



## **School Librarians Advancing STEM Learning** *2017 Pre-Academy Webinar*

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New Hampshire School Librarian Fellows

January 26, 2017, 7pm ET / 4pm PT

# Today's Pre-Academy Agenda

- Meet each other through quick Introductions
- Connect with ISKME and our approach to Open Educational Resources
- Get to know what's driving the SLASL project
- Be introduced to OER Commons digital library tools and resources
- Kick off your pre-Academy assignment with your cohort

# Quick Introductions

- *Introduce yourself (Name, Role, School/District or Organization)*
- *Offer one thing you are excited or curious about related to the project*

## **Project K-12 Professional Learning Team:**

- Amee Godwin, Director, Innovation, ISKME, Project Lead
- Megan Simmons, Asst. Dir. Education Programs, ISKME
- Joanna Schimizzi, Common Core and Science SME
- Susan Ballard, Granite State College, NH, Project Adviser
- Gail March, NH LMS Coordinator
- Michelle Brennan, OER Information Services Manager, ISKME
- Cynthia Jimes, Director Research & Learning, ISKME
- Anastasia Karaglani, Researcher, ISKME
- Lauren Schultz, NC LMS Coordinator and Fellow

## ISKME is...

- A non-profit focused on social science research and education innovation
- Committed to collaboration and knowledge sharing among educators to bring change to education
- Creator of the digital library and collaboration platform, OER Commons, to make Open Educational Resources easier to use and reuse
- Based in California, our distributed team works all around the world

What does OER mean to you?

*Please share your thoughts in chat*

# Open Educational Resources are...



- Teaching and learning content made available at no cost and through terms of use that allow for free access for use and reuse
- Created to support equity of access and to continuously improve curriculum and instruction
- The vehicle for collaboration among educators to find, customize, and share quality content for student learning
- The centerpiece for building open education practice into teaching practice

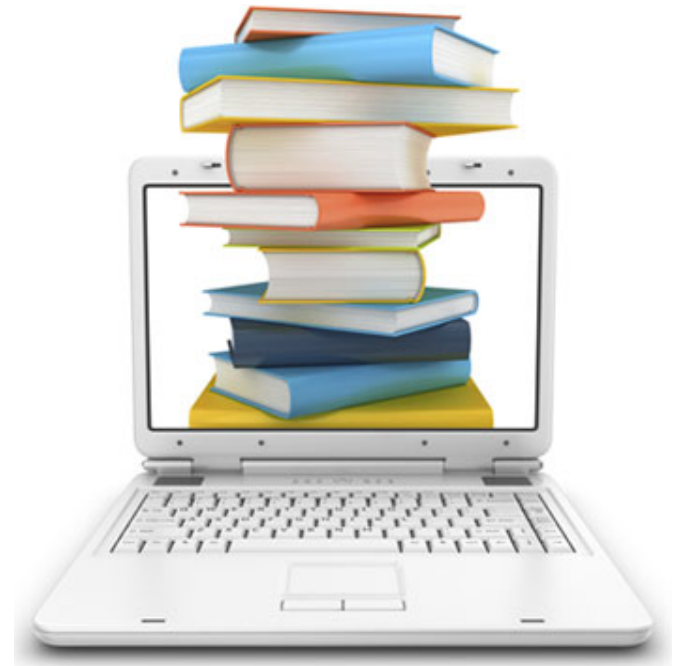
# School Librarians are being challenged to lead



- Take on key leadership roles to address informational and instructional resource needs in schools
  - Develop enhanced skills related to digital content discovery, curation, teaching, and sharing
  - Provide professional learning related to OER implementation and contribute to an ongoing community of practice
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- *Although they are not typically leveraged or included in strategies, planning, or professional learning to meet their districts' content curation needs*

# Open Education Practice that SLs can lead

- Understand “free” vs. open, cost effective, and high quality
- Effectively search, evaluate, and curate existing OER for teachers’ classroom needs
- Teach inquiry and research skills that engage digital-native students with open content
- Remix and customize OER to fit classroom and learner needs
- Collaborate on new curriculum creation and implementation





# What is the School Librarians Advancing STEM Learning Project?

A project, funded by a federal IMLS grant, to elevate and expand the role of school librarians by **building their capacity as instructional leaders and partners to advance STEM learning**



# Impacts of Teacher-Librarian Collaboration

- "I have always believed in the potential of collaboration and the role of the school librarian. There are many obstacles to overcome and relationships to be built before you can get to good collaboration, but it's always worth it. This project has reinforced my beliefs tenfold."
- "I don't know that it changed my perception of my role, but it has given me more contact with the science department and has maybe changed their perspective of my role."
- "My team produced some very high quality work that we will be using for years."
- I learned so much about text-based literacy and inquiry teaching, and really gained confidence in my skills as a teaching partner.

# Why Teacher-Librarian Cohorts?

HERE'S WHATS HAPPENING IN AMHERST

Souhegan Senior Project: Invitation to Community Members

## Power Grid: Librarian and Physics Teachers Collaborate on STEM Initiative

       [www.facebook.com/amhersttoday](http://www.facebook.com/amhersttoday)

October 03, 2016 | By Jeanne Sturges



Pictured: Nathan Carle, Physics teacher

Combining literacy and electricity isn't exactly intuitive, but two Souhegan High School teachers and the librarian took on the challenge through a project called "School Librarians Advancing STEM Learning" sponsored by Granite State College, the New Hampshire Department of Education and the American Association of School Librarians.

Physics teachers Nathan Carle and Charlie Swift joined forces with librarian, Lisa Petrie to create literacy-based inquiry STEM projects. Over the course of the year long initiative, the three faculty members developed and are now implementing a new Power Grid project in

- School Librarian and Teacher roles are complementary
- Cross-disciplinary teaching and sharing are beneficial
- Impact on student learning and engagement is compelling

What does School Librarians  
Advancing STEM Learning  
mean to you?



— SCHOOL LIBRARIANS —  
ADVANCING STEM LEARNING

Please share your thoughts in chat

# What are components of the SLASL workflow?

For continuity and clarity, a curriculum template is used to help teams pace their process and create a product that is accessible to the global education network.

- Stepwise
- Grounded in best practices
- Multiple opportunities for feedback
- Self-reflection and student reflection

## Fractal Cities: Then and Now (Version 2)

The screenshot shows the OER Commons interface. At the top, there's a search bar and navigation links like 'Discover', 'Create', 'Connect', and 'Learn More'. Below the header, the resource title 'Fractal Cities: Then and Now (Version 2)' is prominently displayed, along with the author 'Pam Harland' and the creation date 'Sep 15, 2014'. A summary on the left describes the lesson's focus on text-based inquiry in STEM. The main content area shows the beginning of the unit, with sections for 'Part I: Unit Title' and 'Part II: Background on LMS and Science Teacher relationship'. The page also includes a 'Table of Contents' and a 'Version History' section.

Rating: ★★★★★

5 1 3

[View Resource](#)

Author: Pam Harland

Subject: Mathematics

Provider: OER Commons

Provider Set: Open Author Resources

Level: High School

Grades: Grade 10

Language: English

Material Type: Assessments

Media Format: Graphics/Photos, Text/HTML

**Abstract:** This lesson was created by School Library Media Specialist, Pam Harland, and Math teachers Rebecca Hanna and Carissa Maskwa to model text-based inquiry in STEM. Over the course of the unit, students will explore a

variety of texts and grow in their knowledge of fractals, city design, and ability to use informational text to support their inquiry and research. The unit was created in year two of the School Librarians Advancing STEM Learning (SLASL) project, led by the Institute for the Study of Knowledge Management (ISKME) in partnership with Granite State University, New Hampshire, and funded by the Institute for Museum and Library Services (IMLS).

<https://www.oercommons.org/authoring/16131-fractal-cities-then-and-now-version-2/view>

# What have others done in SLASL?

- Stepwise
- Grounded in best practices

## Part IX: Student Learning Objectives

1. The student will be able to use fractals, geometric shapes, and similarity transformations to map a city of their own design.
2. The student will be able to apply geometric methods to solve problems by finding creative solutions to physical constraints on a map.
3. The student will be able to answer research questions and broaden the inquiry by using textual evidence from a complex anchor text.
4. The students will be able to solve city planning problems by analyzing and reflecting on the anchor text.

## Part X: Text Set Description

Text Title & Hyperlink	Text Purpose (indicate purpose and goal of each text)	Text-Dependent Questions (created by the teacher/librarian to help students analyze the text)	Accommodations for Diverse Learners
THE PLAN OF L'ENFANT FOR THE CITY OF WASHINGTON AND ITS EFFECT UPON THE FUTURE DEVELOPMENT OF THE CITY  [link to full text]	<p>This is our Anchor Text, designed to provide content while provoking student inquiry around the essential question.</p> <p>The Quantitative text complexity of the text is: 11.3</p>	<ol style="list-style-type: none"><li>1. What question did the author seek to answer?</li><li>2. How do well-planned cities grow?</li><li>3. What is his primary claim?</li><li>4. Did he provide specific and useful evidence?</li><li>5. The word "fractal" is not mentioned in the text at all. How is it implied?</li></ol>	<ol style="list-style-type: none"><li>1. Define complex vocabulary for all students.</li><li>2. Specific chunks have been chosen to support students in breaking the reading down into manageable sections. On this version we numbered the pages and adjusted the font and white space on the original document to aid in student understanding.</li></ol>



# What have others done in SLASL?

- **Multiple opportunities for feedback**
- **Self-reflection and student reflection**



Nathan Carle on Sep 21, 04:43pm [Link](#) | [Reply](#)

Warms: Very interesting authentic reading. Nice integration into math.

Love the three questions at the end of day 3: Fractal Anchor Text Questions, and again at the end of the project sheet. They are great higher order thinking questions that really get the students engaged in the text and the content.

The activities seem engaging and interesting for the students.

Wonders: I couldn't access the chunks that the reading was broken into. I wonder if it was the whole document or sections of it.

I wonder if there can be more of a connection between city planning and fractals built into more days of the unit.

I wonder what scaffolding is in place to help the students plan the city and incorporate fractals.



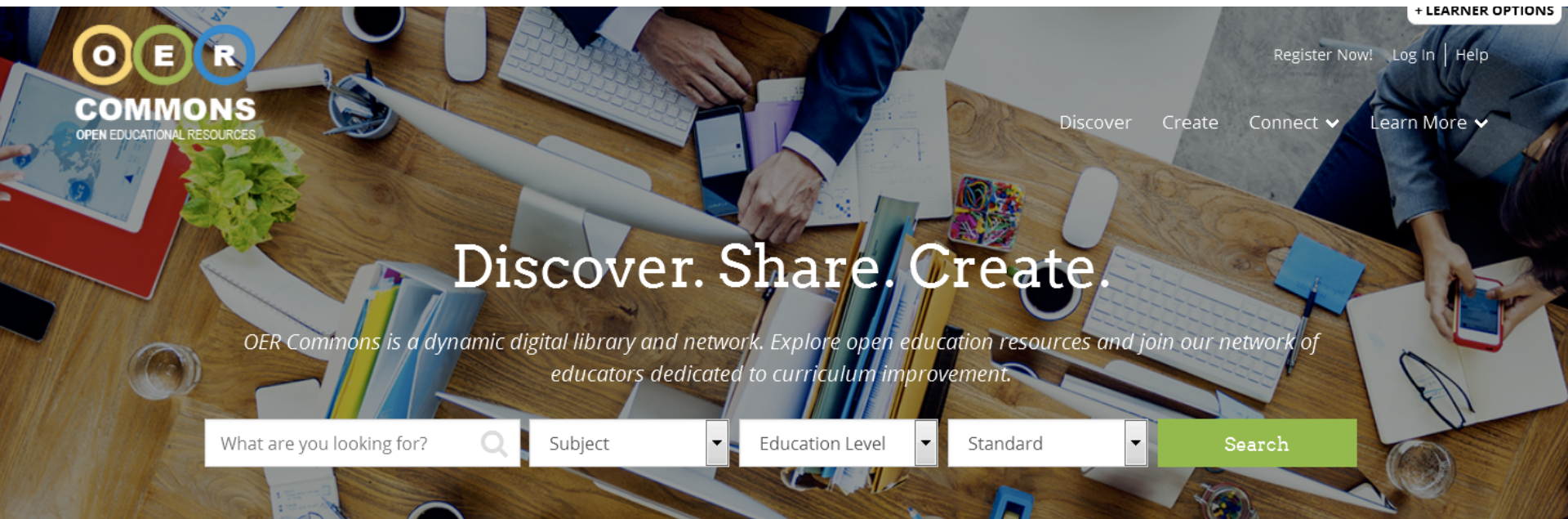
Kelley Joseph on Sep 20, 03:58pm [Link](#) | [Reply](#)

This lesson included student reflection, which is great. After reading through this lesson I thought the product that the students worked on was engaging and different in that it brought in real-world application. I am wondering about how the librarian and teacher monitored progress for understanding throughout the reading? There were many opportunities for peer sharing of ideas, which is fantastic. I am not a "math person," but I was very intrigued by the questions that were asked of the students throughout the whole unit!



# OER Tools to Support SLASL Work

- Discovery of high quality resources
- Collaboration and curation in hubs and groups
- Design in authoring tools



# To Do Before the Academy on 1/20

1. Create login and profile
2. Join the SLASL NH Y3 Group on OER Commons project hub
3. Complete Reading and Respond to Discussion in Group
4. Conduct the STEM Teacher Interview
5. Create your cohort want ad

# Academy Details

## Time/Date

**Thursday, February 2nd, 9:00am-4:00pm**

**Saturday, February 4, 8:00am-2:00pm**

*Breakfast and lunch provided both days.*

*Arrive early to enjoy breakfast and coffees.*

## Location:

Granite State College, 25 Hall St., Concord, NH

*Free parking is available*

*Looking forward to it!!*

*Optional: **February 3<sup>rd</sup>**, NH Tech Symposium, Manchester, NH*

*Registration required, free to all*

Quick check in

Please share any questions and reflections in chat



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