Introduction

- **Open Educational Resources**, known as OER are important materials that are offered to students for certain classes because they are more affordable, and many are free.¹
- The following OER explanatory materials are designed to aid in simplifying and understanding what OER resources are available and where they can best be located.
- There are 7 parts to the OER informational documents, each offering an additional level of detail,² plus two supplementary documents with further details.

Description of Parts

**Part 1: OER at a Glance**
A quick explanatory overview of what OER is, and why it is important to use OER.

**Part 2: OER Resources: Usage Rights**
Explanation of the symbols found on various documents and media (sometimes referred to as objects) showing what kind of copyright usages are allowed by the author or publisher of the images, documents or materials.

**Part 3: Some OER Resources in Detail**
There are many sources available, but this explanatory page offers abstracts of some of the main websites noted and their offerings for locating appropriate materials for a course or for courses.

**Part 4: Additional OER Resources**
This listing covers more sources than are not noted in Part 3.³

**Part 5: Chart of OER Resources**⁴
OER Resources can be challenging to locate for certain subjects. The chart offers suggested sites. Whereas many materials are peer-reviewed, it is the responsibility of the instructor to verify materials and author credentials.

**Part 6: Contact Information for Certain Sources noted**

**Part 7: Notations on Supplementary Materials of Part 8 and 9.**

**Part 8: Achieve: Rubrics for Evaluating Open Education Resource (OER) Objects**


Notes

1 -- See Part 2, Usage Rights.
2 – It should be noted that websites can change, be modified, added or deleted. Resources available at creation of documents, Fall 2019.
3 – It should be noted that websites can change, be modified, added or deleted. Resources available at creation of documents, Fall 2019.
4 -- There are two main aspects to OER. The guides listed above are for users (ie students) and for faculty recommendations. There are additional sources available for faculty to publish and those are not specifically covered in these documents.
What is OER?

OER is the acronym for Open Educational Resources

What is the meaning of OER?

Basically, the OER movement brings together a variety of organizations committed to make freely available educational materials for students and instructors to use, adapt, share and reuse without legal ramifications. (more detailed explanations follow).

As to Rhode Island:

“On September 27, 2016, Governor Gina Raimondo announced a statewide Open Textbook Initiative during a press conference at Rhode Island College (RIC). The initiative challenged Rhode Island’s higher education institutions to reduce college costs by saving students $5 million over five years using open licensed textbooks.”

[From the Office of Innovation, State of Rhode Island, https://www.innovate.ri.gov/open-textbooks]

Why OER?

“Exorbitant textbook prices have become a barrier to student success. Over the last decade college textbook prices have increased by 88%. In addition, traditional textbooks carry restrictive licenses that prevent innovation by faculty and schools. That is why we need openly licensed textbooks, which can be freely distributed online and updated and improved by faculty. Digital textbooks can also address accessibility requirements, such as text-to-speech and translation supports.”

[Quote is from and find more information on the Rhode Island initiative see Open Textbook Initiative at the Office of Innovation, State of Rhode Island, https://www.innovate.ri.gov/open-textbooks]

• Further description can be found in an article: Affordable Course Content by Kristi Jensen.
• For a very short video explanation, see youtube: Why Open Education Matters.

What are OER permittable usages?

“Many of the teaching, learning, and resource materials on eMedia reside in the public domain or have been released under an open license that permits no-cost access, use, and redistribution by others with no or limited restrictions. These privileges cannot be revoked as long as you follow the license terms.” (See Usage Rights, OER Commons Help Center, rev. 3 January 2019) Or in simple terminology – the 5 Rs of Dr. David Wiley of Lumen Learning:

Retain • Reuse • Revise • Remix • Redistribute

Where to find OER resources?

(Sampling of organizations, see OER Resources in Detail for more information)

◆ Creative Commons
https://creativecommons.org/
◆ EDUCAUSE
https://www.educause.edu/
◆ OER COMMONS
https://www.oercommons.org/
◆ OpenStax
https://openstax.org/
◆ Open Textbook Library
https://open.umn.edu/opentextbooks/
◆ SPARC [Scholarly Publishing and Academic Resources Coalition]
https://sparcopen.org/
OER Commons  https://www.oercommons.org/

From the site:
Many of the teaching, learning, and resource materials on eMedia reside in the public domain or have been released under an open license that permits no-cost access, use, and redistribution by others with no or limited restrictions. These privileges cannot be revoked as long as you follow the license terms.

The information on this page is condensed directly from Creative Commons CC BY
If you need further details and explanations on the “License Deed” or “Legal Code” use this link: [https://help.oercommons.org/support/solutions/articles/42000046845-usage-rights]

Main Symbols

<table>
<thead>
<tr>
<th>CC = Creative Commons</th>
<th>BY = Attribution (author)</th>
<th>SA = ShareAlike</th>
</tr>
</thead>
<tbody>
<tr>
<td>The material has a Creative Commons license.</td>
<td>Others can change or distribute the material – even for commercial purposes, but must give credit to the author.</td>
<td>If you share the work, you must keep the original license.</td>
</tr>
</tbody>
</table>

= ND = NoDerivs (No Derivatives)  
This symbol means you can use the material but you cannot alter the content.

$ NC = NonCommercial  
This symbol indicates that the material cannot be used for commercial purposes or profit.

Symbols with Explanations: Identifying a Creative Commons License
Resources have their own special condition of use/copyright label. The labels listed below show the variety of possible uses, and the labels help you quickly distinguish whether a resource can be changed or shared without further permission required. As noted, further details may be necessary and refer to: [https://help.oercommons.org/support/solutions/articles/42000046845-usage-rights]

■ No Strings Attached – free usage

CC = Creative Commons

CC BY = Attribution -- This license lets others distribute, remix, tweak, and build upon your work, even commercially, as long as they credit you for the original creation. This is the most accommodating of licenses offered.

CC BY-SA = Attribution-ShareAlike  
This license lets others remix, tweak, and build upon your work, even commercially, as long as they credit you for the original creation. They must also share changes under this license.

CC BY-SA=NC = Attribution-ShareAlike – NonCommercial  
This license lets others remix, tweak, and build upon your work, even commercially, as long as they credit you for the original creation. They must also share changes under this license. Additionally, they can’t use your work for commercial purposes.

CC BY-SA-NC-DN = Attribution-ShareAlike – NonCommercial – NoDerivs

This license lets others remix, tweak, and build upon your work, even commercially, as long as they credit you for the original creation. They must also share changes under this license. Additionally, they can’t use your work for commercial purposes. They also can’t alter your work in any way, including combining parts of it with other works, without your permission.

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2019/11

Library and Information Commons  NEIT One New England Tech Blvd. East Greenwich, RI 02818  401-739-5000 x3472

Remixing, redistributing, and/or making derivatives come with certain restrictions, including sharing.
Choice #1

Choice #2

Choice #3

Choice #4

CC BY-NC = Attribution-NonCommercial -- This license lets others remix, tweak, and build upon your work non-commercially, and although their new works must also acknowledge you and be non-commercial, they don’t have to license their derivative works on the same terms.

CC BY-NC-SA = Attribution-NonCommercial-ShareAlike -- This license lets others remix, tweak, and build upon your work non-commercially, as long as they credit you and license their new creations under the identical terms.

CC BY-NC-ND = Attribution-NonCommercial-NoDerivs -- This license is the most restrictive of our six main licenses, only allowing others to download your works and share them with others as long as they credit you, but they can’t change them in any way or use them commercially.

■ Share Only
Redistributing comes with some restrictions. Do not remix or make derivative works.

CC BY-ND = Attribution-NoDerivs -- This license allows for redistribution, commercial and non-commercial, as long as it is passed along unchanged and in whole, with credit to you.

■ Read the Fine Print...
...if something is not clearly tagged or marked, what to do...

Click the View Resource button and look for any disclaimer and policies on the copyright and usage of those materials. Copyright and usage may vary from resource to resource, so it is necessary to review the specific policies of a resource.

■ Additional information on license symbols and downloads
See Creative Commons > What we do > Downloads
Some OER Resources in Detail

Creative Commons: when we share, everyone wins

https://creativecommons.org/

Creative Commons is a global nonprofit organization that enables sharing and reuse of creativity and knowledge through the provision of free legal tools. The vision is to help others realize the full potential of the Internet. CC has affiliates all over the world. Although Creative Commons is best known for its licenses, the work extends beyond just providing copyright licenses. CC offers other legal and technical tools that also facilitate sharing and discovery of creative works.

For more details: https://creativecommons.org/faq/#what-is-creative-commons-and-what-do-you-do

EDUCAUSE

https://www.educause.edu/

EDUCAUSE is a nonprofit association that helps higher education elevate the impact of IT and supports those who lead, manage, deploy, and use information technology to advance higher education. There are over 2,300 organizations involved comprising over 100,000 individuals at member organizations in 45 countries. EDUCAUSE members include IT leaders and professionals, teaching and learning professionals, academic leaders, and campus executives at U.S. and international institutions as well as industry influencers from corporations, associations, and organizations serving the higher education community.

EDUCAUSE offers quick reads on essential information for emerging technologies.

The EDUCAUSE Library is a clearinghouse and claims to have the world’s largest collection of information about higher ed technology. From the site.

The Seven Questions

1. What is it?
2. How does it work?
3. Who's doing it?
4. Why is it significant?
5. What are the downsides?
6. Where is it going?
7. What are the implications for higher education?

OER Commons

https://www.oercommons.org/

OER Commons is a public digital library of open educational resources. One can explore, create and collaborate with educators around the world to improve curriculum and search, browse, and evaluate resources.

Open Educational Resources (OER) are teaching and learning materials that you may be able to freely use and reuse at no cost, and without needing to ask permission. In some cases, that means you can download a resource and share it with colleagues and students. In other cases, you may be able to download a resource, edit it in some way, and then repost it as a remixed work.

Resource Builder offers the author an opportunity to create complex documents.

Module Builder (for Higher ed) offers the opportunity to create interactive modules. (From the site)
OpenStax is a nonprofit educational initiative based at Rice University, and its mission is to give every student the tools they need to be successful in the classroom. OpenStax publishes high-quality, peer-reviewed, openly licensed college textbooks that are absolutely free online and low cost in print. Additionally, OpenStax has developed a low-cost, research-based courseware that gives students the tools they need to complete their course the first time around. Books are available for math, science, social sciences, humanities and business.

Browsable but not searchable at this time. Special resources for faculty. | Rice University  (From the site)

Open textbooks are textbooks that have been funded, published, and licensed to be freely used, adapted, and distributed. These books have been reviewed by faculty from a variety of colleges and universities to assess their quality. These books can be downloaded for no cost or printed at low cost. All textbooks are either used at multiple higher education institutions; or affiliated with an institution, scholarly society, or professional organization. The library currently includes 643 textbooks, with more being added all the time.

Browsable but not searchable at this time.

Center for Open Education | University of Minnesota  (From the site)

SPARC is a global coalition committed to making Open the default for research and education. SPARC empowers people to solve big problems and make new discoveries through the adoption of policies and practices that advance Open Access, Open Data, and Open Education.

SPARC focuses on collaborating with other stakeholders—including authors, publishers, libraries, students, funders, policymakers and the public — to build on the opportunities created by the Internet, promoting changes to both infrastructure and culture needed to make open the default for research and education.

Open Access is the free, immediate, online availability of research articles coupled with the rights to use these articles fully in the digital environment.

Open Education encompasses resources, tools and practices that are free of legal, financial and technical barriers and can be fully used, shared and adapted in the digital environment.

Open Data is research data that is freely available on the Internet permitting any user to download, copy, analyse, re-process, pass to software or use for any purpose without financial, legal or technical barriers other than those inseparable from gaining access to the Internet itself.  (From the site)
**Community College Consortium for Open Educational Resources (CCCOER)**

CCCOER is a growing consortium of community and technical colleges committed to expanding access to education and increasing student success through adoption of open educational policy, practices, and resources. We provide a community and resources to learn about the evolving practice of open education.

**Directory of Open Access Books**

- Searchable and Browsable
- Browse by subject is user friendly

![DoAB](https://www.doabooks.org)

**Journals**

- General Works
- Health Sciences
- History and Archaeology
- Languages & Literatures
- Law and Political Science
- Mathematics & Statistics
- Philosophy & Religion
- Physics & Astronomy
- Science General
- Social Sciences
- Technology & Engineering

**Springer Open**

- [www.springeropen.com](http://www.springeropen.com)

**Journals**: Alphabetical List of Journals

**Books**: Over 800, Check topics on this page

**MERLOT**

Multimedia EDUCATIONAL Resource for Learning and Online Teaching

The MERLOT system provides access to curated online learning and support materials and content creation tools, led by an international community of educators, learners and researchers.

MERLOT is a project of the California State University system, which started over 20 years ago. It is an international community of close to 160,000 members with more than 82,000 online learning materials in its repository, in nearly every discipline and material type. It is a comprehensive resource for faculty in all stages of their careers. MERLOT has a peer review process in 25 disciplines and is considered a universal gateway to online learning materials. At MERLOT instructors can use MERLOT Content Builder and create instructional materials.

MERLOT has more than 6,600 open textbooks catalogued in the repository. Users can search by ISBN to discover supplemental materials for a textbook. Users can find learning exercises, bookmarked collections and virtual guest experts. The collection of resources is easily searchable and also conveniently arranged by discipline community. With the MERLOT Smart Search, users can find materials not only in MERLOT, but in over a dozen other digital libraries and the web, all in one place. In addition, there is a search tool to help find colleagues.
The Open Education Consortium (OEC) is a non-profit, global, members-based network of open education institutions and organizations. OEC represents its members and provides advocacy and leadership around advancement of open education globally. OEC works with its members to build capacity to find, reuse, create and share Open Educational Resources (OER), develop open policy, create sustainable open education models, and enable international collaboration and innovation.

OEC does not offer resources, but points to other organizations that do offer specific materials.

Openly Available Sources Integrated Search

Openly Available Sources Integrated Search (OASIS) is a search tool that aims to make the discovery of open content easier. OASIS currently searches open content from 91 different sources and contains 365,241 records.

OASIS is being developed at SUNY Geneseo’s Milne Library. OASIS collects and organizes information from a variety of sources such as openstax, Lumen Learning, etc. To get started, Search or Browse or OER by subject

Lumen Learning

Lumen Learning’s mission is to enable unprecedented learning for all students. We do this by providing affordable course materials designed to strengthen learning using open educational resources (OER). Because learning is about student success as well as affordability and access, we apply learning science insights and learning data analysis to develop iterative improvements to our course materials and learning tools.

Lumen offers OER Course Materials: Candela is extremely affordable e-books with curated text, video, interactives and other learning materials; Waymaker is OER with personalized learning tools to improve faculty student connections; OHM is low cost online homework and customizable courses; OLI is data and research reports to improve courses.

Libretexts

The LibreTexts mission is to unite students, faculty and scholars in a cooperative effort to develop an easy-to-use online platform for the construction, customization, and dissemination of open educational resources (OER) to reduce the burdens of unreasonable textbook costs to our students and society.

Collaborative Effort: Courses, Textbooks and other Materials listed by institution that is sharing. Searchable and browsable by subject.
CCCOER Division/ Open Education Consortium | 60 Thoreau St, Suite 238 Concord, MA 01742 USA
info@cccoer.org

Creative Commons | PO Box 1866, Mountain View, CA 94042
info@creativecommons.org 1-415-429-6753

Directory of Open Access Books  DOAB  Division of OAPEN, based in the Netherlands
Postal address: OAPEN Foundation P.O. Box 90407 2509 LK The Hague
OAPEN Library: www.oapen.org  DOAB: www.doabooks.org

EDUCAUSE  | Monday–Friday, 7:30 a.m.–4:30 p.m. MT
282 Century Place, Suite 5000, Louisville, CO 80027 303-449-4430 (phone)
303-440-0461 (fax) info@educause.edu

1150 18th Street, NW, Suite 900, Washington, DC 20036 202-872-4200 (phone)
202-872-4318 (fax) info@educause.edu

Geneseo SUNY 1 College Circle | Geneseo, NY 14454 (585) 245-5000 | web@geneseo.edu

ISKME 323 Harvard Avenue Half Moon Bay, CA 94019 (650) 728-3322
(650) 728-3344 (fax) info@iskme.org

LibreTexts | UC Davis Library 100 NW Quad University of California, Davis, CA 95616
(530) 752-8792 info@libretexts.org

LUMEN LEARNING | 812 SW Washington St. Suite 1200 Portland, OR 97205
Phone: +1.971.808.1637  Email: info@lumenlearning.com

MERLOT Multimedia Educational Resource for Learning and Online Teaching
a program of California State University
Contact specific people through the website: http://info.merlot.org/

Open Education Consortium | 60 Thoreau St, Suite 238 Concord, MA 01742 USA
feedback@oeconsortium.org

Springer Open BMC, Part of Springer Nature Group
World-wide offices, for contact use the website form.
https://www.springeropen.com/about
Rubric Documentation for Evaluating OER

Achieve (achieve.org) was started in 1996 by a bipartisan group of governors and business leaders, Achieve is a nonprofit education organization that has spent two decades leading the effort to help states make college and career readiness a priority for all students.

“Since 1996, Achieve has been the leading voice for improving college and career readiness in the United States. By convening states and leaders, providing technical assistance to states, conducting research, and offering advocacy, communications, and outreach support, Achieve has transformed the concept of college and career readiness for all students from a radical concept to a national priority.”

Achieve has created guidelines for instructors to evaluate particular OER materials or the term objects is used. Objects can be images, lessons, documents, articles, apps and more.

There are 5 possible scores 3, 2, 1, 0 and N/A and 8 rubrics to be assessed

The following rubrics are included:
Rubric I. Degree of Alignment to Standards
Rubric II. Quality of Explanation of the Subject Matter
Rubric III. Utility of Materials Designed to Support Teaching
Rubric IV. Quality of Assessment
Rubric V. Quality of Technological Interactivity
Rubric VI. Quality of Instructional and Practice Exercises
Rubric VII. Opportunities for Deeper Learning
Rubric VIII. Assurance of Accessibility

For more details about these guidelines for assessing materials refer to:

“Rubrics for Evaluating Open Education Resources (OER) Objects” by Achieve.org. [https://www.achieve.org]

This work is licensed under the Creative Commons Attribution 3.0 Unported License. To view a copy of this license, visit http://creativecommons.org/licenses/by/3.0/ or send a letter to Creative Commons, 444 Castro Street, Suite 900, Mountain View, California, 94041, USA
Rubrics for Evaluating Open Education Resource (OER) Objects

The following rubrics represent an evaluation system for objects found within Open Education Resources. An object could include images, applets, lessons, units, assessments and more. For the purpose of this evaluation, any component that can exist as a stand-alone qualifies as an object. The rubrics in this packet can be applied across content areas and object types.

In general, the rubrics should be applied to the smallest meaningful unit. In some cases, this may be a single lesson or instructional support material, while in others it might be a complete unit of study or set of support materials. If multiple lessons are included in an OER, the reviewer needs to determine if all lessons will be examined, if only those lessons that deal with essential aspects of the curriculum are to be considered, or if it would be best to evaluate random lessons, looking at, for example, every third or fifth lesson.

These rubrics are typically used to rate the potential, not actual, effectiveness of a particular object in a learning environment. Each rubric should be scored independently of the others using the following five scores that describe levels of potential quality, usefulness, or alignment to standards:

3: Superior  
2: Strong  
1: Limited  
0: Very Weak / None  
N/A: Rubric Not Applicable

The not applicable (N/A) rating should be used any time a particular rubric does not apply to the object being rated. This is not a pejorative score; it simply means it would be inappropriate to apply this rubric to this object. For example, Rubric IV: Quality of Assessment would not be applicable to an object that does not have an assessment component.

The following rubrics are included:

Rubric I. Degree of Alignment to Standards  
Rubric II. Quality of Explanation of the Subject Matter  
Rubric III. Utility of Materials Designed to Support Teaching  
Rubric IV. Quality of Assessment  
Rubric V. Quality of Technological Interactivity  
Rubric VI. Quality of Instructional and Practice Exercises  
Rubric VII. Opportunities for Deeper Learning  
Rubric VIII. Assurance of Accessibility
Rubric I: Degree of Alignment to Standards

This rubric is applied to learning objects that have suggested alignments to standards. It is used to rate the degree to which an individual object actually aligns to each proposed standard. The rubric was designed specifically for the Common Core State Standards, but can be used with any set of standards. Before the rubric can be applied, the assumption is that a user has proposed an alignment between the object and the selected standard(s).

There are two major aspects of standards that are vital to a meaningful alignment review: content and performance expectations. It is important that the content addressed in the object matches the content addressed in each proposed standard. Evaluating the alignment of the performances required in both the object and the standard is equally essential and should be considered along with the content.

Rubric I Scoring Guide:

3: An object has superior alignment only if both of the following are true:
   • All of the content and performance expectations in the identified standard are completely addressed by the object.
   • The content and performance expectations of the identified standard are the focus of the object. While some objects may cover a range of standards that could potentially be aligned, for a superior alignment the content and performance expectations must not be a peripheral part of the object.

2: An object has strong alignment for either one of two reasons:
   • Minor elements of the standard are not addressed in the object.
   • The content and performance expectations of the standard align to a minor part of the object.

1: An object has limited alignment if a significant part of the content or performance expectations of the identified standard is not addressed in the object, as long as there is fidelity to the part it does cover. For example, an object that aligns to CCSS 2.NBT.2, “Count within 1000; skip-count by 5s, 10s, and 100s,” but only addresses counting numbers to 500, would be considered to have limited alignment. The object aligns very closely with a limited part of the standard.

0: An object has very weak alignment for either one of two reasons:
   • The object does not match the intended standards.
   • The object matches only to minimally important aspects of a standard. These objects will not typically be useful for instruction of core concepts and performances covered by the standard.

N/A: This rubric does not apply for an object that has no suggested standards for alignment. For example, the rubric might not be applicable to a set of raw data.
Rubric II: Quality of Explanation of the Subject Matter

This rubric is applied to objects designed to explain subject matter. It is used to rate how thoroughly the subject matter is explained or otherwise revealed in the object. Teachers might use this object with a whole class, a small group, or an individual student. Students might use the object to self-tutor. For objects that are primarily intended for teacher use, the rubric is applied to the explanation of the subject matter not to the planning instructions for the teacher.

Rubric II Scoring Guide:

3: An object is rated superior for explanation of subject matter only if all of the following are true:
   - The object provides comprehensive information so effectively that the target audience should be able to understand the subject matter.
   - The object connects important associated concepts within the subject matter. For example, a lesson on multi-digit addition makes connections with place value, rather than simply showing how to add multi-digit numbers. Or a lesson designed to analyze how an author develops ideas across extended text would make connections among the various developmental steps and the various purposes the author has for the text.
   - The object does not need to be augmented with additional explanation or materials.
   - The main ideas of the subject matter addressed in the object are clearly identified for the learner.

2: An object is rated strong for explanation of subject matter if it explains the subject matter in a way that makes skills, procedures, concepts, and/or information understandable. It falls short of superior in that it does not make connections among important associated concepts within the subject matter. For example, a lesson on multi-digit addition may focus on the procedure and fail to connect it with place value.

1: An object is rated limited for explanation of subject matter if it explains the subject matter correctly but in a limited way. This cursory treatment of the content is not sufficiently developed for a first-time learner of the content. The explanations are not thorough and would likely serve as a review for most learners.

0: An object is rated very weak or no value for explanation of subject matter if its explanations are confusing or contain errors. There is little likelihood that this object will contribute to understanding.

N/A: This rubric is not applicable (N/A) for an object that is not designed to explain subject matter, for example, a sheet of mathematical formulae or a map. It may be possible to apply the object in some way that aids a learner’s understanding, but that is beyond any obvious or described purpose of the object.
Rubric III: Utility of Materials Designed to Support Teaching

This rubric is applied to objects designed to support teachers in planning or presenting subject matter. The primary user would be a teacher. This rubric evaluates the potential utility of an object at the intended grade level for the majority of instructors.

Rubric III Scoring Guide:

3: An object is rated superior for the utility of materials designed to support teaching only if all of the following are true:
- The object provides materials that are comprehensive and easy to understand and use.
- The object includes suggestions for ways to use the materials with a variety of learners. These suggestions include materials such as “common error analysis tips” and “precursor skills and knowledge” that go beyond the basic lesson or unit elements.
- All objects and all components are provided and function as intended and described. For example, the time needed for lesson planning appears accurately estimated, materials lists are complete, and explanations make sense.
- For larger objects like units, materials facilitate the use of a mix of instructional approaches (direct instruction, group work, investigations, etc.).

2: An object is rated strong for the utility of materials designed to support teaching if it offers materials that are comprehensive and easy to understand and use but falls short of “superior” for either one of two reasons:
- The object does not include suggestions for ways to use the materials with a variety of learners (e.g., error analysis tips).
- Some core components (e.g., directions) are underdeveloped in the object.

1: An object is rated limited for the utility of materials designed to support teaching if it includes a useful approach or idea to teach an important topic but falls short of “strong” for either one of two reasons:
- The object is missing important elements (e.g. directions for some parts of a lesson are not included).
- Important elements do not function as they are intended to (e.g. directions are unclear or practice exercises are missing or inadequate). Teachers would need to supplement this object to use it effectively.

0: An object is rated very weak or no value for the utility of materials designed to support teaching if it is confusing, contains errors, is missing important elements, or is for some other reason simply not useful, in spite of an intention to be used as a support for teachers in planning or preparation.

N/A: This rubric is not applicable (N/A) for an object that is not designed to support teachers in planning and/or presenting subject matter. It may be possible that an educator could find an application for such an object during a lesson, but that would not be the intended use.
Rubric IV: Quality of Assessments

This rubric is applied to those objects designed to determine what a student knows before, during, or after a topic is taught. When many assessment items are included in one object, as is often the case, the rubric is applied to the entire set.

Rubric IV Scoring Guide:

3: An object is rated superior for the quality of its assessments only if all of the following are true:
   • All of the skills and knowledge assessed align clearly to the content and performance expectations intended, as stated or implied in the object.
   • Nothing is assessed that is not included in the scope of intended material unless it is differentiated as extension material.
   • The most important aspects of the expectations are targeted and are given appropriate weight/attention in the assessment.
   • The assessment modes used in the object, such as selected response, long and short constructed response, or group work require the student to demonstrate proficiency in the intended concept/skill.
   • The level of difficulty is a result of the complexity of the subject-area content and performance expectations and of the degree of cognitive demand, rather than a result of unrelated issues (e.g. overly complex vocabulary used in math word problems).

2: An object is rated strong for the quality of its assessments if it assesses all of the content and performance expectations intended, but the assessment modes used do not consistently offer the student opportunities to demonstrate proficiency in the intended concept/skill.

1: An object is rated limited for the quality of its assessments if it assesses some of the content or performance expectations intended, as stated or implicit in the object, but omits some important content or performance expectations and/or fails to offer the student opportunities to demonstrate proficiency in the intended content/skills.

0: An object is rated very weak or no value for the quality of its assessments if its assessments contain significant errors, do not assess important content/skills, are written in a way that is confusing to students, or are unsound for other reasons.

N/A: This rubric is not applicable (N/A) for an object that is not designed to have an assessment component. Even if one might imagine ways an object could be used for assessment purposes, if it is not the intended purpose, not applicable is the appropriate score.
Rubric V: Quality of Technological Interactivity

This rubric is applied to objects designed with a technology-based interactive component. It is used to rate the degree and quality of the interactivity of that component. “Interactivity” is used broadly to mean that the object responds to the user, in other words, it behaves differently based on what the user does. This is not a rating for technology in general, but for technological interactivity. The rubric does not apply to interaction between students, but rather to how the technology responds to the individual user.

Rubric V Scoring Guide:

3: An object, or interactive component of an object, is rated superior for the quality of its technological interactivity only if all of the following are true:
   - The object is responsive to student input in a way that creates an individualized learning experience. This means the object adapts to the user based on what s/he does, or the object allows the user some flexibility or individual control during the learning experience.
   - The interactive element is purposeful and directly related to learning.
   - The object is well-designed and easy to use, encouraging learner use.
   - The object appears to function flawlessly on the intended platform.

2: An object, or interactive component of an object, is rated strong for the quality of its technological interactivity if it has an interactive feature that is purposeful and directly related to learning, but does not provide an individualized learning experience. Similarly to the superior objects, strong interactive objects must be well designed, easy-to-use, and function flawlessly on the intended platform. Some technological elements may not be directly related to the content but for a strong rating they must not detract from the learning experience. These kinds of interactive elements, including earning points or achieving levels for correct answers, might be designed to increase student motivation and to build content understanding by rewarding or entertaining the learner, and may extend the time the user engages with the content.

1: An object, or interactive component of an object, is rated limited for the quality of its technological interactivity if its interactive element does not relate to the subject matter and may detract from the learning experience. These kinds of interactive elements may slightly increase motivation but do not provide strong support for understanding the subject matter addressed in the object. It is unlikely that this interactive feature will increase understanding or extend the time a user engages with the content.

0: An object, or interactive component of an object, is rated very weak or no value for the quality of its technological interactivity if it has interactive features that are poorly conceived and/or executed. The interactive features might fail to operate as intended, distract the user, or unnecessarily take up user time.
N/A: This rubric is not applicable (N/A) for an object that does not have an interactive technological element. For example, the rubric does not apply if interaction with the object is limited to, for example, opening a user-selected PDF.
Rubric VI: Quality of Instructional and Practice Exercises

This rubric is applied to objects that contain exercises designed to provide an opportunity to practice and strengthen specific skills and knowledge. The purpose of these exercises is to deepen understanding of subject matter and to routinize foundational skills and procedures. When concepts and skills are introduced, providing a sufficient number of exercises to support skill acquisition is critical. However when integrating skills in complex tasks, the number of exercise problems is less important than their richness. These types of practice opportunities may include as few as one or two instructional exercises designed to provide practice applying specific concepts and/or skills. Sets of practice exercises are treated as a single object, with the rubric applied to an entire group.

Rubric VI Scoring Guide:
3: An object is rated superior for the quality of its instructional and practice exercises only if all of the following are true:
   • The object offers more exercises than needed for the average student to facilitate mastery of the targeted skills, as stated or implied in the object. For complex tasks, one or two rich practice exercises may be considered more than enough.
   • The exercises are clearly written and supported by accurate answer keys or scoring guidelines as applicable.
   • There are a variety of exercise types and/or the exercises are available in a variety of formats, as appropriate to the targeted concepts and skills. For more complex practice exercises the formats used provide an opportunity for the learner to integrate a variety of skills.

2: An object is rated strong for the quality of its instructional and practice exercises if it offers only a sufficient number of well-written exercises to facilitate mastery of targeted skills, which are supported by accurate answer keys or scoring guidelines, but there is little variety of exercise types or formats.

1: An object is rated limited for the quality of its instructional and practice exercises if it has some, but too few exercises to facilitate mastery of the targeted skills, is without answer keys, and provides no variation in type or format.

0: An object is rated very weak or no value for the quality of its instructional and practice exercises if the exercises provided do not facilitate mastery of the targeted skills, contain errors, or are unsound for other reasons.

N/A: This rubric is not applicable (N/A) to an object that does not include opportunities to practice targeted skills.
Rubric VII: Opportunities for Deeper Learning

This rubric is applied to objects designed to engage learners in at least one of the following deeper learning skills, which can be applied across all content areas:

- Think critically and solve complex problems.
- Work collaboratively.
- Communicate effectively.
- Learn how to learn.
- Reason abstractly.
- Construct viable arguments and critique the reasoning of others.
- Apply discrete knowledge and skills to real-world situations.
- Construct, use, or analyze models.

Rubric VII Scoring Guide:

3: An object is rated superior for its opportunities for deeper learning only if all of the following are true:
   - At least three of the deeper learning skills from the list identified in this rubric are required in the object.
   - The object offers a range of cognitive demand that is appropriate and supportive of the material.
   - Appropriate scaffolding and direction are provided.

2: An object is rated strong for its opportunities for deeper learning if it includes one or two deeper learning skills identified in this rubric. For example, the object might involve a complex problem that requires abstract reasoning skills to reach a solution.

1: An object is rated limited for its opportunities for deeper learning if it includes one deeper learning skill identified in the rubric but is missing clear guidance on how to tap into the various aspects of deeper learning. For example, an object might include a provision for learners to collaborate, but the process and product are unclear.

0: An object is rated very weak for its opportunities for deeper learning if it appears to be designed to provide some of the deeper learning opportunities identified in this rubric, but it is not useful as it is presented. For example, the object might be based on poorly formulated problems and/or unclear directions, making it unlikely that this lesson or activity will lead to skills like critical thinking, abstract reasoning, constructing arguments, or modeling.

N/A: This rubric is not applicable (N/A) to an object that does not appear to be designed to provide the opportunity for deeper learning, even though one might imagine how it could be used to do so.
Rubric VIII: Assurance of Accessibility Standards

This rubric is used to assure materials are accessible to all students, including students identified as blind, visually impaired or print disabled, and those students who may qualify under the Chafee Amendment to the U.S. 1931 Act to Provide Books to the Adult Blind as Amended. It was developed to assess compliance with U.S. standards and requirements, but could be adapted to accommodate differences in other sets of requirements internationally.

Accessibility is critically important for all learners and should be considered in the design of all online materials. Identification of certain characteristics will assist in determining if materials will be fully accessible for all students. Assurance that materials are compliant with the standards, recommendations, and guidelines specified assists educators in the selection and use of accessible versions of materials that can be used with all students, including those with different kinds of challenges and assistive devices.

The Assurance of Accessibility Standards Rubric does not ask reviewers to make a judgment on the degree of object quality. Instead, it requests that a determination (yes/no) of characteristics be made that, together with assurance of specific Standards, may determine the degree to which the materials are accessible. Only those who feel qualified to make judgments about an object’s accessibility should use this rubric.

Rubric VIII Scoring Guide (see table next page):

Yes: The object displays the characteristic or complies with the standards, recommendations or guidelines.

No: The object does NOT display the characteristic or comply with the standards, recommendations or guidelines.

Comment: Comments on Rubric 8 Object determination may include notes that describe the reason materials do not comply with the standard, recommendations or guidelines or further description that may clarify the characteristics of the object.
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<th>Comment or Explanation</th>
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**Additional references for accessibility:**

Accessible Instructional Materials at the Center for Applied Special Technology
- [http://aim.cast.org/learn/e-resources/accessibility_resources](http://aim.cast.org/learn/e-resources/accessibility_resources)

National Center for Accessible Media
- [http://ncam.wgbh.org/about/accessibility-links](http://ncam.wgbh.org/about/accessibility-links)