

Why Zoos & Aquariums Matter: Aligning Your Agendas With Those of Your Visitors

March 20, 2019



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EVALUATION



Advanced Search

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Learn from Experience

- Examples of funded projects
- Key resources
- Evaluation
- Professional associations and networks

8,000+ resources on InformalScience.org!

STEM LEARNING IN ZOOS & AQUARIUMS

The public at large place a high value on the role of zoos and aquariums in teaching children about the natural world, respect for living creatures, as a place for parents and children to discover new things together, and as an educational resource for children in the community. Research shows that parents in particular place value on zoos and aquariums as unique venues for informal learning (Fraser and Sickler, 2008). In fact zoos and aquariums have become settings where research on approaches to facilitating Science Technology, Engineering and Math learning is thriving (Rubin and Falk, 2012 and Falk et al 2007).



Search the Repository

The InformalScience.org repository is a collection of descriptions of funded awards from various federal agencies, research and reference materials (including grey literature such as conference presentations), and evaluation reports related to STEM learning outside the classroom. This can be a starting point for conducting literature reviews, strengthening grant proposals, learning about best practices, and making the case for your project or program.

To filter your search to zoo and aquarium-specific resources, use the Advanced Search option on the homepage, and under the Environment field, select "Aquarium and Zoo Exhibits" or "Aquarium and Zoo Programs."

2018 Year in ISE

Types of Resources Included

Select Publications
Research, reports, meta analyses, consensus reports, and compendia.

By the Numbers
Data, trends, geographic locations

Citizen Science

Citizen Science: Innovation in Open Science, Society and Policy
Susanne Hecker, Miki Haklay, Anne S....

Select Publications

Citizen Science Maker Summit

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informalscience.org/year-in-ISE

Today's Webinar



CAISE is currently supported by the National Science Foundation (NSF) under award no. DRL-1612739, with previous support under DRL-0638981 and DRL-1212803.

Any opinions, findings, and conclusions or recommendations expressed are those of the authors and do not necessarily reflect the views of NSF.

Our Presenters



John Fraser
New Knowledge
Organization Ltd.



Joe E. Heimlich
COSI's Center for
Research and
Evaluation



Martin Storksdieck
Center for Research
on Lifelong STEM
Learning at Oregon
State University

Moderator: Melissa Ballard, CAISE

Agenda

1. Overview (15 min)
2. Framing (7 min)
3. Q&A (2 min)
4. Perceptions (10 min)
5. Q&A (10 min)

To submit a question, go to your **Control Panel**, and enter it into the **Question Box!**

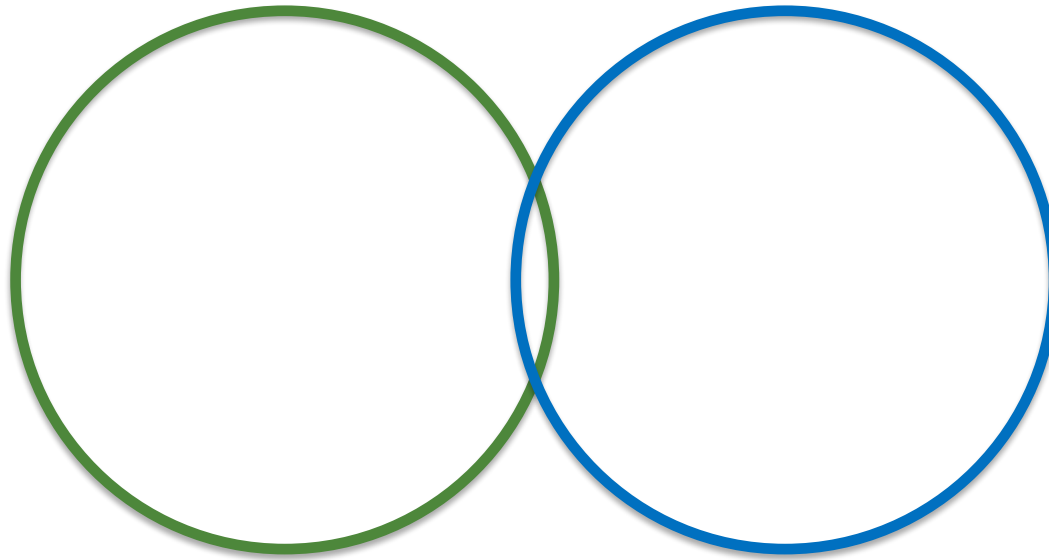
With additional questions, email: kelly.riedinger@oregonstate.edu

Project Goals:

1. To understand how visitor goals and behavior impact learning
2. How the conservation education agenda of most Z/As interlaces with those goals
3. How the public situates the voice of Z/As in society

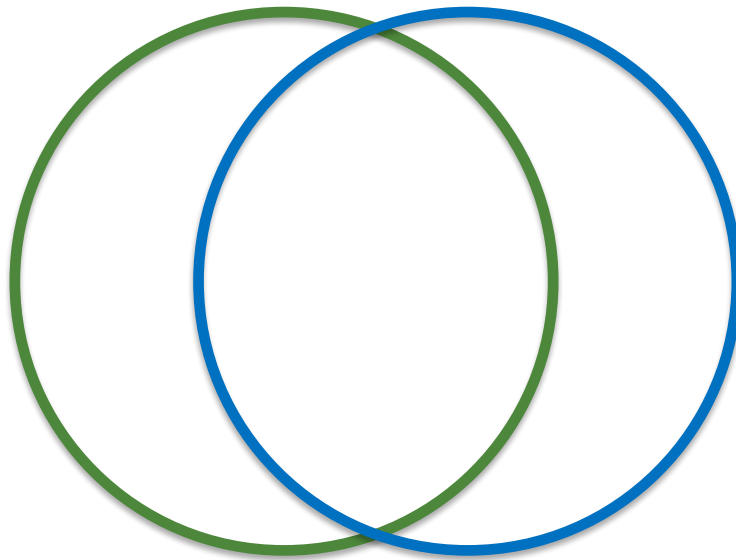
WZAM³

Why Zoos & Aquariums Matter
Wave 3: STEM Matters



WZAM³

Why Zoos & Aquariums Matter
Wave 3: STEM Matters



WZAM³

Why Zoos & Aquariums Matter Wave 3: STEM Matters

Our project asks:

What are the real outcomes of the zoo or aquarium enterprise, both as a **visitor destination** and as a **public voice** in public media?



WZAM³

Why Zoos & Aquariums Matter Wave 3: STEM Matters

- New Knowledge Organization Ltd. (NKO)
- COSI's Center for Research and Evaluation (CRE)
- Oregon State University's (OSU)
Center for Research on Lifelong STEM Learning
- Association of Zoos and Aquariums



This material is based upon work supported by the National Science Foundation under Grant No. 1612729 & 1612699. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

Research Team

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- John Falk
- Kelly Riedinger
- Victoria Bonebrake



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Why Zoos & Aquariums Matter
Wave 3: STEM Matters



**Individual
Visit**

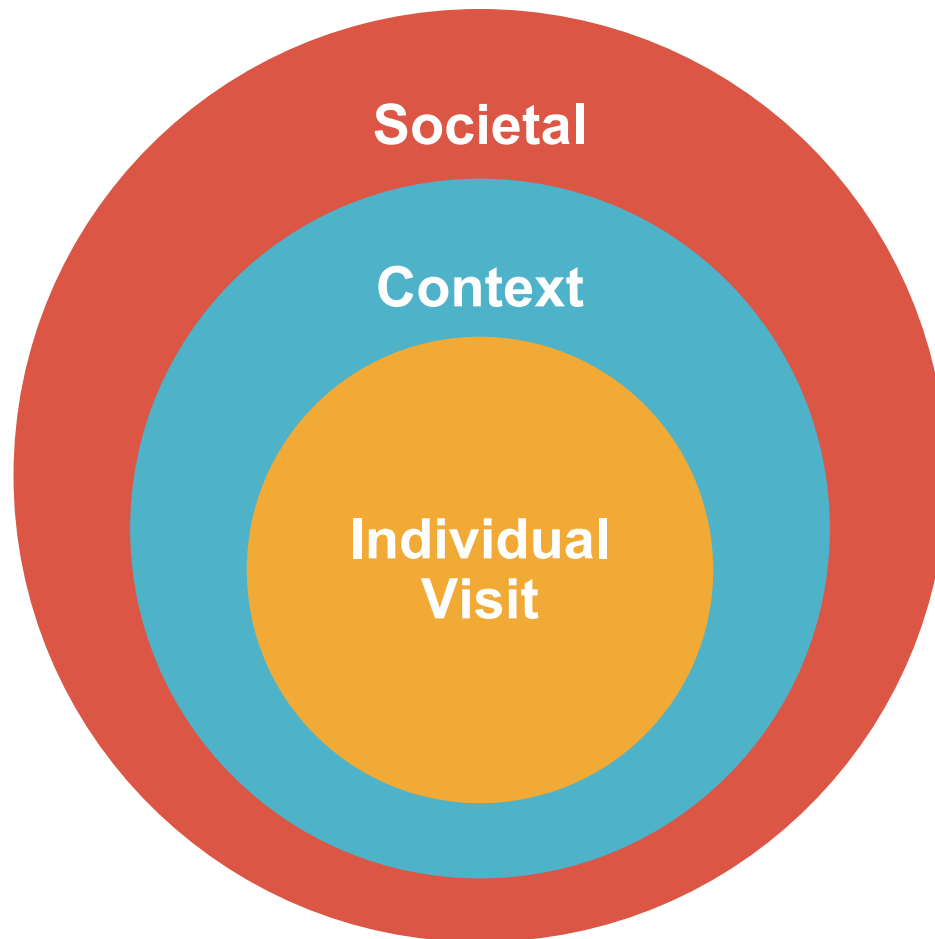
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Wave 3: STEM Matters



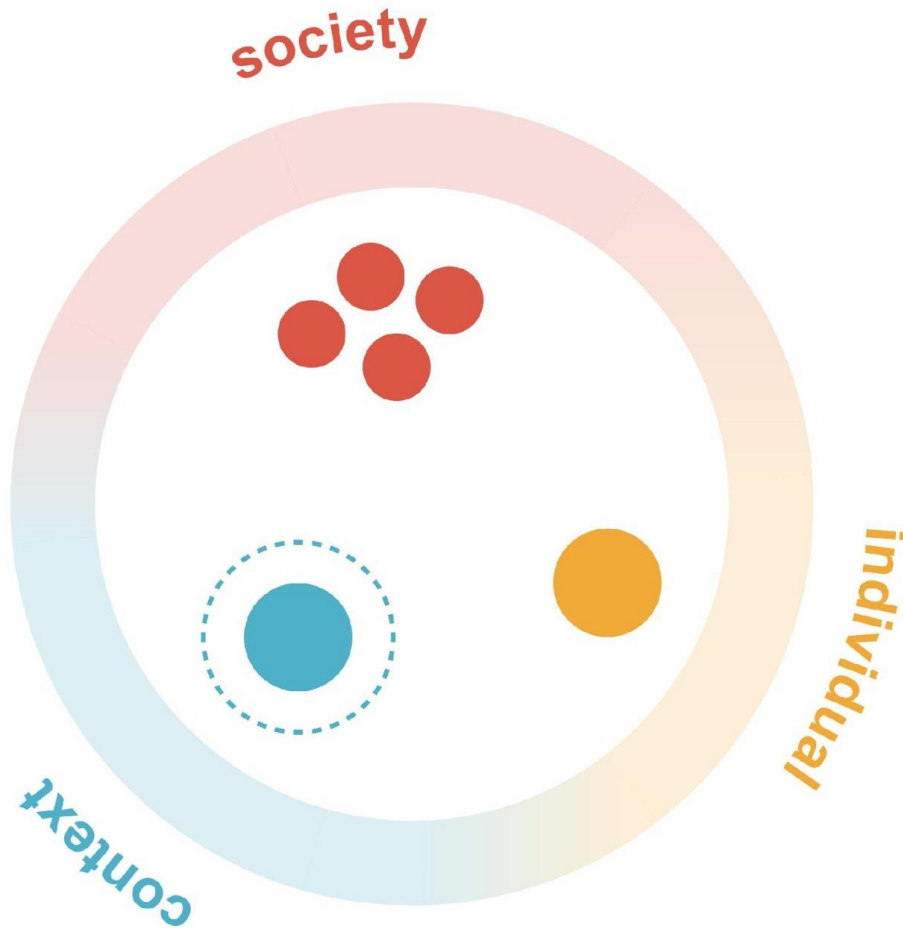
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Wave 3: STEM Matters



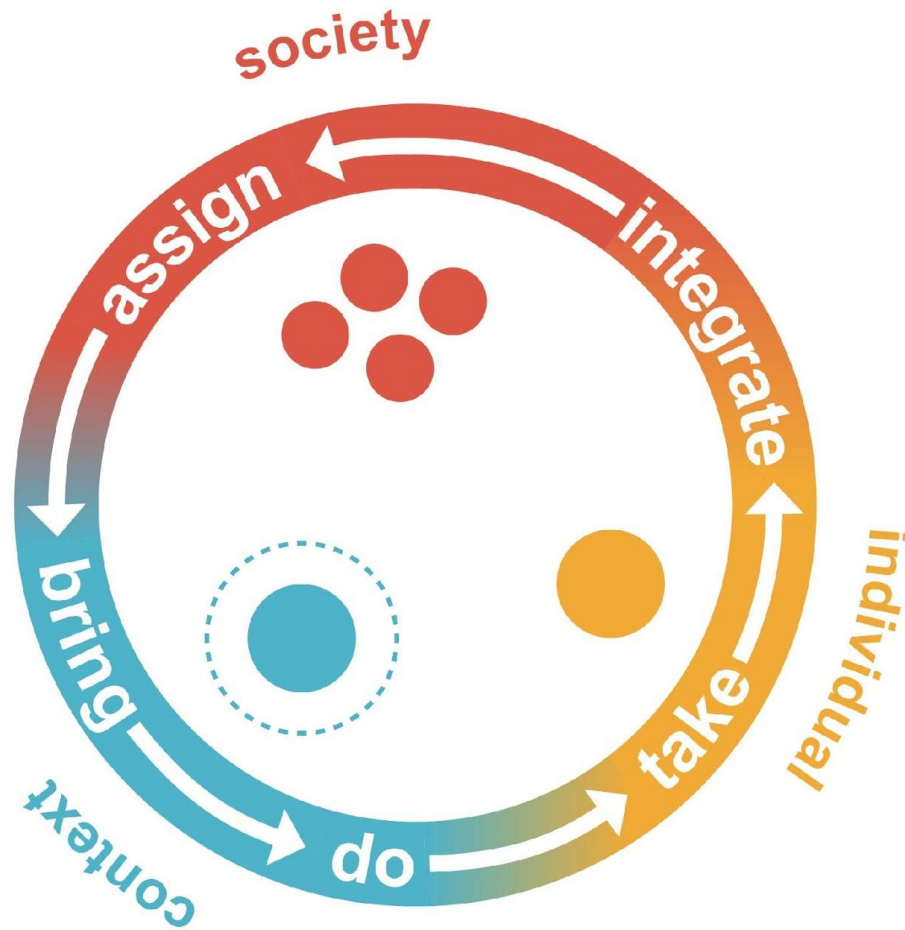
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Why Zoos & Aquariums Matter
Wave 3: STEM Matters



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Wave 3: STEM Matters



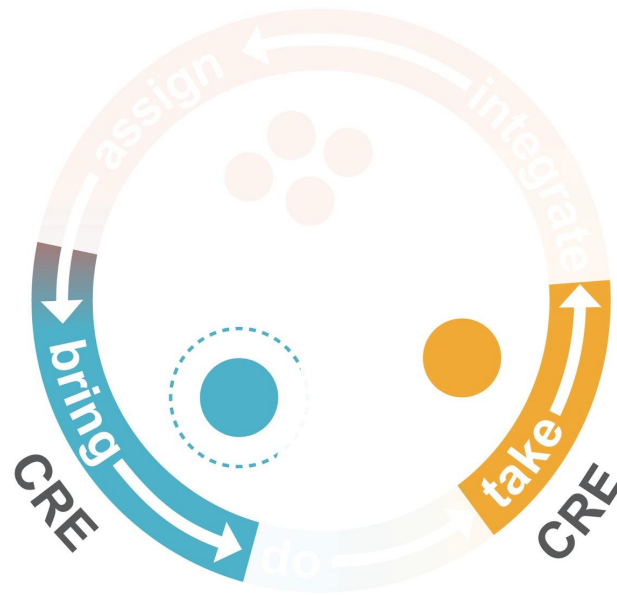
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Wave 3: STEM Matters



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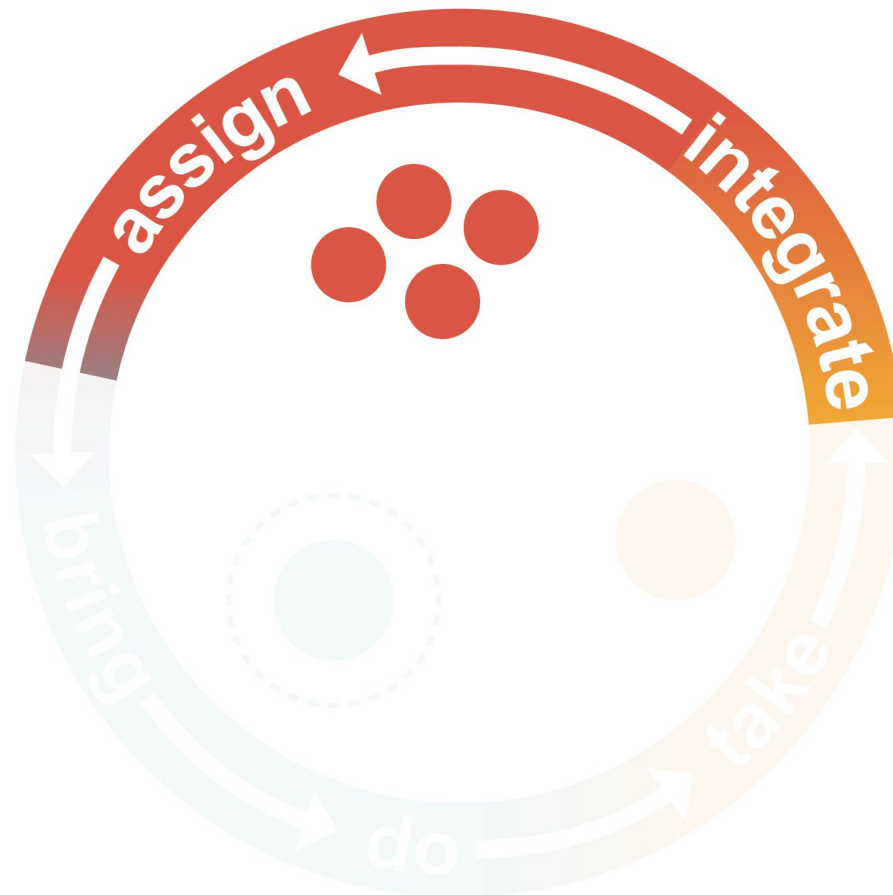
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Wave 3: STEM Matters

Reactions? Questions?

Please use the chat box to post your reaction or any questions about our project cycle graphic.

WZAM³

Why Zoos & Aquariums Matter
Wave 3: STEM Matters

SOCIETY

Public Perceptions of Zoos & Aquariums

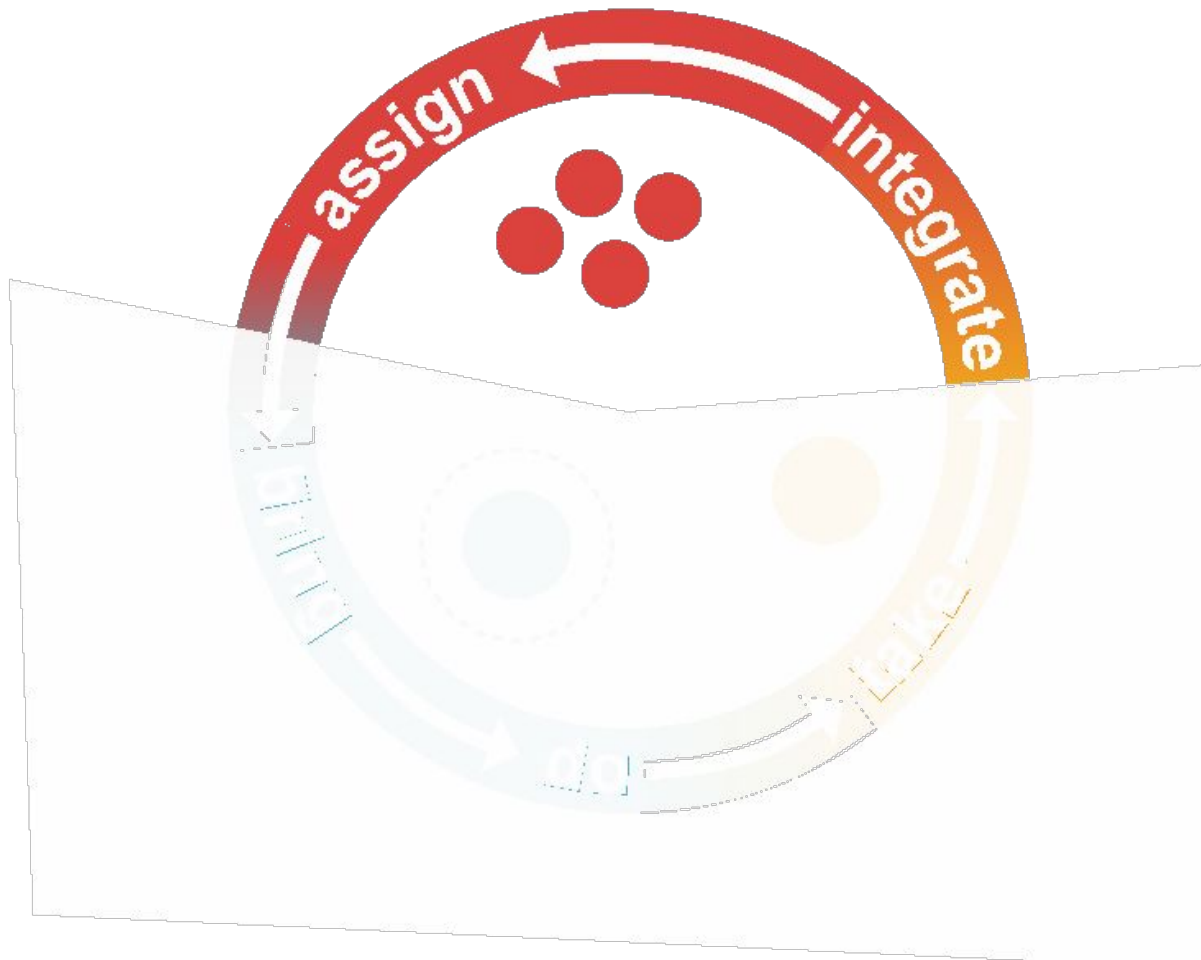
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Research Question

How does the public
perceive Z/A
within the STEM
learning ecology?



STEM Learning Ecology

Settings

Zoos

Aquariums

Restaurants

Science Centers

Parks

STEM Learning Ecology

STEM Topics

Water Quality

Construction

Climate Change

Animal Behavior

Nutrition

STEM Learning Ecology

Modes of Learning

Using Senses

Reading Signs

Conversations

Digital Media

STEM Learning Ecology

Maker Space
Playground

Athletic Facility

Park

Planetarium

Auto Shop

Library

K12 Classroom

Pharmacy

College Restaurant

Job

Home (indoors)

Store
Financial Institution

Zoo
Aquarium

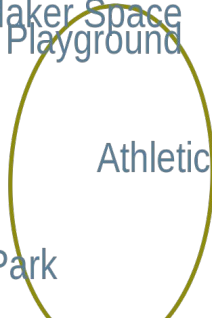
Back/Front Yard

Natural History Museum

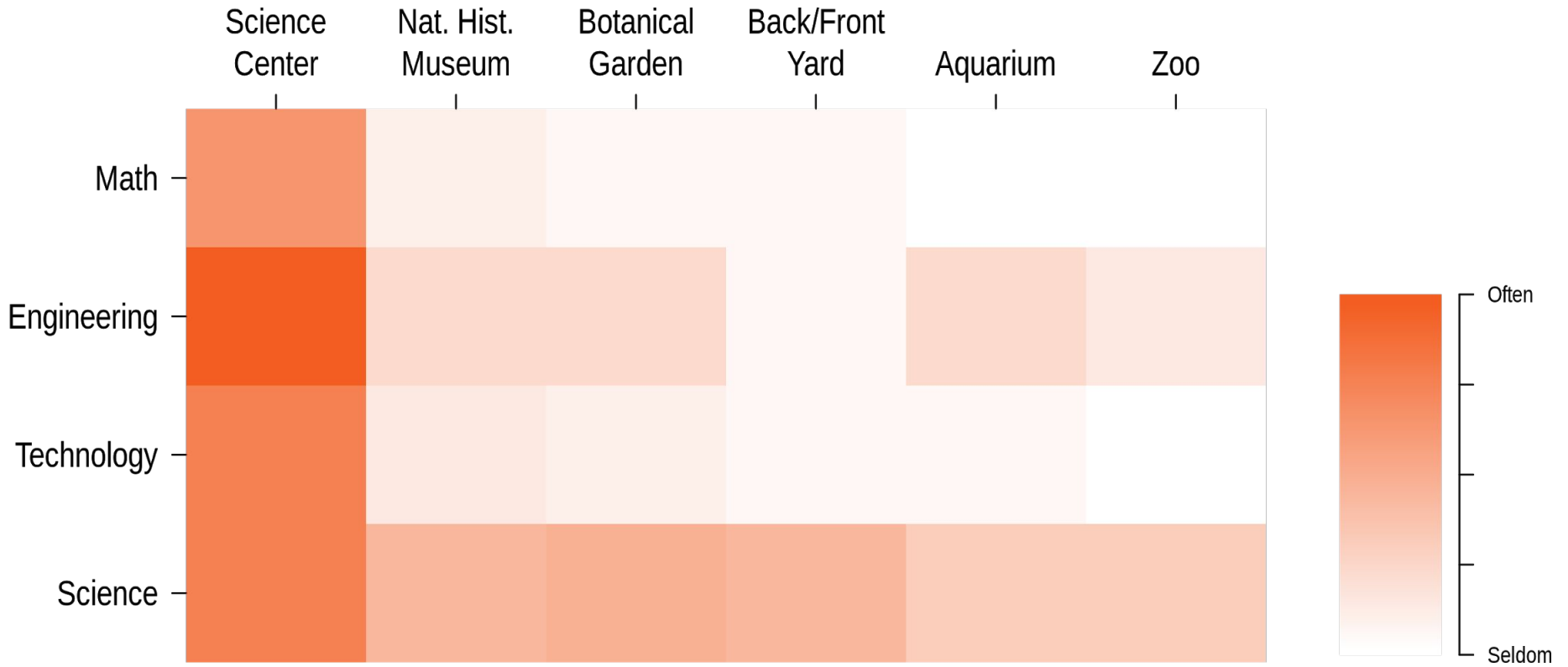
Museum

Botanical Garden
State National Park

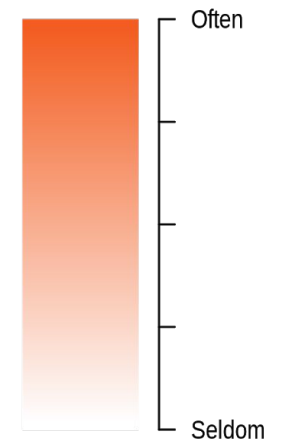
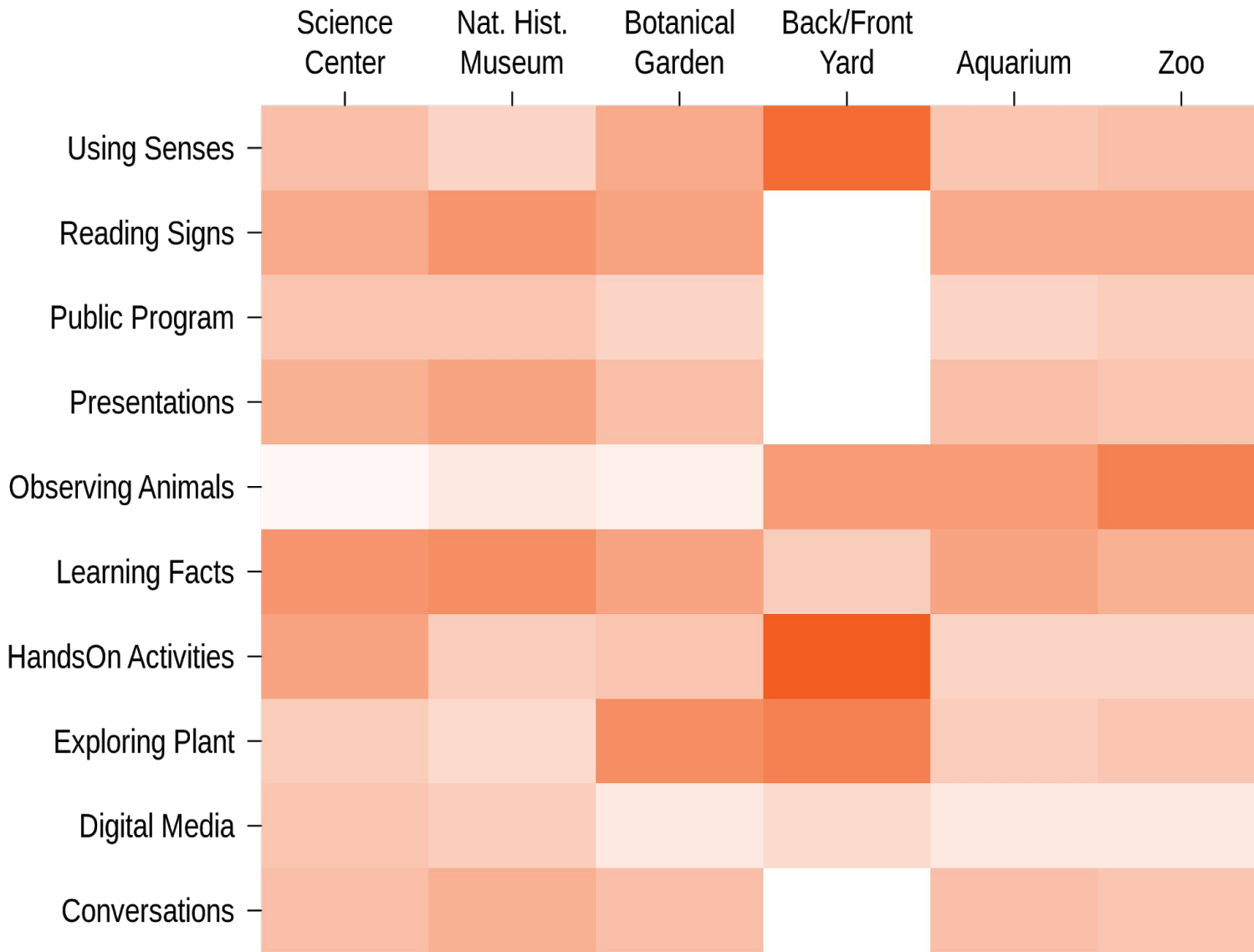
Science Center



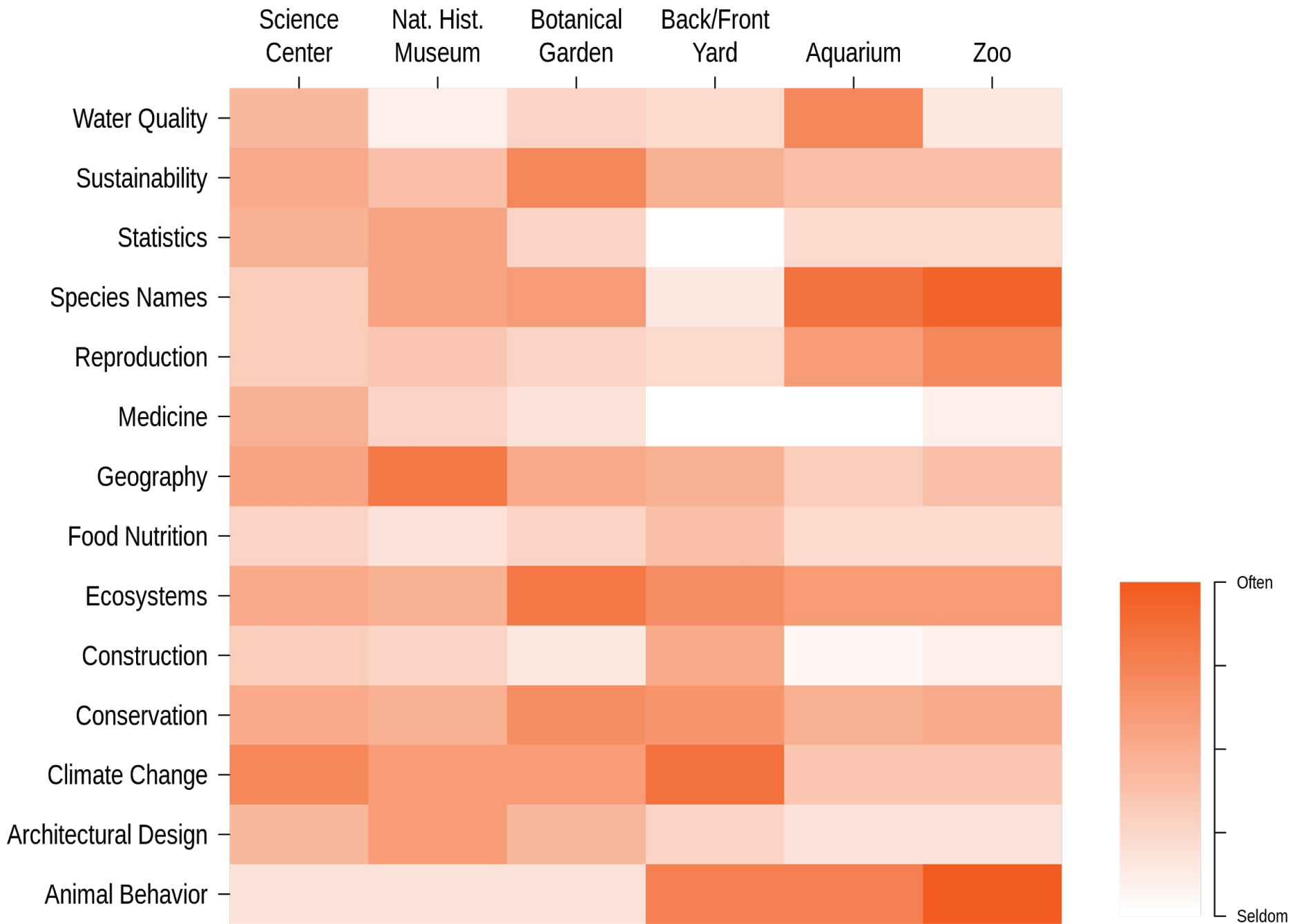
How
frequency of
encountering STEM
sets apart
zoos & aquariums



How
STEM topics
set apart
zoos & aquariums



How STEM
learning modes
set apart zoos &
aquariums



A reflection question for you:

1. What institutional agendas are you pursuing that might not be high on your visitors' minds?
2. What are the implications of the WZAM study to your specific setting?

WEBINAR SERIES

Why Zoos & Aquariums Matter: Part 2

May 2nd at 2 p.m. ET / 11 a.m. PT

www.wzam.org

The logo for new knowledge.org features the word "new" in white lowercase letters inside an orange rounded rectangle, followed by "knowledge.org" in a grey sans-serif font.

The logo for the Center for Research and Evaluation consists of a cluster of green dots of varying sizes, arranged in a pattern that suggests movement or data points.
CENTER FOR RESEARCH
AND EVALUATION

Lifelong Learning Group

The logo for Oregon State University is a shield-shaped crest containing a book, a plow, and a sheaf of wheat, with the year "1868" at the bottom.
Oregon State
University

The logo for garibaygroup features the word "garibay" in a bold, lowercase, orange sans-serif font, followed by "group" in a lighter, lowercase, grey sans-serif font.

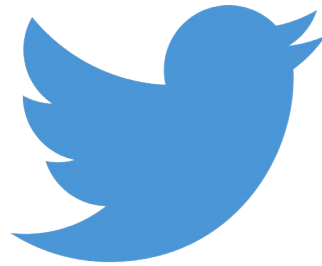
The logo for J. Sickler Consulting is a stylized green diamond shape composed of four smaller diamonds.
J. Sickler Consulting

The logo for the Association of Zoos & Aquariums features the text "ASSOCIATION OF ZOOS & AQUARIUMS" in a bold, uppercase, red sans-serif font, with a large ampersand at the end.

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