

Florida Learning Object Repository

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The Orange Grove --- Florida's K20 Digital Repository

What is the Orange Grove

The Orange Grove is an operational repository project of the Florida Distance Learning Consortium (FDLC). The project director is Susie Henderson (shenderson@distancelearn.org). Committee members come from a number of institutions, including FDLC, Daytona Beach CC, University of West Florida, Tallahassee CC, Florida Association of Community Colleges, Polk CC, South Florida CC, Broward CC, Brevard CC, Indian River CC, and North Florida CC. The learning object repository (LOR) provides a single point of access for learning resources designed to be used by Florida's K20 teachers and educational institutions. It is currently being used by Florida community colleges and universities.

Goal of the Orange Grove

The Orange Grove is a digital repository for the storage, management, location, and retrieval of electronic content that: 1. stores meta-data about the objects they contain; 2. allows users to upload, download, and update materials; and 3. is compatible and interoperable with a variety of library, learning management, and other repository system standards.

Content of the Orange Grove

The Orange Grove seeks to house digital educational resources that contribute to student learning or to educators' professional development. These may include: 1. Agents/Tools/Widgets; 2. Animations/Simulations/ Tutorials/Videos; 3. Assessment/Test Items; 4. Educational Documents; 5. Learning Objects; 6. Images/Photographs/ Presentations/Slideshows; and 7. Syllabi/Lesson Plans

Searching and Browsing

Through the interface for guests (<http://florida.theorange Grove.org/og/access/Tasks.jsp>), users can browse the resources by contributing institution, K-12 subject area, and higher education subject area. They can do full-text search within a specific collection (which is called "collection search"). They can also search by resource type, audience type, classification source, interactivity type, interactivity level, difficulty, learning object type, etc.

The Orange Grove also allows for federated searching. Users can search for items simultaneously from a variety of sources, including BCcampus SOLR, Florida on Florida, Google, Library of Congress, MERLOT, PALMM Collection, and University System of Georgia LOR.

The system should provide more features to registered users.

Metadata

Current metadata standard is Southern Regional Education Board's SCORE documentation. This standard is based on IEEE Learning Object Metadata (LOM, <http://ltsc.ieee.org/wg12/>) and uses LOM and Gateway to Educational Materials (GEM, <http://www.thegateway.org/about/documentation>) controlled vocabularies. The SCORE document is available at http://www.sreb.org/programs/EdTech/SCORE/SCORE_Users_Guide.pdf. Metadata elements used by SCORE is listed on pages 9-14.

The following is the example of the displayed metadata of one LO:

MAC1105 Lesson 01b. Exponents (Part 2)

Description

Part 2 of MAC1105 Lesson 1 on how to use exponents, simplify expressions and use scientific notations. The lesson includes presentations and a series of worked examples.

Details

Language

en-US

Installation remarks

The link will work only in Internet Explorer. If your default broser is Mozilla or Netscape, you need to copy and paste the link to the IE window. You also need to allow pop up windows.

Interactivity type

Expositive

Interactivity level

Low

Educational context

10, 11, 12, Community College

Difficulty

Medium

Has costs

No

Classification purpose

Discipline, Educational objective

FL Statewide Course Numbers

MAC 105

Links To Resources

 [Link to video. Work only in IE.](#)

Software Platform

Requirement Name

IE 5x and above.

Duration

00:41:21

Learning resource type

Lecture, lesson, Slide

Intended end user role

Learner, Teacher, Teacher

Typical age range

16-18 years, College freshman, College sophomore

Typical learning time

00:41:21

Rights statement

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Classification source

FL Statewide Course Numbering System

The Learning Edge, from Australia. The software is called Equella here in the U.S. EQUELLA is digital repository software that incorporates Learning Objects, Learning Content Management and integrated content authoring. EQUELLA assists the educator to discover, classify, compare, document and enhance the power of Digital Learning Resources across campus, across the state or across the country (The Learning Edge International, <http://www.thelearningedge.com.au/products.php?id=37>). Equella components include: Digital Repository; Activity Assembler; Administration Console; Active Caching Tool.

The Orange Grove provides a course building software **softChalk** which can create a learning object package zip file as the IMS package. It also provides the **Equella Assembler**, an online resource editor and authoring tool. The Activity Assembler: Provides the know-how to build eLearning content; Allows educators to author new content; Gives educators the tools to take raw digital assets and turn them into full bodied eLearning content; Provides a drag and drop tool; Allows educators to upload media content, record highly compressed voice and sound into an activity plan, reuse external learning objects, search online content, link multiple activities into a sequence for presentation, and preview the final activity to see how it look to students. Uses a WYSIWYG interface so content can be entered using a word processor-styled interface; Allows educators to disaggregate Learning Objects into customisable resources. (The Learning Edge International, <http://www.thelearningedge.com.au/products.php?id=37>). The multimedia tutorial is available at: <http://florida.theorangegrove.org/og/items/3df9d04f-8a39-c69a-74d7-fbe590c2f7c4/1/Equella%20assembler-module%201-audio.swf>)

To see an example of a learning object at the Lesson level, created by this software for an algebra course (MAT 1033), go to <http://florida.theorangegrove.org/og/items/5c13fc69-2c1d-93e2-b54c-1cd6ee05a270/1/ViewIMS.jsp>; click on the plus sign beside the “organization” link from the left navigation bar; click on “Functions as Mathematical Relations” and then the “launch” button. A new window pops up that shows the content of this lesson.

Copyright

Copyright information is included in the descriptive information about every resource. The default copyright statement for Orange Grove resources is the Creative Commons Attribution-NonCommercial-ShareAlike3.0 unported License (<http://creativecommons.org/licenses/by-nc-sa/3.0/>), which states that the user is free to copy, distribute, transmit and adapt the work for non-commercial purposes and if the user alter, transform, or build upon this work, he/she may distribute the resulting work only under the same or similar license to this one.

Workflow and Policies

The project supports two types of quality standards:

- **International e-Learning Technical Standards** that form the foundation of the repository: technical standards (IEEE, IMS, Ariadne) support universal access to resources through interoperability (defined by IEEE as "the ability of two or more systems or components to exchange information and to use the information that has been exchanged"). Metadata standards ensure the discoverability of resources (IEEE LOM).
- **Quality Review Standards and Policies** that allow users to trust the repository content: all

resources are reviewed for factual accuracy, grammatical correctness, technical conformance, and sufficiency of descriptive information about the resource itself (metadata). Lessons/tutorials are also reviewed for instructional quality. There are different roles for reviewers: Subject Matter Expert; Instructional Designer Reviewer; Editor; and Technical and Accessibility Validator (see Appendix A for detailed descriptions of each reviewer role and the tasks associated with each role)

The project also provides metadata information form to insure the quality of metadata items (see Appendix B).

Appendices

A. The Orange Grove K20 Digital Repository Learning Resources Review Process: Roles and Tasks
<http://florida.theorange grove.org/og/items/17dcf0ea-ef0c-039b-12d1-f528f1482ed6/1/Orange%20Grove%20Review%20Process.rtf>

B. Metadata Information Form – Higher Education
<http://florida.theorange grove.org/og/items/227c245e-fd4b-7f66-5123-dcfa9aedc448/1/Metadata%20Information%20Form.HigherED.rtf?backto=close>

C. FDLC learning object content creation requirements
http://florida.theorange grove.org/og/items/d76b5335-4532-8121-2068-34352f0a84a5/1/FDLC_Content_Templates_V1.doc?backto=close

D. Reusability Framework (Granularity or aggregation level, Design, Interoperability. Rights, Metadata)
<http://www.reusablelearning.org/index.asp?id=26>

The OnCoRe Blueprint

Objectives and goals

The OnCoRe Blueprint is a FIPSE (Fund for the Improvement of Postsecondary Education) funded project, aiming to develop a national model for **statewide** digital repositories. The principle investigator is Susie Henderson (shenderson@distancelearn.org).

The OnCoRe Blueprint offers the methodologies and lessons learned gathered during the design, implementation, and ongoing support of The Orange Grove. It also reflects collected wisdom garnered from research, interviews, and discussions with pioneers, planners, and implementers of repository projects.

The blueprint includes recommendations for policies, procedures, metadata and content standards, workflow and quality review guidelines, training topics, and funding and marketing strategies that will enable users to establish and maintain a successful learning object repository.

By using the blueprint, an institution, state, or department can ensure: interoperability among repositories and learning management systems, persistent quality content, and faculty trust and participation to enable a community of practice among repository users. It can be modeled and reused by educational institutions and state and federal government entities across the nation. The blueprint will be based on the international standards for reusability and interoperability which have been proven to be effective in reducing development costs and duplication of effort.

Project plan and timeline

<http://www.oncoreblueprint.org/documents/services.pdf>

Partner state

Pilot partner state: Kentucky

Secondary pilot state: Minnesota

Collaborating State partners: Georgia, Louisiana, Tennessee

A list of subjects that will be addressed in the OnCoRe Blueprint

Subjects will be added, expanded, and reorganized as the project develops.

Policy

- Standards

- Quality review — which criteria will be used to evaluate items for possible inclusion in the repository?
- Tagging—what metadata schema will be used to identify and label content?
- Workflow— what is the process for naming and sequencing the steps needed for creation, review, editing, and acceptance of items prior to their inclusion in the repository?
- Vocabularies—which controlled vocabularies will be selected to describe repository items?

Communication

- What is the most effective method for communicating with the various constituencies that will use the repository? (e.g., users, contributors, development team, technical support)
- What is the most effective method for communicating with the various constituencies that will use the repository? (e.g., users, contributors, development team, technical support)
- What is the best ways to inform and engage users and contributors in the repository?
- Which marketing tools, vehicles, and venues are available? (e.g., web, wikis, paper base)

Technology

- Hardware—how will the repository be physically housed? What are the system and server needs?
- Software—which software will be needed to sustain the project ?
- Interaction—which methods will the repository be able to use to interact with: other repositories, other collections, content management or learning management systems (e.g., OSIDS, Z39.50, SRU, SRW)?
- Interoperability standards—which standards will be used or mandated to ensure interoperability among user systems (e.g., SCORM).
- Technical Standards—which other technical standards will be mandated for the repository (e.g., 508 compliance)?

Sustainability

- Funding
 - What sources of funding are available for the project (e.g., legislative appropriations, grants, institutional, private donors)?
 - What is the time period for which funding has been committed?
 - What additional funding needs should be addressed?
- Staffing—What repository functions must be staffed? Blueprint will provide suggested repository roles and sample job descriptions
- Training—What type of training will be needed for users, contributors, and administrators (e.g., online, tutorials, personal training sessions) Blueprint will suggest training topics and provide examples of training modules.

Content

- What is the purpose of the repository (e.g., instructional content for students, professional development materials for educators, institutional archives for administration/research)?
- How is content acquired for the repository?
- Copyright/Digital Rights Management

Dissemination/Change Management

- What strategies will be used to help repository users accommodate new ways of teaching and new ways to create content?

A list of educational resource repositories in the US

<http://www.oncoreblueprint.org/Repositories.htm>.