Notice, Record, Revisit

Explore the connections in a living system. Let learners choose how to explain what they discover.

This classroom adaptation is inspired by Nature-Nurture-Network; it is not a verified reproduction of a HILLS lesson.

The invitation

A tree is more than a tree. It connects with birds, insects, roots, fungi, soil and water. Invite learners to investigate a local place, represent its relationships and ask what might happen if one part changes. Adapt the complexity to your learners and setting.

Plan for access

Suggested time: two 35-minute sessions and a later revisit, or a longer inquiry. **Materials:** paper and pencils, plus a school-approved device if useful. No headset is required. Use a safe school-ground place or teacher-provided images, establish boundaries and follow local outdoor-learning procedures.

1 Notice systems, not just objects

Look for parts, patterns and relationships. What visits the flowers? What is happening in the leaf litter? How might roots, water and soil connect? Let students select a question worth returning to.

2 Separate observations from explanations

Record the date, conditions and evidence. “We saw bees visiting flowers” is an observation. “These flowers depend on these bees” is an idea to investigate. Sketch connections and mark what is still uncertain.

3 Make the relationships visible

Offer a choice: a mind map or food web, a stop-motion animation, a Scratch model or an immersive habitat. Students can represent a possible change, such as less rainfall, while clearly distinguishing their model from observed events.

4 Revisit and revise

Return after rain or at another time. Compare soil, insects or plants. What changed? What evidence challenges the first explanation? Add new observations and keep unanswered questions visible.

5 Share an explanation with an audience

Create a class gallery or nature archive. Students can narrate a tour, demonstrate an animation or explain a paper model. Include evidence, dates and open questions so viewers can follow the reasoning.

Make room for every learner

Assess the thinking, not the technical polish.

Offer drawing, spoken responses, photographs of nature, tactile models and collaborative roles. Provide indoor images when outdoor access is difficult. Start with a few connections, then grow toward food webs, feedback and human impacts. Keep student identities and private locations out of public work unless separately authorized.

Look for evidence of learning

Can learners identify parts of a system, explain a connection using an observation, distinguish evidence from a prediction and revise an explanation? A polished animation is not evidence of understanding on its own. Ask students what their representation leaves out.

Optional teacher AI prompts

Use only a school-approved tool with anonymous information. Do not upload student identities, private locations or restricted cultural knowledge. Check ecological accuracy, access and safety before using any output. These prompts support teacher planning; AI is not required.

1 Plan an open-ended investigation

“Help me adapt a safe nature-systems inquiry for [age range and access needs]. Learners will explore parts, connections and change at [general setting]. Offer paper, animation, coding and optional VR choices, plus an indoor alternative. Do not invent observations. Identify what I must check for safety, accessibility and ecological accuracy.”

2 Build an observation record

“Create a simple observation sheet with date, conditions, parts of the system, arrows for possible connections, evidence, questions and space for revisions. Include drawing and oral-response options. Use fallen leaves, decomposers and soil nutrients only as a model to investigate, not as a claim about our site.”

3 Strengthen reflection

“Using this anonymous summary [insert], suggest questions that help learners test their model. What might change if a pond became drier? What observations would we need before drawing conclusions? Keep uncertainty visible and do not claim causation without evidence.”

A research connection, with limits

O'Rourke describes ongoing university-linked action research into student engagement and creativity through student-created immersive VR storytelling. Nature-Nurture-Network is the broader educational framework. The research outcomes have not been independently reviewed for this guide. The related studies offer context, but neither evaluates this guide or her curriculum. Read the iVR science study and the immersive narrative study.

Choose a way to create

Start with one tool, or with paper. Learners do not need every app.

Colleen suggested the options below. Free access and feature limits vary by platform, plan and school use. Check licensing, age requirements, accessibility and privacy before adoption. Links checked October 24, 2026.

Draw and connect: paper or Ayoa

A paper mind map is a complete option. Ayoa offers a limited free plan; school-use licensing needs checking.

Animate a process: Stop Motion Studio

Stop Motion Studio can help students show changes through a sequence of images, such as a model of pollination. Check the version, device and current pricing; do not assume every edition or feature is free.

Code a model: ScratchJr or Scratch

ScratchJr and Scratch provide starting points for stories, animations and interactive models. Choose a level that fits learners' experience. Check installation, account and sharing requirements with your school.

Build an immersive environment

Delightex Edu advertises a free Basic plan with limited creation features. eVR Classroom is another option Colleen suggested; free access has not been established. Check available features and school licensing before planning around either tool.

Explore an example: Pollinator Park

Pollinator Park is an interactive environment to explore and discuss, not a student creation tool. Use it to ask how a digital experience explains ecological relationships, then let learners design their own representations.

People behind the inspiration

Colleen O'Rourke and HILLS Christian Community School students; Cavan Newble, Nature Science Educator; Dr Paul Unsworth, Charles Sturt University, formerly University of South Australia; and Rosanna Cotino, EdgedVR. Roles and contributions are credited from Colleen's written account.

The activities and ecological examples in this guide are suggestions for adaptation, not claims that students completed these exact tasks.

Champions of Learning | Colleen's published award profile