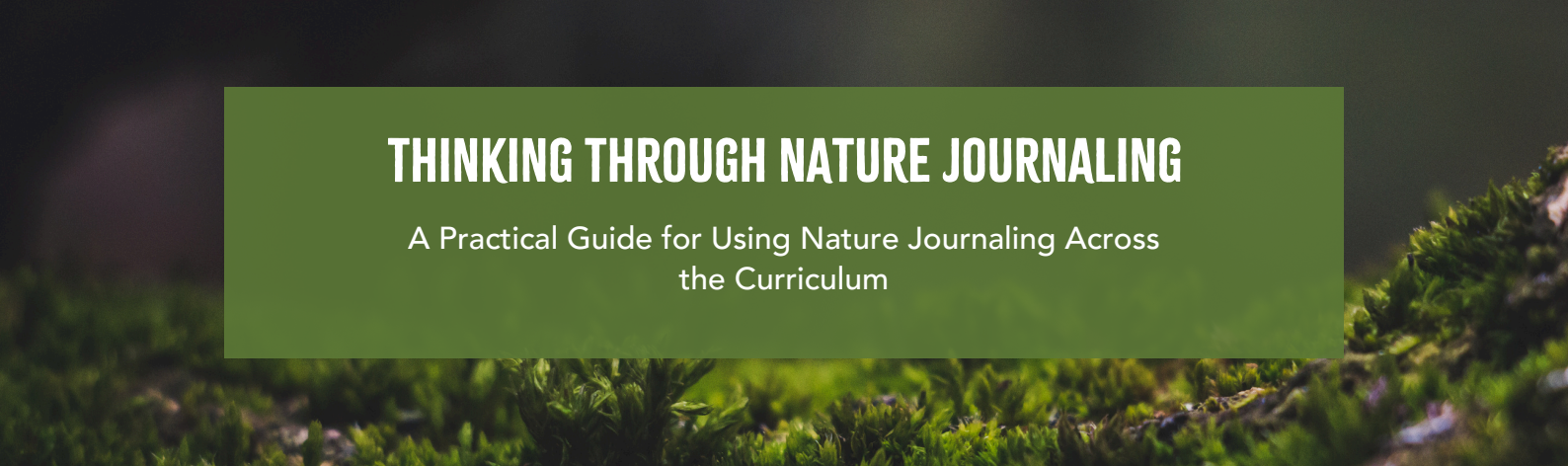




THINKING THROUGH NATURE JOURNALING

A Practical Guide for Using Nature Journaling Across
the Curriculum

WHY NATURE JOURNALING BELONGS ACROSS THE CURRICULUM

Nature journaling is often viewed as a one-time activity, something educators try during a science unit or an outdoor learning day before moving on to the next topic. While these experiences are valuable, nature journaling has the potential to become much more than an occasional activity.

At its heart, nature journaling is a tool for learning and thinking.

Whenever possible, the outdoors can provide an authentic setting for students to slow down, observe carefully, ask thoughtful questions, and make meaning from what they notice. These experiences can foster curiosity, deeper observation, and a stronger connection to the world around them.

The Nature Journaling Thinking Framework provides a simple framework for making this thinking visible. Through words, pictures, and numbers, students communicate what they notice, the questions they ask, and the connections they make. These habits of observation and inquiry become powerful tools for learning that extend far beyond outdoor education.

While the richest nature journaling experiences begin outdoors, the thinking students develop does not have to stay there. Once students learn to observe carefully, wonder deeply, and make connections, they can apply these same habits across the curriculum.

Imagine students using this approach to investigate simple machines, explore celebrations and traditions, collect and represent mathematical data, examine historical artifacts, apply artistic techniques, write poetry, or explore patterns in music. The subject changes, but the thinking process remains.

Throughout this guide, you will see examples of how nature journaling can support different curriculum areas without becoming another subject to teach. The goal is not to add more activities to an already busy school day, but to consider how observation, questioning, representation, and reflection can enrich the learning experiences you are already creating.

Thinking through nature journaling isn't another subject to teach. It's a way of helping students think more deeply about every subject they learn.

HOW TO USE THIS GUIDE

Think of this guide as a starting point for thinking about how nature journaling can support learning across the curriculum. The ideas are intentionally adaptable because effective nature journaling responds to the learners, the place, the season, and the learning goal.

This guide is not a collection of lesson plans. Instead, it offers examples of how the Nature Journaling Thinking Framework can be adapted to different subjects and learning goals.

Each example follows a consistent structure:

- **How nature journaling can support it:** An overview of how nature journaling connects to the subject or learning goal.
- **Students might explore:** Questions and possibilities to help students observe, wonder, and make connections.
- **Words • Pictures • Numbers:** Ways students might make their thinking visible in their journals.
- **Ask yourself:** Planning questions to help educators adapt the approach to their own students and curriculum.
- **Why it works:** A brief explanation of why nature journaling is a useful tool for this area of learning.
- **Pine & Ponder Tip:** A practical teaching insight from Pine & Ponder Outdoors.

Use these examples as inspiration, not prescriptions. Adapt the ideas to your students, curriculum, learning environment, and the opportunities available in the places where you teach.

The goal is not to follow a particular lesson. It is to begin seeing how the habits of observation, wondering, and making thinking visible can become part of everyday learning.

BEFORE YOU GET STARTED

One of the strengths of nature journaling is that there is no single "right way" to create a journal entry. Every student notices different details, asks different questions, and communicates their thinking in different ways.

A nature journal should never be judged by artistic ability. Instead, it can be viewed as a window into student thinking. Some students may communicate primarily through writing, while others may rely on sketches, diagrams, labels, measurements, or data. The goal is not to create a beautiful page. The goal is to make thinking visible.

At the same time, effective nature journaling begins with a clear purpose.

Before introducing nature journaling, ask yourself:

- What do I want students to understand?
- What thinking do I want students to practise?
- What could students observe, question, or investigate?
- How could words, pictures, and numbers help students communicate their thinking?

The learning goal might involve collecting and representing data in mathematics, developing descriptive language in Language, exploring artistic techniques in Visual Arts, investigating how something works in Science and Technology, or reflecting on an experience in Health.

Once the learning goal is clear, consider how nature journaling could naturally support the learning that is already taking place. Nature journaling does not need to become a separate activity or another

subject to teach. It can provide students with a way to observe, explore, represent, and communicate their thinking within the curriculum.

As educators, it can be tempting to explain concepts immediately. Nature journaling encourages us to pause. Give students time to observe before explaining, wonder before researching, and develop ideas before drawing conclusions. Careful observation creates opportunities for deeper questions and more meaningful learning.

Most importantly, give students room to communicate what they notice in their own way. A journal entry does not need to look a certain way to demonstrate learning. When students have a clear purpose and the freedom to use words, pictures, and numbers, their journals can become a powerful record of how they are thinking.

THE NATURE JOURNALING THINKING FRAMEWORK

Nature journaling doesn't begin with drawing.

It begins with paying attention.

At the heart of nature journaling is a simple thinking framework developed by John Muir Laws and Emilie Lygren in their book *How to Teach Nature Journaling*. The framework encourages students to slow down, observe carefully, ask thoughtful questions, and make connections before searching for answers.

Rather than telling students what to think, it provides a structure for developing curiosity and understanding. While the framework was developed through nature journaling, these habits of thinking can extend well beyond the outdoors and support learning across the curriculum.

The subject may change, but the thinking process can remain the same. Students might observe a natural object, investigate a simple machine, explore a celebration, examine a work of art, listen to patterns in music, or reflect on an experience. In each case, students can begin by paying attention, asking questions, and making connections.

It begins with three guiding questions:

I Notice...

Observation is the starting point.

Students take time to look, listen, and pay attention before making assumptions or searching for answers. The goal is to notice what is actually there.

They might ask themselves:

- What do I notice?
- What stands out?
- What patterns, colours, textures, shapes, sounds, or details do I notice?
- What might I have missed at first?

I Wonder...

Observation creates opportunities for curiosity.

Once students have had time to notice, their observations can lead to questions and possibilities for further investigation.

They might ask:

- Why might this happen?
- How does it work?
- What else do I want to understand?
- What could I investigate further?

It Reminds Me Of...

Connections help students make meaning from what they notice.

Students can connect new observations to prior knowledge, personal experiences, other learning, or the world around them.

They might think about:

- Something they have learned before.
- A personal experience.
- Another curriculum area.
- Something they have observed elsewhere.
- A real-world problem or situation.

These three prompts help students move beyond simply collecting information. They encourage the habits of observation, inquiry, and connection that support deeper learning.

Making Thinking Visible

Nature journaling also gives students different ways to communicate their thinking. **Words, pictures, and numbers** are not separate steps in the framework. They are different ways students can represent what they notice, wonder about, and understand.

Words allow students to describe observations, record questions, label diagrams, explain ideas, and reflect on their learning.

Pictures help students communicate visually through sketches, diagrams, maps, symbols, and labelled drawings that can reveal details that are difficult to express with words alone.

Numbers allow students to measure, estimate, compare, collect and represent data, identify patterns, and use mathematics to describe what they observe.

Students do not need to use all three in every journal entry. The appropriate combination depends on the learner, the learning goal, and what they are observing or investigating.

Together, I Notice, I Wonder, It Reminds Me Of, and Words, Pictures, and Numbers create a flexible framework that can be adapted across subjects, grade levels, and learning environments.

The topic changes. The thinking process remains.

OBSERVATION BEFORE EXPLANATION

Too often, we ask students to identify, classify, explain, or solve before they've had the opportunity to truly observe. We rush to answers before students have had time to notice the details, ask their own questions, or make meaningful connections.

Nature journaling encourages us to pause.

By giving students time to observe before explaining, we create space for curiosity to develop. Their questions can become richer, their thinking more visible, and their understanding more meaningful because learning begins with what they notice and wonder about.

This does not mean that explanation or direct instruction has no place. Rather, it invites us to consider when explanation is most useful. Sometimes students benefit from having time to develop their own observations and ideas before an explanation is introduced.

Observation isn't simply the first step in learning. Observation is learning.

When students learn to notice deeply, they begin thinking more deeply.

NATURE JOURNALING IN ACTION

Rather than asking:

"What subject am I teaching?"

Ask:

"What is my goal as an educator?"

Start with the learning goal. What do you want students to understand, practise, explore, or communicate?

Once the goal is clear, ask:

"How could nature journaling support that goal?"

Nature journaling does not need to become a separate lesson or activity. It can be a tool for helping students observe, question, investigate, represent, and communicate their thinking within the learning that is already taking place.

For example, your goal might be for students to:

- develop descriptive language
- collect and represent mathematical data
- understand how something works
- apply an artistic technique
- develop listening skills
- explore a cultural tradition
- reflect on their own well-being

The learning goal comes first. Nature journaling is the tool that can help students get there. The examples that follow demonstrate how the Nature Journaling Thinking Framework can be adapted across different curriculum areas. The subject and learning goal may change, but the underlying thinking process remains: Observe, Wonder, Connect, Make Thinking Visible.

SCIENCE & TECHNOLOGY

Exploring Simple Machines

How nature journaling can support it

Nature journaling gives students an opportunity to observe simple machines before explaining how they work. Students can look closely at the materials, structure, and movement of a machine, then use their observations to ask questions and make connections to other machines they encounter.

Students might explore:

- What materials are being used?
- What do you notice about how the machine is constructed?
- How does it work?
- What other machines does it remind you of?
- How could the nature journaling framework support students in designing or creating their own simple machine?

Ask yourself:

- What is my goal for this unit?
- What do I want students to notice before I introduce the explanation?
- Where could observation, questions, and student-generated ideas fit naturally into the learning?

Words • Pictures • Numbers

Students might use their journals to:

- Record observations, describe how the machine works, and record new vocabulary.
- Sketch the machine, label its parts, and illustrate how the parts work together.
- Measure or compare parts, count components, and record observations about movement or distance.
- Design, sketch and label ideas for their own simple machine.

Why it works

Nature journaling gives students a way to observe how something works before they are asked to explain it. By examining structure, movement, materials, and function, students can develop their own ideas and questions about simple machines. This makes scientific concepts more meaningful because students are building understanding from what they notice, rather than simply receiving an explanation.

PINE & PONDER TIP

Resist the urge to explain too soon.

Students often notice important details before they understand what those details mean. Giving learners time to observe first encourages richer questions, deeper thinking, and more meaningful scientific inquiry.

When students have an opportunity to develop their own ideas and theories before receiving explanations, they become more engaged in the learning process and are more likely to remember what they discover.

SOCIAL STUDIES

Holidays Around the World

How nature journaling can support it

Nature journaling can give students a way to explore cultural celebrations through careful observation and inquiry. Rather than beginning with explanations, students can first notice traditions, symbols, foods, clothing, music, and other details, then use their observations to ask questions and make connections.

Students might explore:

- What traditions, symbols, colours, foods, clothing, or music do you notice?
- What similarities and differences do you observe?
- What questions do these observations raise?
- What does this celebration remind you of?
- What values or traditions are important to families and communities?

Words • Pictures • Numbers

Students might use their journals to:

- Record observations and new vocabulary.
- Sketch symbols, clothing, decorations, or other meaningful details.
- Compare similarities and differences.
- Organize observations using simple charts, tables, or graphs.

Ask yourself:

- What is my goal for this learning?
- What could students discover through observation before I provide an explanation?
- How can I create opportunities for students to learn about celebrations respectfully and avoid making assumptions about cultures or traditions?
- What connections could students make to their own experiences and communities?

Why it works

Nature journaling encourages students to slow down, look closely, and notice details before drawing conclusions. In Social Studies, this creates opportunities to explore traditions, symbols, and community practices with curiosity and care. Students can use their observations to ask questions,

recognize similarities and differences, and develop a deeper understanding of the people and communities they are learning about.

PINE & PONDER TIP

Begin with one celebration before introducing another.

Taking time to explore one celebration allows students to notice details, develop questions, and build understanding before making comparisons. As additional celebrations are introduced, students can begin to recognize both differences and similarities between traditions.

LANGUAGE

Poetry

How nature journaling can support it

Nature journaling gives students a place to gather the observations, sensory details, words, and personal connections that can become the raw material for poetry. By slowing down and noticing the world around them before they begin writing, students can discover that strong writing often begins with careful observation.

Students might explore:

- What colours, shapes, textures, sounds, or movements do you notice?
- What details might others overlook?
- What words or phrases could describe what you observed?
- What does your observation remind you of?
- What memories, feelings, or ideas does it bring to mind?
- How could an observation become an image, comparison, or poetic idea?

Words • Pictures • Numbers

Students might use their journals to:

- Collect descriptive and sensory vocabulary.
- Record interesting observations or phrases.
- Sketch details that inspire their writing.
- Notice patterns, repetition, measurements, or other details that could contribute to their writing.

Ask yourself:

- What is my goal for this poetry experience?
- What could students observe before they begin writing?
- How can I give students time to gather their own ideas and language?
- What poetry form or writing approach best supports my learning goal?

Why it works

Nature journaling gives students a place to collect ideas before they are expected to turn them into writing. Observation can provide authentic sensory details, descriptive language, questions, memories, and connections that give poetry something meaningful to grow from.

PINE & PONDER TIP

Strong poetry begins with strong observation.

Give students time to notice before asking them to write. Simple poetry forms can provide an accessible starting point, while different forms and approaches can be introduced as students become more comfortable using their observations as inspiration.

MATHEMATICS

Fractions

How nature journaling can support it

Nature journaling can give students authentic opportunities to use fractions to describe and communicate what they observe. Instead of encountering fractions only through worksheets or manipulatives, students can use mathematical thinking to describe parts of real objects, spaces, and patterns in the world around them.

Students might explore:

- What parts make up the whole?
- What fractions could describe something you observe?
- How might you estimate a fraction before measuring?
- How could you represent a fraction using words, pictures, and numbers?
- How might two people arrive at different estimates?
- Where else do fractions appear in the world around us?

Words • Pictures • Numbers

Students might use their journals to:

- Describe and explain their estimates.
- Sketch and label parts of a whole.
- Record fractional representations.
- Compare observations using mathematical language.
- Organize observations using simple tables or graphs.

Ask yourself:

- What is my goal for this math learning?
- Where could students encounter a fraction naturally rather than being given one?
- What could students estimate before they measure or calculate?
- How can students use words, pictures, and numbers to explain their mathematical thinking?

Why it works

Nature journaling gives students a reason to use mathematics to describe something they can actually see and investigate. Estimating, representing, comparing, and explaining fractions can become part of observing the world rather than an isolated mathematical exercise.

PINE & PONDER TIP

Encourage estimation before measurement.

Nature rarely divides itself into perfect halves or quarters. Giving students an opportunity to estimate first creates space for mathematical reasoning, discussion, and justification before they look for a precise answer.

VISUAL ARTS

Applying Artistic Techniques Through Nature Journaling

How nature journaling can support it

Nature journaling gives students an authentic context for applying the artistic techniques they are learning in class. By observing closely before they begin drawing, students can use line, shape, colour, texture, value, pattern, and other techniques to communicate what they see and make their thinking visible.

Students might explore:

- What lines, shapes, colours, textures, or patterns do you notice?
- How does light affect what you see?
- What artistic technique could best communicate a particular detail?
- How does looking more closely change what you notice?
- How can artistic choices help communicate an observation?
- What happens when you experiment with different materials or techniques?

Words • Pictures • Numbers

Students might use their journals to:

- Describe artistic techniques and observations.
- Label colours, textures, patterns, or other details.
- Experiment with line, shading, colour, and different artistic media.
- Sketch and annotate observations.
- Measure or compare proportions, sizes, distances, or repeating patterns.

Ask yourself:

- What artistic technique or skill do I want students to practise?
- What could students observe that would give them an authentic reason to use that technique?
- How can I encourage students to focus on observation rather than artistic perfection?
- How can students use their artwork to communicate what they have noticed?

Why it works

Visual arts and nature journaling share the same foundation: careful observation. When students slow down and pay attention to line, shape, colour, texture, light, and pattern, they have an authentic reason to practise artistic techniques while deepening their understanding of what they see. The goal is not simply to create beautiful artwork, but to use artistic techniques as a tool for observation and communication.

PINE & PONDER TIP

Nature journaling isn't about creating perfect drawings. It's about learning to see more.

Encourage students to focus on careful observation rather than artistic perfection. As students spend more time looking, their drawings often become more detailed because they are noticing more. Drawing is a learned skill, and every sketch provides an opportunity to practise, observe, and make thinking visible.

MUSIC

Exploring Nature Through the Senses

How nature journaling can support it

Nature journaling gives students an opportunity to use their senses to observe and interpret the natural world while exploring musical concepts such as rhythm, tempo, pitch, dynamics, and pattern. Careful listening and observation can help students recognize patterns, movement, and relationships in their surroundings while developing their listening skills.

Students might explore:

- What sounds do you hear?
- What rhythms or repeating patterns do you notice?
- How would you describe the tempo, pitch, or dynamics of different sounds?
- What natural or human-made sources are creating the sounds you hear?
- What colours, shapes, textures, or movements do you notice as you listen?
- How might the sounds and patterns of a place change at another time of day or during another season?

Words • Pictures • Numbers

Students may use their journals to:

- Describe sounds and sensory observations using musical vocabulary such as rhythm, tempo, pitch, and dynamics.
- Sketch their surroundings, create sound maps, use symbols to represent sounds or movement, and illustrate patterns they notice.
- Count different sounds, estimate how often sounds repeat, compare natural and human-made sounds, or record measurable observations such as temperature or wind speed.

Ask yourself:

- What musical concept do I want students to explore?
- What could students hear or observe that would give them an authentic reason to explore that concept?
- How can I encourage students to listen before explaining what they are hearing?
- How could students use words, pictures, and numbers to communicate their observations?

Why it works

Music and nature journaling both begin with careful observation. By slowing down and paying attention to rhythm, tempo, pitch, dynamics, repetition, movement, and pattern, students can begin to recognize musical ideas in the world around them. Using multiple senses also gives students a richer way to gather information and communicate their observations through words, pictures, and numbers.

PINE & PONDER TIP

Nature is experienced through all of our senses.

While sight is often our first way of observing, listening, touch, and smell can reveal details we might otherwise overlook. A Sound Map can be a useful way to develop careful listening, while encouraging students to record what they hear, see, smell, and feel can create a richer picture of a place.

HEALTH

Nature Journaling for Mindfulness and Well-Being

How nature journaling can support it

Nature journaling gives students an opportunity to slow down, pay attention to the present moment, and reflect on their experiences. Through careful observation of their surroundings and their own responses, students can develop self-awareness and explore how spending time in nature can support their overall well-being.

Students might explore:

- What is happening around me?
- What do I hear, see, smell, or feel?
- What small details do I notice when I slow down?
- How does my experience change when I take time to observe?
- What helps me feel calm and focused?
- How does spending time outdoors affect my thinking or awareness?

Words • Pictures • Numbers

Students may use their journals to:

- Describe what they observe, record reflections, and explore how they feel before and after spending time observing.
- Sketch their surroundings, draw details that capture their attention, or use colour to represent the mood of a place.
- Count different sounds or living things, estimate the amount of time spent observing, or compare observations from different visits.

Ask yourself:

- What is my goal for this learning?
- How can I create space for students to slow down and be present?
- How can students reflect on their experience without feeling that there is a right or wrong response?

- How can I make mindfulness and observation a regular part of learning rather than an occasional activity?

Why it works

Health education encourages students to develop self-awareness, emotional regulation, and healthy habits that support overall well-being. Nature journaling creates intentional opportunities for students to slow down, observe, and reflect on their experiences. By making space for observation and reflection, students can practise mindfulness while developing a deeper awareness of themselves and their surroundings.

PINE & PONDER TIP

Mindfulness doesn't have to take a long time.

Start small. For some students, even five minutes of quiet observation can feel like a long time. Beginning with **30 seconds, one minute, or two minutes** can be enough to introduce the practice. As students become more comfortable with slowing down and paying attention, the length of time can gradually increase.

Regular, short opportunities for observation can be more meaningful than occasional longer sessions. The goal isn't to have students sit quietly for a prescribed amount of time. The goal is to give them opportunities to pause, notice, and reflect in a way that feels manageable for them.

It is also important to give students **choice about what they share**. Not every journal entry needs to be read by a teacher or shared with the class. Some observations and reflections may be personal, and students should have a way to keep those entries private.

One simple strategy is to give students a paper clip they can use to clip a page when they want it to remain private. **When a page is clipped, it is off limits, including to the teacher.** This establishes a clear boundary and helps students understand that their journal can be a space for honest observation and reflection, not simply something being assessed.

A journal should be a place where students can think freely, not a place where they feel they are always being watched.

BRINGING IT ALL TOGETHER

Nature journaling may begin with an outdoor experience, but throughout this guide we've explored something bigger.

Nature journaling is a tool for learning and thinking.

The learning goal comes first. As educators, we can then ask how nature journaling might help students reach that goal by giving them opportunities to observe carefully, ask questions, make connections, and communicate their thinking.

We've seen how the same thinking framework can support scientific inquiry, mathematical reasoning, descriptive writing, artistic observation, musical listening, cultural understanding, and personal reflection.

The subject changes. The thinking remains.

Students can learn to:

- slow down and pay attention
- observe carefully
- ask thoughtful questions
- make connections to prior knowledge and experience
- communicate their thinking through words, pictures, and numbers

These habits can support deeper learning across the curriculum.

Whenever possible, the outdoors can provide an authentic setting for observation and inquiry. But the value of the framework does not depend on being outside. The habits students develop through careful observation can be used wherever learning takes place.

The goal is not to add another activity to an already busy curriculum. It is to consider how nature journaling can become a tool within the learning that is already happening.

Start with your goal as the educator.

What do I want students to understand, practise, explore, or communicate?

Then ask:

How can nature journaling help students get there?

PINE & PONDER REFLECTION

The goal isn't to create better nature journalers.

The goal is to help students become better observers, deeper thinkers, and more engaged learners.

WANT TO SEE IT IN ACTION?

Reading about nature journaling is one thing. Experiencing it with your students is another.

If you'd like to see how nature journaling can support observation, inquiry, and curriculum-connected learning in practice, explore Pine & Ponder's Student Experiences and Professional Learning opportunities.

Whether you're looking for a hands-on experience for your students, professional learning for educators, or support integrating nature journaling into your teaching, Pine & Ponder can help you take the next step.

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