

**Learning Theory in  
Museums:  
Theorizing the role of  
**serendipity** in public  
engagement and learning of  
STEM (NSF grant #2516863)**

**February 25, 2026**

**2026 AISL Awardee Meeting**

**American Museum  
*of* Natural History**

# AGENDA



1. Your experiences with serendipity?
2. Lightning overview of our study
3. Your predictions? What might we find?
4. Discussion

# Your experience with serendipity?

Think about a moment in your life when you experienced something *serendipitous*: an unplanned or unexpected experience that led to a meaningful or valuable outcome (action, emotion, or behavior). Please share or write in the chat:

- a. What was the setting?
- b. What was the 'spark'?
- c. What was the 'valuable outcome'?

# what was the setting for your serendipitous moment?



# What are we studying?



Our project investigates how **unplanned** yet **meaningful** learning experiences that lead to a **valuable but unexpected action, emotion, or behavior** – termed *serendipitous moments* – can spark curiosity, deepen understanding, and broaden participation in informal science learning environments like museums.

# Why is this important?



Serendipity may be very important for learning! It has played a key role in the work of countless scholars & researchers. Examples of serendipitous discoveries include the well known (penicillin, radioactivity) but also the adhesive for Post-it Notes and new uses of Minoxidil.

Helps us explore a question we've long been thinking about and wondering about in our museum:

What happens when someone's curiosity is sparked?  
What sparks it?  
What happens NEXT?

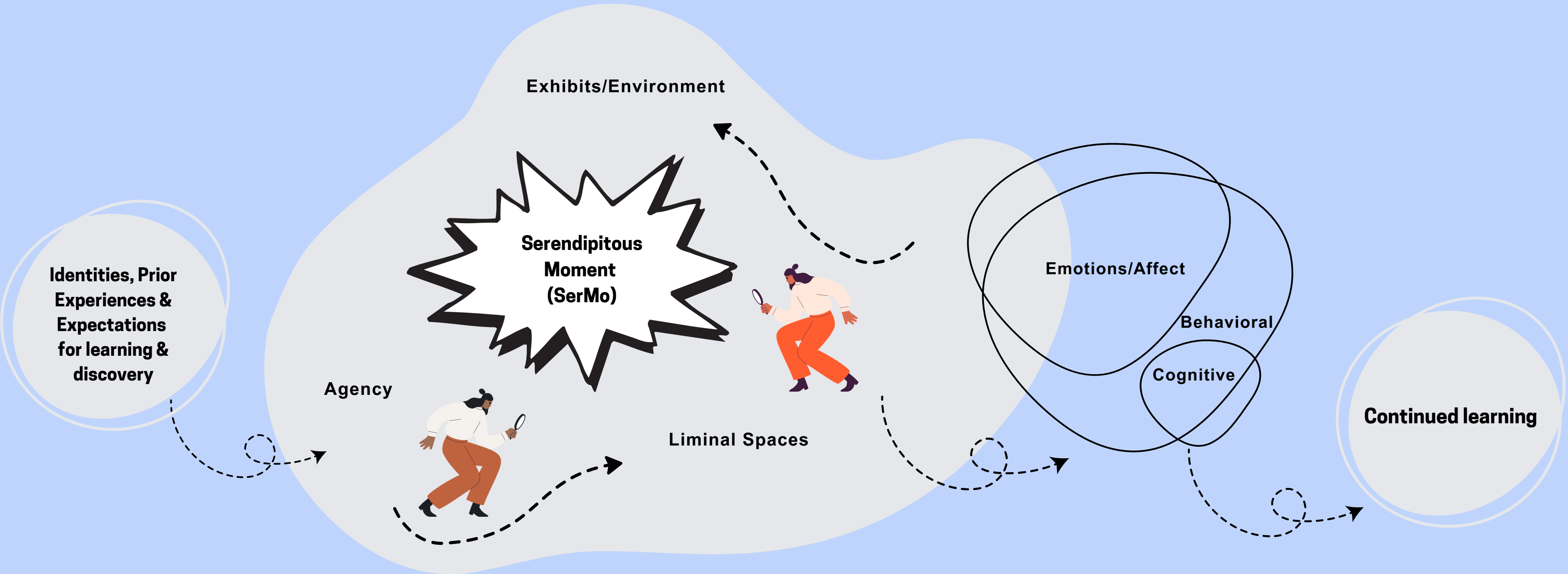
Serendipitous learning occurs when a learner encounters an insight by chance while having the background to recognize and the agency to act on it.

# Why are we studying serendipity in museums?

**Some research suggests that serendipitous moments happen regularly to all of us. What a great area to explore: are these moments common, or perhaps more rare?**

- Museum settings with their free-choice, interest driven, unstructured opportunities, may be ripe for serendipity for all kinds of learners
- If serendipity sparks scientific discovery and learning (or learning of all kinds); we want to know more about it through systematic study
- Learning more can help us design experiences to foster more serendipity and increase access to learning

# Our initial model



# How will we be studying these moments?

This is a **new area of research in museums** and there are **few existing examples** of instruments and methods for us to draw on.

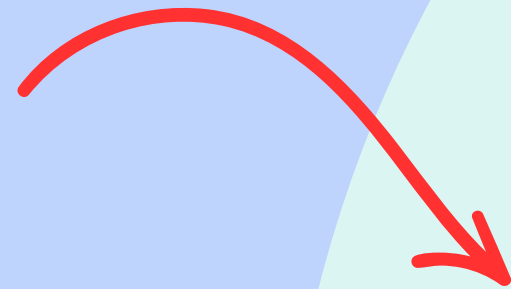
We will be piloting and testing out new versions in this study (surveys, ESM, interviews, potentially observations). From our “Museums and You” event we will contact participants for interviews.



**We are inviting frequent visitors to “Museums and You” a free visit and they will be asked to respond to a set of texted questions about their experience.**

# What do you predict?

As AISL researchers and informal learning experts, **you have knowledge about what sparks curiosity and interest in spaces, settings and exhibits.**



**Have you seen or observed moments or ‘triggers’ of serendipity in your informal settings?**

**What do you think we will find?**

# Thank you for your input!

If you notice any serendipitous experiences as you continue your work, please email examples or reach out to us! We love to hear these examples and learn from them!

## Project Researchers

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**Questions?:**

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