

Delaware Department of Education (DDOE) Open Education Resources (OER) Strategy

Product of the “Teachers as Catalysts” Fellow, Summer of 2016

Original August 2016, Updated October 2016

Recommendation: Build and maintain a DDOE OER Repository

Issue: There is both a need and a desire for a repository of quality open educational resources that has been thoroughly vetted and aligned with Delaware standards in every discipline/subject and at every level.

Background: As teachers and students have more access to digital tools in the classroom, there is a growing need for quality digital educational resources that are open so that teachers can share, remix, and reshare the objects. To ensure that these resources are quality, some states/districts/schools have begun to create repositories of open educational resources that are thoroughly vetted and align with the standards and practices. These repositories come in many different flavors and sizes. Some states/districts/schools have built repositories using LMSs, some have aligned with higher ed institutions to create their repositories, and some have built their own repositories from scratch.

The current Delaware OER strategy is being a partner in Open Up Resources (formerly known as the K-12 OER Collaborative) which will start delivering OER content in the 2017-2018 school year. A “Teachers as Catalysts” fellow was brought in over the summer of 2016 to explore the possibility of creating a Delaware Department of Education OER repository. This exploration would include the different possibilities of how it would be structured, how the LMS Schoology or content built in Schoology could be utilized, and what were all the various components that would have to be considered and planned for.

Proposal: Path Forward

The Path Forward is threefold:

- Explore in greater detail these five major components that must be considered when constructing an OER strategy and repository. Each will be fully detailed in the following briefs:
 - 1) Repository Structure. (Brief 1)
 - 2) Populating the Repository. (Brief 2)
 - 3) Vetting Process. (Brief 2)
 - 4) Maintenance and Sustainability. (Brief 3)
 - 5) Future Options: Refinement and Growth, Open Up Resources, and #GoOpen. (Brief 4)
- Utilize OER material from Open Up Resources beginning in the 2017-2018 school year.
- Join the USDOE #GoOpen Campaign as a #GoOpen State (done October 2016) and encourage districts/charters to join the #GoOpen movement at the local level.

Recommendation:

Continue the work begun in the summer of 2016 by the “Teachers as Catalysts” fellow in order to have vetted OER approved by DDOE available to Delaware Educators.

Repository Structure – Brief 1

Recommendation: Create the Delaware DOE OER Repository within Schoology using the Group feature.

Issue: A clean, friendly and easy to use structure to host and disseminate the OER in the DDOE Repository is essential if there is a hope for Delaware Educators to engage with it and use it. It is also imperative that the structure and procedure needed to maintain and update the site is easily manageable since recourses to do so are and will be limited.

Background: Several possible structures using various hosts were scrutinized and explored over a 7 week period by the “Teachers as Catalysts” fellow in the summer of 2016. The ability to upload content, the ability and ease to tag content, the ability to search for content by the user, and the ability to easily discover relevant content by grade or content by the user were considered to some of the most important aspects. It is generally accepted that most individuals will not go much farther than a few clicks of a mouse to find what they seek, a fact that was also considered. Being able to manage the site—managing objects uploaded to be vetted, sharing those objects with those doing the curating, renaming files, ordering objects, managing vetted content were of paramount concern.

Proposal: Several possibilities were considered—third party OER sites (such as, Amazon Inspire and OER Commons), and Schoology. Both were found to have positive and less attractive aspects.

Amazon Inspire has a robust search engine that uses some of the same technologies that the Amazon.com site uses. There have been preliminary discussions regarding a Delaware DOE section within Inspire where Delaware DOE “approved” resources would be housed. There is also work being done by Amazon Inspire to build an “app” that will connect it with Schoology and other LMSs. Current challenges include: common cartridge, scorm, mbz, and zip files are not allowed file formats, a folder of objects (complete lesson or unit) able to be uploaded or downloaded is not allowed, and users are required to have an Amazon.com log in to access the service. Vetting and curating is completely crowd sourced – users rank (stars) the quality of the resource. Other third party OER sites share many of the same traits as Amazon, such as, robust search engines and large number of resources, but lack a clear way to identify and tag “Delaware DOE” approved content as well as limited file formats.

Schoology has a number of tools that make it an attractive platform to house the DDOE OER Repository. Each public school teacher in the state has an account and access. Each teacher can build, share and access resources and content that can be single files, full lesson or complete units with assessments attached. Teachers are able to search for content and import it to their resources or drop it immediately into the lesson they are creating. DDOE is able to create groups and enroll all educators in the group, which will allow all teachers to have access to OER that has been vetted by DDOE. The structure of this group can be organized in such a way to allow the educator to find resources quickly and easily through navigable folders or through the group search function. Several OER sites—Merlot, OER Commons, Open Ed Assessments, Common Core projects & Lessons and many video resources—Khan Academy, TedEd, School tube have apps created for Schoology that allow direct access through the LMS. Multiple file types may be attached or integrated into a Schoology module and common cartridge, scorm, mbz, and zip files are easily imported allowing materials from other LMSs, such as, Blackboard, Moodle, Brainhoney, QTI, and Angel. Creating a procedure to allow teachers to easily share their created content and remixes of content to be vetted for the Delaware OER repository is possible. In addition to the formal vetting process, users have the ability to rank the quality/usability of the resource. The ability to tag and search items and the general search functions within Schoology are currently quite weak. Schoology has been made aware of this issue and are currently exploring solutions.

Recommendation:

Use Schoology as the platform for the DDOE OER repository as it meets most of the needs we have, has solid tech support, is easily configurable and adaptable locally, and is a platform we can utilize immediately. Resources from other repositories — OER Commons, Merlot, Amazon Inspire, Open Up Resources —are easily imported into a Schoology module. Selecting Schoology as the platform for the Delaware DOE OER Repository makes the most sense at this time. A working model/prototype of a Delaware DOE OER Repository, complete with links to OER sites and some OER content was built during the summer of 2016.

Populating the Repository and Vetting Objects—Brief 2

Recommendation: Engage and work with stakeholders to build an understanding about OER and to secure quality content for the repository. Use rubrics adapted from Equip Rubrics to guide the vetting/curating and self-review process. Utilize the Schoology Champions Cadre and individuals for vetting process

Issue: In creating an OER repository, there needs to be a plan to populate the repository with sufficient objects created by Delaware teachers and districts, tools to vet those objects, and a group tasked and responsible for completing the process.

Background: A repository, to be useful, must have sufficient resources in it and available to make it a useful resource for educators. Outside repositories can easily be linked to, but there is also a need to have content created by Delaware Teachers, Districts and DDOE included in the repository. To this end, quality objects must be gathered or created, vetted and uploaded to the repository and a formal process and procedure needs to be instituted to guide this work.

Proposal:

Populating the repository: All Delaware Educators would have the ability to submit items to the repository. Items would be uploaded to the “DDOE OER upload for Schoology objects” group along with the self-review checklist for content experts to review.

Members of the Schoology Champions Cadre, Curriculum specialists at the district level, district administration, DDOE administration, the BRINC consortium, and professional educational organizations would all be engaged to spread the message and encourage submissions to the Delaware OER Repository.

Vetting/Curating: The Equip rubrics developed by Achieve.org are the most accepted/trusted tools available for the purpose of vetting/curating resources. These rubrics have been adapted for use in Delaware and a separate “Self-Review” Quality lesson checklist has been created based on those rubrics (see Addendum A). The Self-Review checklist would be used when submitting objects/resources to the repository and the larger set of rubrics would be used by the individuals/groups vetting the objects/resources. A score of “2” or higher in each of the 8 areas would be required for an object/resource to be added to the repository.

There are several current “groups” as well as knowledgeable individuals who could be engaged in the process of vetting objects and resources submitted to the repository. Those groups would include the subject matter Cadres for the various subjects, the Schoology Champions Cadre, and individual educators—currently employed or retired educators.

- Subject matter Cadres (i.e., Literacy Cadre, Math Cadre, Digital Learner Cadre) could use a portion of their regular meetings to vet objects and resources that have been submitted to the OER Repository. This group would have the depth of knowledge and skill needed with little to no training necessary. While these groups do meet regularly, if their meeting agenda is full without this extra responsibility, they might not have the time to devote to this task.
- The Schoology Champions Cadre could use part of their quarterly meetings to vet/curate objects and resources that have been submitted to the OER repository. This is a very diverse group that has a unique familiarity with Schoology and should have the depth of knowledge and skill needed to apply the rubric in their subject area with little training. This activity would also benefit the members of the Cadre as they build and help others build resources in Schoology.
- Individual educators and retired educators could be contracted to vet objects and resources that have been submitted to the OER repository. An online training module (in Schoology) would be developed for training purposes and those individuals who successfully complete the training would be utilized for the purposes of vetting objects and resources. These individuals would be compensated on a per object/resource basis. An object/resource would be defined as having multiple parts—A lesson plan/teacher instructions, several student activities, several resources (reading/video), and an assessment.

Recommendation:

- Engage and work with all stakeholders at all levels with a unified and consistent message to help build the understanding of OER and the repository.
- Use the Rubrics and Self-Review Checklist adapted from the Equip Rubrics for vetting.
- Engage the Schoology Champions Cadre and contract with educators and retired educators to vet objects for the Delaware DOE OER Repository

Maintenance and Sustainability—Brief 3

Recommendation: Contract with an individual to manage the OER repository including the updating, vetting, messaging, and placing of objects in the repository.

Issue: In creating, maintaining, and updating an OER repository, there needs to be a plan to manage the different tasks that will be ongoing as the site is populated, people and groups are gathered or contracted to vet objects and resources, the repository is integrated with other platforms (i.e., OER Commons, Amazon Inspire, Learning Registry), and new technologies allow the registry to be upgraded/updated to better meet the need of Delaware teachers.

Background: A repository, to be useful, must have sufficient resources in it and available to make it a useful resource for educators. There is a need to update and expand the links to outside OER sites regularly. There is a need to have quality content created by Delaware Teachers, Districts and DDOE included in the repository. There is a need for that content to be vetted and uploaded to the repository. Additionally new technologies or new advancements in platforms or new ways of thinking may call for an update or upgrade of the repository. There needs to be dedicated management of all of these activities.

Proposal:

Managing the site: There will need to be an individual or individuals who would have the responsibility of managing the Delaware OER Repository. Duties would include:

- Updating and expanding the links to outside OER sites.
- Working with DDOE to copy or remix (into Schoology modules) exemplars that currently exist to the repository.
- Distributing objects and resources to groups/individuals for vetting.
- Placing approved objects and resources into the Delaware OER Repository.
- Ensure proper naming conventions are used on objects and resources and applying the proper tags
- Working with DDOE to create, develop and forward the engagement message for the Delaware OER Repository.
- Monitor other options for the Repository as technologies and services become available.

There are several options to consider for managing the Delaware DOE OER Repository:

- The Education Associate for the content area or their designee would be responsible for all of the managing responsibilities for their content/subject area and would work with the other Education Associates or their designee and DDOE on the engagement message. Education Associates or their designee may need some training on working with Schoology groups and creating Schoology objects for the classroom. Designees who are not DDOE employees would require a form of compensation (hours or financial compensation). A very precise and detailed procedure would have to be created to ensure that there is a uniform process and a uniformity of design across all disciplines and levels.
- An individual contracted by DDOE to manage the repository would be responsible for all of the managing responsibilities. DDOE could contract with an individual with a strong knowledge and understanding of Schoology and the background, history, new ideas surrounding OER repositories as well as their ability to work with others and manage a project.
- An individual currently working for DDOE or DCET would be responsible for all of the management responsibilities listed above for the repository in addition to their current duties.

Having a single individual responsible for the duties would ensure uniformity across the site and throughout all of the procedures.

Recommendation:

A single contracted manager would result in a more uniformed site, process and message, the best option would be to contract with an individual, at least at this beginning stage, to move the process forward, create the procedures and begin populating the repository with resources.

Future Options: Refinement and Growth, Open Up Resources and #GoOpen—Brief 4

Recommendation: Join the #GoOpen Campaign (done in October 2016). Continue partnership in Open Up Resources. Monitor trends, technological advancements, and engage in partnerships to further refine and adapt the Delaware DOE Repository to meet the needs of Delaware teachers.

Issue: The OER and #GoOpen movements have become more mainstream as more states, districts and schools are joining the movement. With the creation of the Delaware DOE OER repository, relationships with the BRINC consortium and districts like Colonial and Indian River who are working with and developing OER, Delaware is well positioned to join the movement. Technological advancements are always creating new possibilities and with those changes new opportunities and options for the Repository will become possible. Monitoring options for further refinement and growth is important to stay current.

Background: The US Department of Education, on October 29, 2015 announced a campaign to encourage states, school districts and educators to use openly licensed educational materials to transform teaching and learning. Secretary John King said “Openly licensed educational resources can increase equity by providing all students, regardless of zip code, access to high quality learning materials that have the most up-to-date and relevant content.” The US Dept. of Education and the Office of Educational Technology invites states to join the campaign as a #GoOpen State. #GoOpen States are “powerful collaborators in supporting and scaling innovation.” These statewide initiatives “are helping districts transition to a new model of learning by facilitating the creation of an open ecosystem of digital resources.”

#GoOpen States agree to:

- Adopt/Implement a statewide technology strategy that includes the use of openly licensed resources as a central component.
- Develop and maintain a statewide repository solution for openly licensed resources.
- Develop the technical capability to publish OER to the Learning Registry.
- Participate in a community of practice with other #GoOpen states and districts to share learning resources and professional development resources.
- Create a webpage to share the commitment to #GoOpen and document the state’s progress.

Delaware is currently a partner in Open Up Resources, formed in November 2014. The organization is developing full courses to be released for the 2017-18 school year.

As the OER and #GoOpen movements gain momentum, new opportunities, partnerships to further refine and grow state Repositories will become available. Monitoring these possibilities needs to be an ongoing mission.

Proposal:

Upon evaluation, Delaware is well on its way towards accomplishing 4 of the 5 steps necessary to meet the goals of the #GoOpen campaign. Joining the campaign will allow DDOE, districts and schools to be part of the community that share learning resources and professional development resources. Joining the campaign will also serve to inform the work being done on the Delaware DOE OER Repository.

Recommendation:

- 1) Commit to joining the #GoOpen campaign (done in October 2016). The advantages to joining the campaign would have a direct affect on our current and future efforts and allow districts and schools to be part of the larger community sharing professional development resources.
- 1) Continue the partnership in Open Up Resources.
- 2) Monitor other options and opportunities for the growth and refinement of the Delaware DOE OER Repository.

Works Cited:

"Open Education - Office of Educational Technology." *Office of Educational Technology*. N.p., n.d. Web. 01 Aug. 2016.

"#GoOpen States - Office of Educational Technology." *Office of Educational Technology*. N.p., n.d. Web. 01 Aug. 2016.

"U.S. Department of Education Launches Campaign to Encourage Schools to #GoOpen with Educational Resources." *Home*. N.p., n.d. Web. 01 Aug. 2016.

Addendum A

Delaware Dept. of Education OER Review Process – Achieve OER Rubric Selected Modules

- 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 VII – Creative Commons License and Copyright Free (developed independently)
- Quality Lesson Checklist – Self Review

Object From _____ Reviewed by _____

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.*

Summary of observations and suggestions for improvement:

Rating: 3 2 1 0 NA



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.

Summary of observations and suggestions for improvement:

Rating: 3 2 1 0 NA



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.

Summary of observations and suggestions for improvement:

Rating: 3 2 1 0 NA



Rubric IV. Quality of Assessment

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.

Summary of observations and suggestions for improvement:

Rating: 3 2 1 0 NA

Rubric V. Quality of Technological Interactivity



Delaware Dept. of Education OER Review Process - Achieve OER Rubric Selected Modules

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.*

Summary of observations and suggestions for improvement:

Rating: 3 2 1 0 NA

Rubric VI. Quality of Instructional and Practice Exercises



Delaware Dept. of Education OER Review Process - Achieve OER Rubric Selected Modules

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.

Summary of observations and suggestions for improvement:

Rating: 3 2 1 0 NA

Rubric VII. Opportunities for Deeper Learning

Rubric developed by Achieve

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Delaware Dept. of Education OER Review Process - Achieve OER Rubric Selected Modules

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.

Summary of observations and suggestions for improvement:

Rating: 3 2 1 0 NA

Rubric VIII. Creative Commons license and Copyright free

Rubric developed by Achieve

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Delaware Dept. of Education OER Review Process - Achieve OER Rubric Selected Modules

This rubric is applied to objects to ensure that they are free of any materials that have a copyright attached and that they carry a Creative Commons license that allows others to use and remix the works and share with others.

Rubric VII Scoring Guide:

3: An object is rated *superior* if **all** of the following are true:

- The object is free from any copyrighted materials.
- The object is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License or a Creative Commons Attribution-NonCommercial 4.0 International License.

2: An object is rated *strong* if it is free from any copyrighted materials but carries no indication of a Creative Commons International License.

1: An object is rated *limited* if it contains some materials that may have been taken or used from materials that are copyrighted that does not fall under fair use for copyrighted materials for education.

0: An object is rated *very weak* if it contains materials that are clearly taken from works that are protected under the Copyright law and do not fall under the fair use for copyrighted materials for education.

Summary of observations and suggestions for improvement:

Rating: 3 2 1 0



Open Education Resource (OER) to share with DDOE tag
Quality lesson checklist/Self Review

Object Name _____

Submitted by _____ District/School _____

Date submitted _____

Aspect of object/Lesson design	What Should Be Found in a Quality OER (entire module is defined as "object" below)	✓
Alignment to Standards	<ul style="list-style-type: none"> ● Content and performance expectations in the identified standard(s) are addressed by the object. ● Content and performance expectations of the identified standard(s) are the focus of the object. 	<input type="checkbox"/>
Explanation of Subject Matter	<ul style="list-style-type: none"> ● The object provides comprehensive information so that audience is able to understand the subject matter ● The object connects important associated concepts within the subject matter. ● The main ideas of the subject matter addressed in the object are clearly identified for the learner. ● The object does not require additional explanation. 	<input type="checkbox"/>
Materials designed to support Teaching	<ul style="list-style-type: none"> ● 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. ● For larger objects (units) materials facilitate the use of a mix of instructional approaches. ● Materials lists are complete, Explanations make sense. 	<input type="checkbox"/>
Assessment	<ul style="list-style-type: none"> ● Knowledge and skills assessed align to the content and performance expectations intended by the object ● The most important aspects of the expectations are targeted in the assessment. ● The assessment modes require student to demonstrate proficiency in the intended concept/skill. ● Formative and/or summative assessment included 	<input type="checkbox"/>
Technological Interactivity	<ul style="list-style-type: none"> ● Object is well designed, easy to use. ● The interactive element is purposeful and directly related to learning. ● The object allows the user some flexibility and control. 	<input type="checkbox"/>
Instructional and Practice exercises	<ul style="list-style-type: none"> ● The object offers exercises to facilitate mastery of the targeted skills. ● The exercises are clearly written. ● There are a variety of exercise types or they are available in a variety of formats. 	<input type="checkbox"/>
Opportunities for Deeper Learning	<ul style="list-style-type: none"> ● The object requires the learner to use several of the deeper learning skills (Think critically and solve complex problems, Communicate effectively, Reason abstractly, Apply discrete knowledge and skills to real world situations, Work Collaboratively, Learn how to learn, Construct viable arguments and critiques, Construct, use or analyze models). ● The object has a range of cognitive demand that is appropriate and supportive of the material. ● Appropriate scaffolding and direction are provided. 	<input type="checkbox"/>
Copyright/Creative Commons license -	<ul style="list-style-type: none"> ● This work is free of all copyright material. ● This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License. OR This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License. 	<input type="checkbox"/>

