

16 September 2025

WebJunction

Linked data for public libraries: An introduction

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What is linked data?

**Structured data,
published on the web,
connected across sites,
services, organizations,
and industries**



What is linked data?

Entity

Any object or concept that can be identified, named, or addressed



Linked data terms

URI

(Uniform Resource Identifier)

Identifies a resource
on the internet



Linked data terms

This:

38°1'15"N 120°24'41"W



Not this:

Springfield

Identifiers, not text strings

This:

<https://id.oclc.org/worldcat/entity/E39PBJtgYDdKdvTYGb4Xy4WxDq>



Not this:

Vincent VanGogh

Identifiers, not text strings

Ontology

The formal representation of concepts and the relationships between those concepts



Linked data terms

Knowledge graph

A network of linked data connections that describe contextually related resources



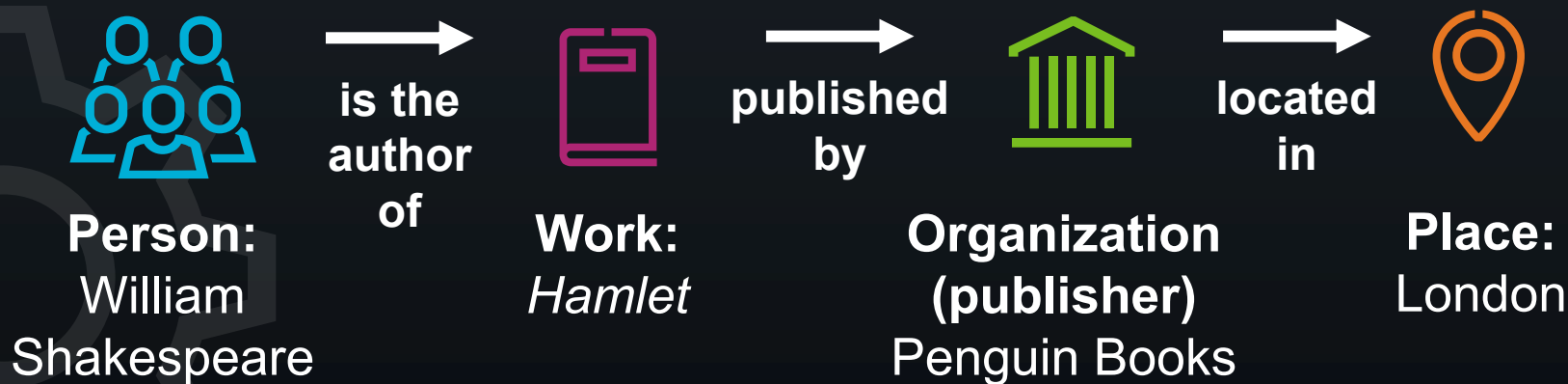
Linked data terms

Fields in MARC records

100	1		▶	<u>Shakespeare, William</u> , \$d <u>1564-1616</u>
245	1	0	▶	Hamlet / <u>\$c</u> William Shakespeare
264		1	▶	London: <u>\$b</u> Penguin Books, <u>\$c</u> 1994.

Library data today

Entities connected by relationships

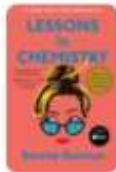


Library linked data

Book preview

46/423 pages available

 Preview



About

3.7/5

ThriftBooks

4.6/5

Target

4.9/5

Walmart

85% liked this book

Google users



Lessons in Chemistry is a novel by Bonnie Garmus.

Published by Doubleday in April 2022, it is Garmus's debut novel. It tells the story of Elizabeth Zott, who becomes a beloved cooking show host in 1960s Southern California after being fired as a chemist four years earlier. [Wikipedia](#)

Originally published: March 29, 2022

Author: [Bonnie Garmus](#)

Genres: [Historical Fiction](#), [Humor](#), [Tragicomedy](#), [Humorous Fiction](#)

Audio read by: [Miranda Raison](#)

ISBN: 9780385547345

Set in: 1960s Southern California

Feedback



Fiction

Audio read by: Miranda Raison

ISBN: 9780385547345

Set in: 1960s Southern California

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Author



Bonnie Garmus

American author and former copywriter



Bonnie Jean Garmus is an American author and former copywriter. Garmus is from Seattle. She received her bachelor's degree in creative writing/aesthetic studies from UC Santa Cruz. She's worked as a copywriter and creativ...



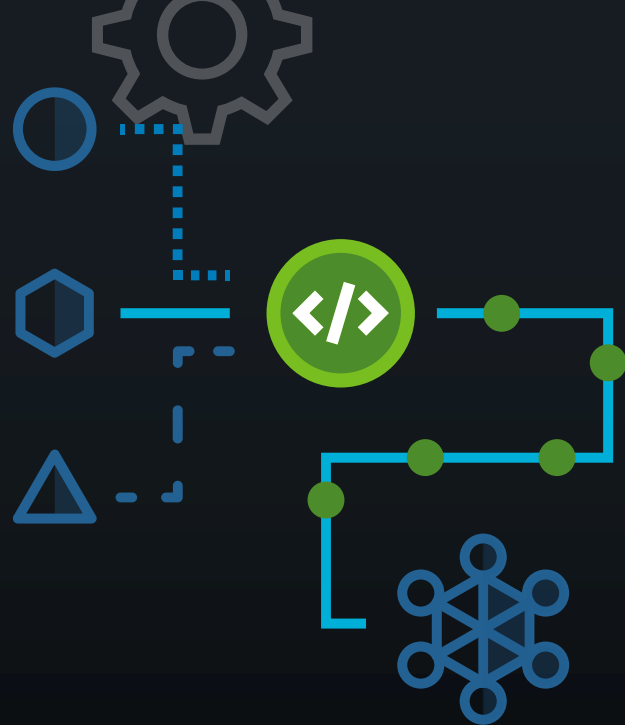
Why linked data?

Connect and scale library knowledge



Benefits of linked data for libraries

Fuel serendipitous discovery



Benefits of linked data for libraries

**Focus on
high-value
knowledge
work**



Benefits of linked data for libraries

Contribute to the global information ecosystem



Benefits of linked data for libraries

**What this means for
library work.**

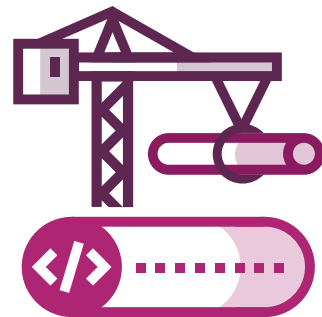
Our linked data strategy



Expertise



Data



Infrastructure



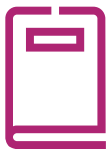
Tools



Data



WorldCat[®] Entities



Works



Places



Persons



Organizations



Events

entities.oclc.org

WorldCat Entities URIs as JSON-ID

```
{
  "id": "https://id.oclc.org/worldcat/entity/E39PBJym6v6xMdcX3dQdh48KVC",
  "@context": "https://id.oclc.org/api/context.json",
  "child": [
    "https://id.oclc.org/worldcat/entity/E39PBJycT8v6JJkGX4xWf4QXh3"
  ],
  "placeOfBirth": [
    "https://id.oclc.org/worldcat/entity/E39PBJpYy9jfQfrXByKcDx83cP"
  ],
  "dateOfBirth": [ 1 element.. ],
  "prefLabel": {
    "ar": "كين بيرنس",
    "ca": "Ken Burns",
    "en": "Ken Burns",
    "fa": "کن برنس",
    "he": "קנ בירנס",
    "ja": "ケン・バーズ",
    "pa": "ਕੇਨ ਬਰਨਸ",
    "pt": "Ken Burns",
    "ru": "Бёрнс, Кен",
    "ta": "கேன பர்னஸ்",
    "be-tarask": "Кен Бэрнс",
    "de": "Ken Burns"
  },
  "altLabel": [ 11 elements.. ],
  "givenName": [ 1 element.. ],
  "type": [
    "Person"
  ],
  "description": { "ar": "مخرج أفلام وثائقية أمريكي، المولود في 12 أغسطس 1933 في نيويورك، نيويورك." }
```


Dewey Decimal Classification

Unlocks the power of Dewey numbers via the creation of URIs

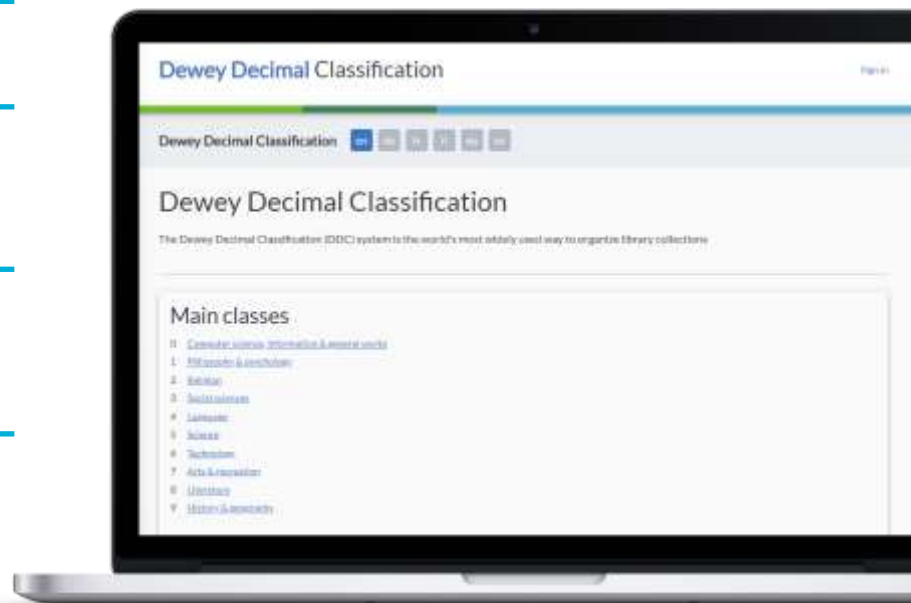
Forms the foundation for Concept entities

Provides subject classifications to Works entities in WorldCat Entities

Creates a layer of new relationships for knowledge graphs

Connects Dewey classifications to FAST topical headings

oclc.org/dewey-linked-data



Dewey Decimal Classification

en

de

fr

it

no

sv

[DDC](#) / [6: Technology](#) / [62: Engineering](#) / 627: Hydraulic engineering

oclc.org/dewey-linked-data

627: Hydraulic engineering

 [Download](#)

URI: <https://id.oclc.org/worldcat/ddc/E3tPjwQmcxRdR8jHvRd4fcFy3g> 

Entity type: Concept

Scope

The branch of engineering dealing with utilization and control of natural waters of the earth

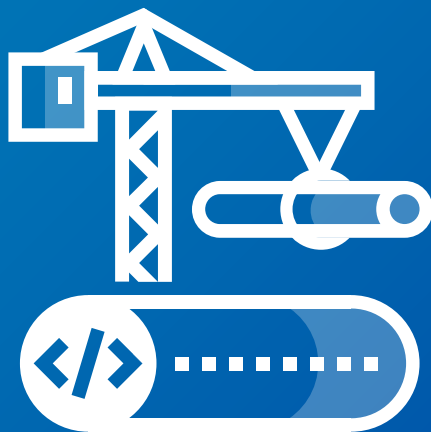
Class here hydraulic structures, water resource engineering

BIBFRAME

- Bibliographic linked data
- Uses URIs (Uniform Resource Identifiers) to identify resources
- Enables connections between:
 - Bibliographic information
 - Authority data
 - Other external resources and vocabularies
- Example:
 - `<Work URI> bf:creator <Person URI>`

Part of a growing ecosystem





Infrastructure

WorldCat Entities in WorldCat

650		0	Institutional repositories \$z United States \$v Case studies
650		7	Institutional repositories. \$2 fast \$0 (OCoLC)fst01740486
700	1		Mixer, Jeff , \$e author. \$1 https://id.oclc.org/worldcat/entity/E39PBJtRJykJh8gwxXj3JQ4cyd
700	1		McMillian, Ciara

400M

WorldCat Entity URIs

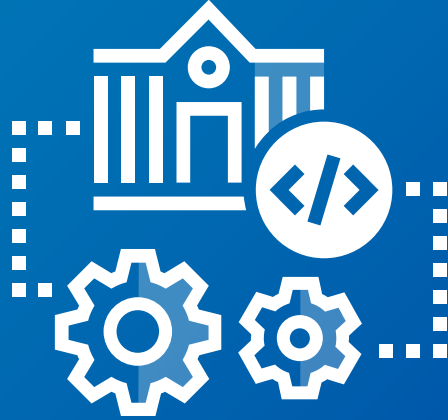
Dewey linked data into WorldCat

Uses of Dewey URIs:

- Unlock relationships between classifications in discovery systems
- Multilingual and human readable labels for Dewey numbers
- Bridge classifications and topical subject headings for enhanced information discovery

143 million WorldCat records

As of mid-June, OCLC has added over 50 million Dewey Linked Data URIs



Tools

Look up WorldCat Entities within Record Manager and Connexion

The screenshot shows a library system interface with a modal dialog titled "Insert WorldCat Entity". The dialog has a search bar with the text "Mixer, Jeff" and buttons for "Search" and "Reset". Below the search bar, a table displays the search results:

Entity Label	Description
Jeff Mixer	product manager at OCLC

Below the table, it says "Results 1 - 1 of 1" and "Rows 10". A pink box highlights the table, and another pink box highlights the "Select Entity" button.

Create WorldCat Entity

Create WorldCat Entity

Language: English (en)

Entity label (do not invert names): Jane Sturmary

Entity type: Agent Entity subtype: Person

☐ Fictional entity

Description: Include information about the entity: Author and educator

Aliases: Add any alternative names that you want to be searchable

Dates: Date of birth: Year (YYYY) 1983

Create and insert URI Cancel

Library workers need new tools to be able to work with linked data

A tool to create and curate linked data entities
(People, Works, Places, etc.)

Able to connect those entities to existing library data

Leverages the value in MARC catalogs today

Uses standardized rules that promote discovery and
connection of library resources more widely

OCLC Meridian

Create, curate, and
connect linked data
in WorldCat Entities

oclc.org/meridian

 WorldCat[®]
Entities



Make use of Dewey linked data APIs

Dewey Linked Data

Included with a WebDewey subscription, limited data access for non WebDewey subscribers

Dewey Lookup API

Available to WebDewey subscribers only

oc.lc/dewey-services-apis

BIBFRAME Editor

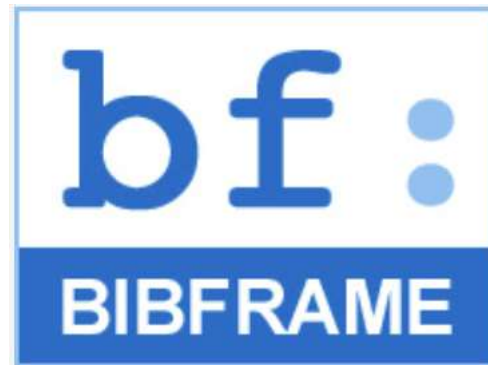
Seamless work in MARC or BIBFRAME

Web Application and set of APIs

Development partner testing soon

Integration with OCLC Meridian

BIBFRAME support for all of WorldCat



Fueling discovery experiences

The screenshot displays the University of Illinois Libraries WorldShare interface. At the top, the search bar contains the text "as (John Adams)". Below the search bar, the results section shows "16,000 results in Libraries Worldwide". A detailed record for John Adams is displayed, including a portrait, birth and death dates (Oct 30, 1735 - July 4, 1826), and place of birth (Braintree, MA). The record also lists related persons and organizations, a list of related works, and a downloadable article titled "John to Abigail : selected letters of John Adams". The article is authored by John Adams (1735-1826) and Jane Haines, published in 2020, and has a unique identifier of 8448247292. The article summary states: "We are human beings, imbued with the ability to make decisions and think deductively and inductively. However, our ability to do so is related asymmetrically to external factors such as wealth and physical strength; some are imbued with more power than others and use that extra power as a tool to influence how far and equitable are defined or, in extreme cases, to harm others." The article is available in PDF format and is accessible online.

UNIVERSITY
LIBRARIES WORLD SHARE

as (John Adams)

Sign In

Advanced Search Course Reserves Resources

My Items (188) Search history

Retain Filters Clear Filters

Group Title Search

Series Title Search

Held By Library

Format

Content Type

Publication Year

Author/Creator

1

68 Cite Share Save

John to Abigail : selected letters of John Adams

Authors: John Adams 1735-1826 Jane Haines

Downloadable Article 2020 in Substantia v4 (2020)

Unique Identifier: 8448247292

Summary: We are human beings, imbued with the ability to make decisions and think deductively and inductively. However, our ability to do so is related asymmetrically to external factors such as wealth and physical strength; some are imbued with more power than others and use that extra power as a tool to influence how far and equitable are defined or, in extreme cases, to harm others.

Show/Hide

Subjects: Annotated

Available

At other libraries worldwide

2

68 Cite Share Save

Linked data in WorldCat.org

This Year

Last 5 Years

Last 10 Years

Last 25 Years

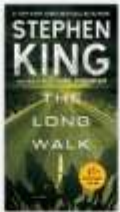
Custom Year Range:

From Through

[Apply Year Range](#)

▼ Audience

▼ Subject



[The long walk](#)

Authors: [Stephen King](#) (Author), [Richard Bachman](#) (Author)

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[The long walk](#)

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Print Book, English, 2024

Edition: 45th anniversary edition. Pocket Books paperback edition

Publisher: Pocket Books, New York, NY, 2024

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[The long walk : a novel](#)

Authors: [Stephen King](#) (Author), [Kirby Heyborne](#) (Narrator), [Richard Bachman](#) (Author)

Summary: On the first day of May, 100 teenage boys meet for a race known as The Long Walk. If the rules are broken, three warnings are given. If the limit is exceeded,

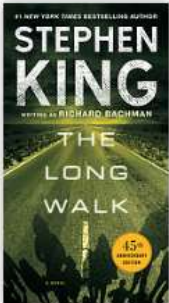
Show more ▼

Audiobook on CD, English, 2016



Edition: Unabridged

Publisher: Simon & Schuster Audio, New York,

Data from WorldCat Entities




[The long walk](#)

Authors:  [Stephen King](#) (Author),  [Richard Bachman](#) (Author)

Summary: A
about to com


[Show more](#)

 [Print Book](#)

Edition: 45th
paperback ed

Publisher: P


Also available as [eBook](#)



Stephen King

American author

1947 -

 [Copy URI](#)

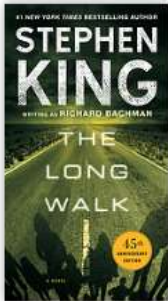
[Works by author](#) >

[Works about author](#) >

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known as the

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Language display



STEPHEN KING
THE LONG WALK
45th Anniversary Edition


[The long walk](#)

저자: [Stephen King](#) (저자) [Richard Bachman](#) (저자)

요약: Ag...
compet...

자세히 표...

인쇄본
판: 45th
paperba...
출판사: F...



스티븐 킹
미국 작가
1947 -

[URI 복사](#)

[저자별 작품 >](#)
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전체 보기 [형식 및 판본](#)

WorldCat Entities Data

The screenshot shows the WorldCat Entities interface for Stephen King. A sidebar on the left contains navigation links: Top, Key information, Significant Dates, Names, Other Identifiers, Related Persons and Organizations, Related Places, and Related Works. The main content area has a 'View' tab and a 'Download' button. A highlighted box contains the following information:

Stephen King
↓ Download
URI: <https://id.oclc.org/worldcat/entity/E39PBJdgVCJpMKHYMtkmw6v4MP>
Entity Type: Person
Description: American author

Below this, the 'Key Information' section displays a table with 61-85 of 140 rows. The table has four columns: Language of Content, Entity Label, Description, and Aliases.

Language of Content	Entity Label	Description	Aliases
Kannada	ಸ್ಟೀವನ್ ಕಿಂಗ್		0
Kazakh	Стивен Кинг		0
Khmer			
Kongo			
Korean			

A second highlighted box at the bottom shows the Korean translation of the key information:

Language of Content	Entity Label	Description	Aliases
Korean	Korean	스티븐 킹	미국 작가

**Because
what is
known must
be shared.®**

oclc.org/linkeddata

oclc.org/linked-data-future

Anne Washington

Product Analyst

washinga@oclc.org