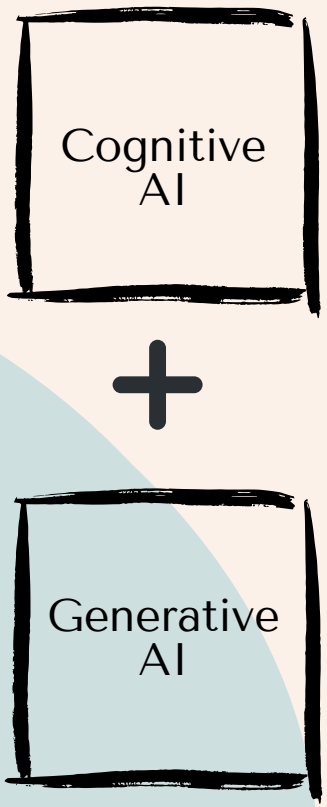
Self-Explanation in VERA

Learners can ask questions about VERA's internal workings, fostering trust and enhancing the learning experience.[3]



Acknowledgements

Smithsonian
Encyclopedia of Life
dilab design intelligence lab
Georgia Tech
SOUTH BDHUB
IBM
NSF

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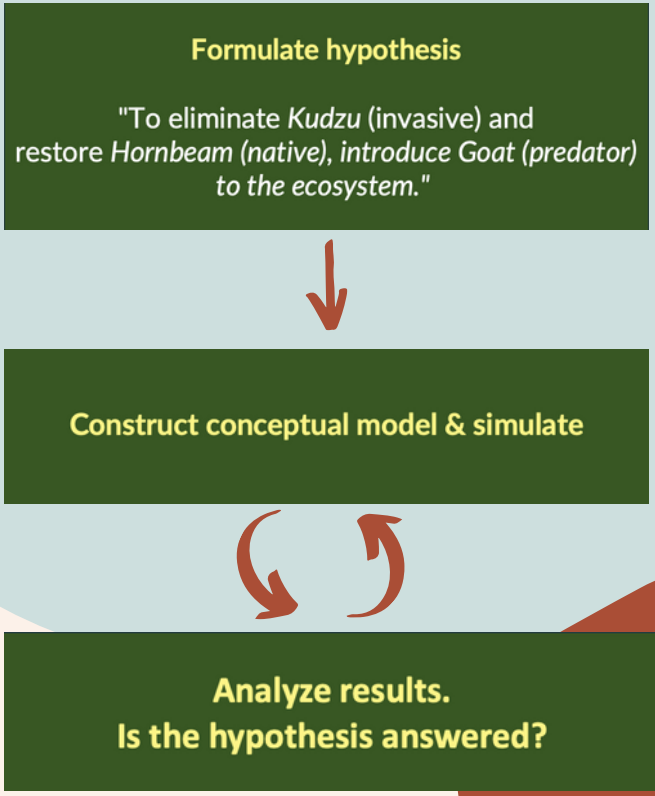
VERA



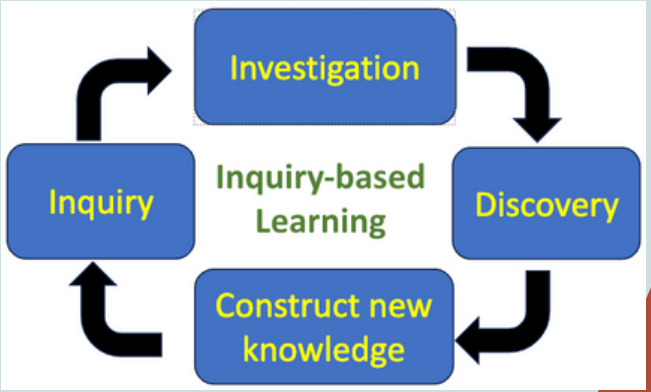
Virtual Experimental Research Assistant

Purpose

VERA guides learners in exploring **complex ecological models** through **interactive simulations**, offering personalized coaching and real-time feedback.[1]

It develops learners' modeling skills by breaking the process into three steps: **construction**, **parameterization**, and **simulation**.

How can a learner develop modeling as a skill?



Personalized Learning

VERA features an AI coach that analyzes each learner's modeling behavior to deliver tailored feedback.

By classifying a learner into 3 categories, the coach provides **adaptive metacognitive scaffolding** to refine their modeling skills

Learner	Feedback
Constructor	**Parametric**
Observer	**Construction**
Full-explorer	**Motivational**

Wheel Spinning

In closed domains, learners who struggle with getting the correct concept multiple times exhibit wheel spinning.

Q: How to identify wheel spinning when there is no single correct answer? **Ask students!** [2]

Students who quit and restart a problem are more likely to experience Wheel Spinning.

Students request help throughout the assignment, even late into their learning journey.