



NJAS Guide Notes

Exploring Nature Through Inquiry & Visible Thinking

Welcome! This guide is for adults who want to build a nature journaling practice of their own or lead one for others. You may be a parent or grandparent, a docent or nature center volunteer, a garden club or library program leader, a homeschool educator, or someone who simply wants to see the natural world more clearly. You do not need to be a scientist or an artist. You just need curiosity and a willingness to look again.

Your Role As A Guide

As an adult journaler, you are both the learner and the guide. Nature journaling builds skills of true observation: looking closely, asking honest questions, connecting what you see to what you know, and measuring change over time. When you journal on your own, use the four routine questions to guide yourself through each page. When you lead a group, point attention to nature's details, ask the question, wait, and let each person make their own discoveries. You do not need to know all the answers. The same question words appear at the station activity flag, on the art placemat and on every journal page.

The Session Frame

Every session follows the same five steps, whether you journal alone or with a group. Only the unit and the specimen (the leaf, rock, flower, or other piece of nature being studied) change. Recommended times for each approach are listed on the practice pages.

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|---------------------------|---|
| Step 1
GATHER | Settle into the same spot each time. If you are leading a group, point out the boundaries and the station flag(s), and agree on one attention signal, such as a raised hand. If you are journaling on your own, take one quiet minute to look and listen before you begin. Then read the unit's question aloud. |
| Step 2
EXPLORE | Visit one or two garden flags, using the prompts on the Quick Prompt card. Stay longer than feels necessary at each one, since the best details often appear on the second or third look. |
| Step 3
CREATE | At the placemat art table, try one drawing technique. Work slowly, draw what you actually see rather than what you expect to see, and let the drawing be a record rather than a finished artwork. |
| Step 4
RECORD | Fill in the metadata box at the top of the page: the date, time, place, and weather. Scientists and naturalists record these details with every observation. Then add words, numbers, and pictures about what you saw, keeping what you observed separate from what you think it means. |
| Step 5
SHARE | Share one thing you noticed, wondered, connected or measured with the group, a journaling partner or a family member. When journaling alone, write one new question to return to next time. |

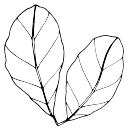
Guiding Moves

Use these moves on any flag, placemat or journal page, for yourself or with a group.

Moves or Actions	What you do	What you might say
Ask the Unit Questions	Read the unit's question exactly as written, for yourself or for the group.	"What do you notice?"
Show how first	When leading, share your own observation out loud so others hear what careful looking sounds like.	"I notice the veins on this leaf branch like a river."
Wait	Allow ten seconds of quiet before anyone speaks. The first look is rarely the most detailed.	
Ask for proof	Point to the exact place on the specimen or the drawing that supports an idea.	"Where do you see that?"
Repeat and stretch	Restate an idea, then add one question that takes it further.	"You see three colors. Where does each one begin and end?"
Connect	Link an observation to another person's idea, an earlier page, or another season.	"How is this different from what we saw last month?"
Step back	Let each journaler choose what to study next and how to record it.	"What will you look at next?"

Routines That Keep The Group Together

- **Use One Attention Signal:** Agree on one signal, such as a raised hand, so the group can regather without raising voices.
- **Pause, Look, Listen:** When the signal is given, everyone pauses, looks up, and listens for the next direction.
- **Journaling Partners:** Pair up to compare observations and look out for one another on the trail.
- **One Task at a Time:** Give one clear prompt and a time frame, such as "Ten minutes at this flag."
- **Move as a Team:** Move between flags together so no one misses the next prompt.
- **Quiet Outdoor Voices:** Keep voices low so everyone can hear birds, wind, and insects, and so wildlife stays nearby.



Outdoor Classroom & Care

Before You Go

- Walk the space first and look for anything unsafe: spines or thorns, water, stinging insects, uneven ground, and plants that should not be touched.
- When leading a group, use the flags as boundaries and agree on a meeting spot and a time to regather.
- Pack tools (pencils, magnifiers, rulers, a field guide) in a tray or bag at each flag, or keep them together in your own journaling kit.

Caring for Nature and Each Other

- **Look First, Ask Second:** Look closely before touching, and ask the site host before collecting any natural item.
- **Collect with Care:** Follow local site rules on what you can gather. Take only a single small piece, never a whole handful, and never from protected areas.
- **Photograph Living Wildlife:** Photograph insects and small animals instead of capturing or handling them.
- **Magnifiers Point Down:** Be careful where magnifying lenses point so they don't focus sunlight. This action is a fire hazard.
- **Leave No Trace:** Return rocks, sticks, and logs exactly where you found them, and stay on marked paths.
- **Plan for the Elements:** Bring water and sun protection, dress for the weather, and have an indoor option for extreme conditions.
- **Count Your Gear:** Check that every tool is accounted for before moving to a new area.
- **Wash Hands:** Wash your hands thoroughly after handling anything from the outdoors.
- **Model for Others:** When journaling with children or new journalers, your care for nature shows them how to care for it too.

When Learners Get Stuck

If a learner says or does this	Try saying
"I'm not an artist." "I've seen this a hundred times." "I don't have a question." States an assumption as a fact Writes a number by itself Wants to collect a living thing	• "Nature journaling is drawing to see, not to make art. Start with one shape and one label." • "Look for three things you have never noticed before. Try a magnified view of one part." • "Point to the part you can't explain. Start with 'I wonder why...' or 'How does...'" • "Is that something you observed, or something you already knew? How could you check?" • "What does the number measure? Add the unit and the date, like '3 in tall on Oct 14.'" • "Take a photograph instead, so it stays safe. You can study the photo later."

Every session supports

Science Practice: observing, questioning, counting, measuring, and citing reliable sources.

Creative Practice: drawing, color, rubbings, specimen archiving, and photography.

Wellbeing: time outdoors, slowing down, connection with others, and care for living things.

Science practices for adult learners: see the NJAS Science Standards Alignment Rubric.

Journaling with young learners: see the Early Learners Guide (TK-1) and the School Age Guide (Grades 1-12).

- All Educator Guides can be found at www.NewMettleFarms.com/njas-educator-resources.

Continue Learning

- **Library Collections:** build your own Rubbings Library, Swatch Cards, Viewfinder Frames, Measuring Strips, and Field Guide pages. The Art & Placemat Guides have the instructions.
- **Share the Practice:** journal alongside children, grandchildren, or a community group, using the Early Learners and School Age Guides to adjust for each age.

Getting Started

Adult Guide (Lifelong Learners)

For new journalers. Focus on looking closely and filling one page; skill grows with each session.

1. Gather	2. Explore	3. Create	4. Record	5. Share
5 min	15–20 min	20 min	10 min	5 min

How to Support This Adult Learning

How much to show

How learners record

Questions to ask

Drawing

Counting & measuring

Finding answers

- Try each step yourself, following the Quick Prompt card and the Art & Placemat Guides.
- Write in full sentences or short notes, and add labels to every drawing.
- What is this? Why does it look this way? How does it work?
- Start with simple shapes, then add details and a magnified view of one part.
- Count parts and groups, and measure in inches with a ruler or Measuring Strip.
- Use a field guide to name what you find, and write down where each fact came from.

Notice: What do you notice?

Spend five quiet minutes with one specimen, list what you notice, and add 3 or more labels.

Wonder: What do you wonder?

Write three questions around your drawing, and look up the answer to one in a trusted source.

Remember: What does this remind you of?

Note what the specimen reminds you of, and how it is the same and different.

Measure: How could you measure this?

Measure one feature, record the number, unit and date, and note the weather.

GO DEEPER

- Draw the specimen from the top, side and underneath.
- Return to the same spot next week.
- Try a rubbing or a color swatch to show texture.
- Look up the specimen's scientific name.

What Success Looks Like

- ☐ Records date, place and weather
- ☐ Draws with labels and a close-up
- ☐ Writes at least three questions
- ☐ Records a number with its unit
- ☐ Leaves the spot as it was found
- ☐ Shares one observation

Guide Tips: Set a timer and stay with one specimen longer than feels comfortable. The most interesting details usually appear after the first few minutes of looking.

Building a Practice

Adult Guide (Lifelong Learners)

For regular journalers. Return to the same places, track changes across seasons, and build a personal record.

1. Gather	2. Explore	3. Create	4. Record	5. Share
5 min	20–30 min	25–30 min	10 min	5–10 min

How to Support This Adult Learning

How much to show

How learners record

Questions to ask

Drawing

Counting & measuring

Finding answers

- Choose your own focus each session, using the routine question as a starting point.
- Keep dated field notes that separate what you observed from what you think it means.
- What would happen if...? How could I test this? What has changed since last time?
- Make field sketches with shading, true proportion and a scale bar.
- Keep data tables across visits, estimate large groups, and calculate change over time.
- Compare two or more expert sources and note where they agree or differ.

Notice: What do you notice?

Sketch to scale, use precise terms, and keep an observation log for one place.

Wonder: What do you wonder?

Turn one question into a small investigation you can repeat over several visits.

Remember: What does this remind you of?

Connect the specimen to its habitat and the larger system it belongs to.

Measure: How could you measure this?

Track one measurement across a season, graph it, and describe the pattern.

GO DEEPER

- Share an observation with a citizen-science project.
- Compare your records with another site or year.
- Build a Field Guide page for your own place.
- Keep a journal from one sit spot all year.

What Success Looks Like

- ☐ Keeps dated field notes
- ☐ Makes scaled field sketches
- ☐ Asks questions that can be tested
- ☐ Graphs change over time
- ☐ Makes care decisions with evidence
- ☐ Discusses findings with others

Guide Tips: Pick one sit spot and one specimen to follow all year. A single page means more when it sits beside the pages that came before it.

Guiding Others

Adult Guide (Lifelong Learners)

For docents, volunteers, family leaders and program guides who lead nature journaling with groups.

1. Gather	2. Explore	3. Create	4. Record	5. Share
5 min	15–25 min	20–25 min	10 min	10 min

How to Support This Adult Learning

How much to show

How learners record

Questions to ask

Drawing

Counting & measuring

Finding answers

- Show how first by thinking out loud, then step back and let the group lead.
- Invite each person to record in their own way: words, numbers, sketches or photos.
- Ask the routine question, then follow with “Where do you see that?”
- Demonstrate one technique per session from the Art & Placemat Guides.
- Introduce one measuring tool per session, and say the unit out loud.
- Bring field guides and point to reliable sources, such as museum, park or university websites.

Notice: What do you notice?

Lead a slow look: one minute of silence, then each person names one thing they notice.

Wonder: What do you wonder?

Collect the group’s questions on a shared page, and choose one to explore together.

Remember: What does this remind you of?

Invite stories and connections, and review the specimen rules before anyone collects.

Measure: How could you measure this?

Set up one shared measurement the group can repeat on each visit.

GO DEEPER

- Pair new journalers with experienced ones.
- Use the Early Learners or School Age Guide for children.
- Keep a group record of changes across the season.
- Invite a local expert to answer one group question.

What Success Looks Like

- ☐ Group follows boundaries and signal
- ☐ Everyone records date and weather
- ☐ Each person asks a question
- ☐ Measurements include units
- ☐ Specimen rules are followed
- ☐ Everyone shares at least once

Guide Tips: Your job is to ask the next question, not to give the answer. Wait longer than feels natural, and let the group’s discoveries lead the session.

Sources & Acknowledgments

The NJAS routines Notice, Wonder, Remember, and Measure are New Mettle Farms' adaptation of Project Zero's See, Think, Wonder routine at the Harvard Graduate School of Education. We thank the educators and researchers whose work informs these guides.

AI Use: This guide was drafted with assistance from Claude, an AI model by Anthropic, using New Mettle Farms' original NJAS materials. New Mettle Farms reviewed, edited, and approved all content.

"Draft text for the NJAS Adult Guide" prompt. Claude, Anthropic, Oct. 2026, claude.ai.

Project Zero. "Thinking Routines." *Project Zero's Thinking Routine Toolbox*, Harvard Graduate School of Education, pz.harvard.edu/thinking-routines.

Wiederhold, Chuck. *Cooperative Learning and Higher-Level Thinking: The Q-Matrix*. Kagan Cooperative Learning, 1991.

Science practices: For the science practices behind each routine, see Adult Learners in the NJAS Science Standards Alignment Rubric.