality resources about specific content topics.

2. Robust metadata

Significance: Information in FEDRL records promotes resource discovery and use.

3. Records retrievable on multiple sites

Significance: Teachers can find FEDRL records on sites that they already use.

Benefits to NSDL

Item-level metadata

- A harvestable collection of rich item-level records describing high-quality digital resources

ENCdl Indexing Guidelines

- Available at www.encdl.org for other collection developers to consult when making their cataloging decisions
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Recent Publications

- By Janet Kahkonen Smith, Roger L. Cunningham, and Stephen P. Sarapata
“**MARC to ENC MARC: Bringing the Collection Forward,**”
Library Hi Tech, vol. 22, no. 1, 2004, pp. 28-39.
www.emeraldinsight.com/0737-8831.htm
 - By Kimberly S. Lightle
“**Using Metadata Standards to Support Interoperability,**”
in C. M. Gynn & S. R. Acker (eds.), *Learning Objects: Contexts and Connections*, The Ohio State University, Columbus, 2003, pp. 43-48.
http://morty.uts.ohio-state.edu/learning_objects/documents/TELR-LO7.pdf
 - By Kimberly S. Lightle and Judith S. Ridgway
“**Generation of XML Records across Multiple Metadata Standards,**”
D-Lib Magazine, vol. 9, no. 9, September 2003.
<http://www.dlib.org/dlib/september03/lightle/09lightle.html>
-



ENC Publicizes Education Digital Libraries

The screenshot shows the ENC website interface. At the top left is the ENC logo. A red navigation bar contains the text "ENC Features" and a search box with a "Go!" button. The main content area features a central banner with the text "Focus on Digital Libraries: Finer than Google". Below this banner are two columns of links: "Search Smarter with Digital Libraries" and "Digital Libraries by Subject" (with sub-links for Physical Science, Life Science, Earth Science, and Mathematics). On the right side, there is a sidebar titled "ENC Focus Digital Libraries: Finer than Google" with a list of subject-specific digital library links and an "Email the Editor" link at the bottom. The left sidebar contains a menu of site features like "Classroom Calendar", "Digital Dozen", "ENC Focus", "Lessons & Activities", and "Ask ENC".

ENC Features

- [Classroom Calendar](#)
- [Digital Dozen](#)
- [ENC Focus](#)
 - ENC Updates
 - [Past Issues](#)
 - About ENC Focus
 - Write for ENC
 - Frequently Asked Questions
- [Lessons & Activities](#)
- [Ask ENC](#)

Web Links

Explore online lesson plans, student activities, and teacher learning tools.

Curriculum Resources

Find detailed

ENC Features

Search the Site

[More Options](#) **Go!**

Focus on

Digital Libraries: Finer than Google

• [Search Smarter with Digital Libraries](#)

• [Using Digital Libraries: Vignettes](#)

• [Digital Library Projects from ENC](#)

• **Digital Libraries by Subject**

[Physical Science](#)

[Life Science](#)

[Earth Science](#)

[Mathematics](#)

ENC Focus

Digital Libraries: Finer than Google

- [Search Smarter with Digital Libraries](#)
- [Physical Science Digital Libraries](#)
- [Life Science Digital Libraries](#)
- [Earth Science Digital Libraries](#)
- [Mathematics Digital Libraries](#)
- [Using Digital Libraries: Vignettes](#)
- [Digital Library Projects from ENC](#)

• [Email the Editor](#)



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**Please Take One
(or Many)**
