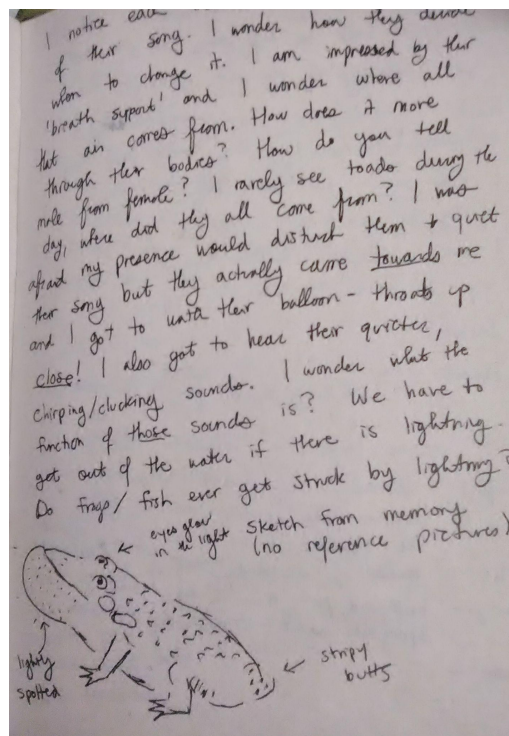


Science & Imagination: Exploring WORDS in Your Nature Journal

8 Actionable tips to add to your Nature Journaling toolkit,
from the Nature Journal Club's
"Writing Workshop Wednesdays"



Created by Rebecca Rolnick
Forest School-to-You

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You can attend “Writing Workshop Wednesdays” (free, virtual) by visiting John Muir Laws’ Nature Journal Club Community Calendar.

<https://johnmuirlaws.com/events/category/nature-journal-club/>

Past workshops can be viewed on Rebecca’s YouTube channel.

Why use WORDS in your nature journal?

If you've ever felt intimidated by the pretty pictures in others' nature journals, that's OK! Even if you love to draw, using words can help you use your brain in a different way and notice things you wouldn't have otherwise.

Learn to tell the stories only you can, of the places and creatures you care about and your relationship to them.

You can use paper and pen/pencil to record your thoughts and observations, but you are also welcome to use a voice recorder if that is easier for you-- they are still words when they are spoken. You can even use a notes app on your phone if you don't have your nature journal with you.

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“One of the gifts of being a writer is that it gives you an excuse to do things, to go places and explore... Writing motivates you to look closely at life, as it lurches by and tramps around.”

- Anne Lamott, *Bird by Bird: Some Instructions on Writing and Life*

“For me, writing is an act of reciprocity with the world; it is what I can give back in return for everything that has been given to me.”

- Robin Kimmerer, *Braiding Sweetgrass*

## Activity 1: Start with a Sense of Wonder

We need to *wonder* before we can ask “I wonder....?” Rachel Carson is best known for being the author of *Silent Spring*, which made the public aware of the dangers of pesticides such as DDT, and helped start the modern environmental movement. But her last book, and the one that she thought was perhaps the most important, is called “*The Sense of Wonder*.” She wrote (emphasis added):

*“Exploring nature....is largely a matter of becoming receptive to what lies all around you. It is learning again to use your eyes, ears, nostrils and finger tips, using your senses. For most of us, knowledge of our world comes largely through sight, yet we look about with such unseeing eyes that we are partially blind. One way to open your eyes to unnoticed beauty is to ask yourself, ‘What if I had never seen this before? What if I knew I would never see it again?’”*

For this activity, start by brainstorming a list of words that are synonyms for “wonder”, such as: *Joy, mystery, thrill, excitement, love, awe, surprise, beauty, delight, awe*. Participants from the Nature Journal Club added the following to the list: *enthralled, gobsmacked, speculate, tickled*. Choose four words that stick out to you. Divide your journal page into four quadrants, and put one word on the top of each. Go out into nature, or observe a nature object. Search for phenomena that make you feel the emotions you wrote down.. You can decide whether to observe the same object/organism for each quadrant, or to use different ones.

|                                                                                                                                                                                                            |                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b><u>Joy</u></b><br/>A sunset - pink, orange, gold sunlight like liquid dripping over the edge of the horizon, one last flash of brightness, too bright to look at, spreading color across the sky</p> | <p><b><u>Surprise</u></b><br/>I still feel really surprised about finding stoneflies in the snow. I learned something that made me stop in my tracks</p>                           |
| <p><b><u>Mystery</u></b><br/>Where do the crows go? And Why? Every morning crows fly to the East, every evening the river of crows flies to the West. How do they coordinate this?</p>                     | <p><b><u>Awe</u></b><br/>Looking up at the sky. A really big tree. Thinking about how complex my own body is and somehow it still works. Thinking about how my food got to me.</p> |

Example chart by Rebecca Rolnick.

\*This activity is based on a lesson plan from the US Fish & Wildlife Service<sup>2</sup> \*

## Activity 2: Think Like a Scientist

A nature journal is more than just an art project (although it *can* be artistic, if you want it to be). You are now part of a great tradition of scientists and explorers who have kept journals to record what they learned about the world, from Lewis and Clark to Charles Darwin to Aldo Leopold, and many many others. Your journal is a home for your thoughts and wonderings. Remember that above all, your goal is to LEARN and BE CURIOUS. You are using writing as a tool to observe, think, and reflect.

The writing in your nature journal does not have to be “pretty”. You don’t even have to use fully formed sentences. You can jot down words using labels, bullet point phrases, and sentence fragments. If you like, you can develop your thoughts with short sentences or paragraphs.

Use these sentence starters as a place to begin:

| <u>Type of Writing</u>     | <u>Sentence Starter</u>                  |
|----------------------------|------------------------------------------|
| Writing to Observe         | “I notice...”                            |
| Writing to Think           | “I wonder....?”<br>“It reminds me of...” |
| Writing to Reflect/Express | “I feel...”                              |

Then, you can write about potential explanations or answers to the questions you asked. Make sure to always use the “language of uncertainty”: it *might* be, it *possibly* could be, etc. A good scientist never jumps to conclusions, and knows we might always find more evidence that makes us revise our current understanding.

\*\*This activity is based on the lesson “Writing to Observe, Writing to Think” from the book *How to Teach Nature Journaling* by John Muir Laws and Emilie Lygren \*\*

### Activity 3: Travel Through Time

This activity was inspired by the chapter “Good Oak” from *A Sand County Almanac* by Aldo Leopold, who was an influential conservationist from the United States. He popularized the idea of the land ethic, which says that our moral responsibility extends to the land around us. He wrote the first textbook for the then-new field of Wildlife Management (as opposed to focusing only on game species we hunt).

The chapter “Good Oak” is about his experience chopping down an old tree on his farm which had been struck by lightning. As he chops deeper into the tree’s rings, he describes what was happening to people and nature in Wisconsin in that period of the tree’s life.

This is a great example of using a specific observable phenomenon to talk about a broader idea ( in this case, our larger connection to the land). It also reminded me that memory can be thought of as a form of “mental time travel”. One powerful thing about writing is that we can travel instantly through space and time, making connections to other events and experiences. This is often “sneaky” in writing; if you’re caught up in a good story you barely notice when the character starts thinking about something, or there’s a flashback. But this chapter makes it very deliberate and noticeable, and that’s a technique we can mimic in our writing. Nature journaling can help us with mindfulness and being in the present moment, but we can also connect it to our episodic memory of to learn from the past and prepare for the future. As explained in this article<sup>6</sup>:

*“episodic memory allows us “to **peer back across time, using our imagination to revisit just about any event that we choose...**[it] tends to be rather flawed but, according to two scientists Falk quotes, that’s okay since its core purpose is to provide “a more general toolbox that allowed us to escape from the present and develop foresight, and perhaps create a sense of personal identity....Mental time travel may have been “a pre-requisite to the evolution of language itself.”*

Continued on the next page...

To do this activity, make a chart of three phenomena you have observed. What memories do the phenomena remind you of? Do they connect to any big ideas or philosophies? Make notes with bullet points and short phrases. It's OK if no "big ideas" come up yet; you might think of some later as you explore the topic further, through the process of writing. Also take note of things that might need outside research.

| <u>Phenomenon</u>                                                                                            | <u>Memories ("It Reminds Me Of...")</u>                                                                                                                                                                                                            | <u>Big Ideas / Philosophies</u>                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b><u>Aldo Leopold</u></b><br/>Oak tree struck by lightning, then chopped down to burn wood for fuel</p>  | <ul style="list-style-type: none"> <li>-Memories of this tree when alive</li> <li>-History of the landscape 1865-1930s (probably needed outside research)</li> </ul>                                                                               | <ul style="list-style-type: none"> <li>-“Spiritual danger of not owning a farm”; knowing where your food / heat comes from</li> <li>-Ecology: predator/prey population cycles</li> </ul>                                                                                                                                                           |
| <p><b><u>Rebecca Rolnick</u></b><br/>Tree stump in backyard -- Ash tree that used to be my favorite tree</p> | <p>Reading a book up there<br/>The photo in my high school graduation party invitation<br/>My method of climbing up and swinging down<br/>Mom worrying about me falling down<br/>From in that tree I could see farther than from anywhere else</p> | <p>Favorite tree = unreliable; feelings of loss.<br/>Loss of ash trees; ash part of people's lives in so many ways; baseball bats; even the <i>Firebolt</i> broomstick in Harry Potter is made of ash<br/>I'm tired of nature stories about LOSS. Can there instead be, the invisible yet important role a species has on our own human lives?</p> |

After completing the chart for three phenomena, choose your favorite. Take (at least) ten minutes to freewrite and begin constructing your narrative. Be intentional about how you weave back and forth between direct observation and memories / ideas. If you come upon a big idea, you could use it as an opening sentence later, if you edit. This can be a chance to revisit old observations, let your thinking about them develop, and make connections. Your writing may also go in directions you didn't expect -- if that happens, let your words wander.

## Activity 4: Interview a Creature

This activity is based on the Beetles Project lesson plan “Interview an Organism,” and was partially inspired by the book *The Wild Girls* by Pat Murphy.

We can learn more about other people by interviewing them, or by asking questions during a casual conversation. Imagine that you have the chance to interview an individual nonhuman creature: an animal or plant, or even a protist, bacteria, or virus if you so choose. Make a list of questions you would ask that individual. Then, sort the questions into two categories: ones that can be answered scientifically by direct observation, and ones that can't.

| <u>Questions the can be answered by observation</u>                                                                                                                                                                                                                     | <u>Questions that CAN'T be answered by observation</u>                                                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| American Tree Sparrow, where do you go when spring comes?<br>What does your voice sound like?<br>How large are your wings? What is the aspect ratio?<br>Can you move easily through bushes and brambles?<br>What do you do every day? How has your morning gone so far? | What does it feel like to be a sparrow?<br>Do you feel scared when you hear a hawk?<br>Where is your favorite place?<br>Do you feel proud when your hatchlings learn to fly? |

Write out answers to your interview questions *in the imagined voice of the creature you are interviewing*. Get to know the creature; your goal is to learn something new about them. What might their voice / style sound like?

When we imagine, we might be wrong -- but it gives us a place to start. When we are writing as a scientist, we don't want to *anthropomorphize* wild creatures (make them seem human). We can never fully understand what it's like to be someone else. But this imaginative activity can help us develop empathy for other species.

**~Science and imagination are important. We can use both AS LONG AS we're clear about which is which. ~**



## **Activity 5: The Grammar of Animacy (Try Ki/Kin Pronouns)**

It is thought that the way we think and see the world is influenced by the language we speak. Robin Wall Kimmerer is a Potawatomi nation botanist and professor at the SUNY College of Environmental Science and Forestry. In her NY Times bestselling book *Braiding Sweetgrass*, she explores the intersections of scientific and indigenous worldviews, and how together they enrich our understanding of the world.

In a chapter of *Braiding Sweetgrass* called “The Grammar of Animacy,” Kimmerer explains that many indigenous languages have constructions that show the aliveness of something. (This is similar to the “masculine/feminine” genders of some languages, but for “alive/not alive.”) In English, if we want to describe another species, we are usually stuck with “it”, which is the same word we use for nonliving objects. (Although, “they/them” as a nonbinary singular pronoun was added to the Merriam-Webster dictionary in 2019, so that’s an option now too.)

In a 2017 *Orion* article titled “Speaking of Nature,” Robin Kimmerer writes about how she came up with the pronoun “ki” (plural: “kin”):

*“Inspired by the grammar of animacy in Potawatomi that feels so right and true, I’ve been searching for a new expression that could be slipped into the English language in place of it when we are speaking of living beings. I asked [elder and language guide Stewart King] if there was a word in our language that captured the simple but miraculous state of just being. And of course there is. “Aakibmaadiziiwin,” he said, “means ‘a being of the earth.’” I sighed with relief and gratitude for the existence of that word. However, those beautiful syllables would not slide easily into English to take the place of the pronoun it. But I wondered about that first sound, the one that came to me as I walked over the land. With full recognition and celebration of its Potawatomi roots, might we hear a new pronoun at the beginning of the word, from the “aaki” part that means land? Ki to signify a being of the living earth. Not he or she, but ki. So that when the robin warbles on a summer morning, we can say, “Ki is singing up the sun.” Ki runs through the branches on squirrel feet, ki howls at the moon, ki’s branches sway in the pine-scented breeze, all alive in our language as in our world.”*

**Try using ki/kin pronouns in your nature journal when you write about nonhuman creatures. Does it change the way you think about them?**

## **Activity 6: Connect with Your Reader**

Mary Ward (1827-1869) was an Irish naturalist and astronomer who wrote the book *World of Wonders Revealed by the Microscope*. It's written in the style of a letter to a friend. The book is like a personal tour around her lab where she explains each item.

Her enthusiasm shines through so clearly, even 150+ years later, when many older writings seem boring or dry to us in modern times. If she were alive today, I wonder if she would have a YouTube channel; that's what her writing makes me think of.

Her book has been noted as being particularly feminine; many of her specimens are compared to domestic items, such as lace and buttons. One article<sup>16</sup> interpreted this to mean that Ward was "concerned with maintaining femininity." (I'm skeptical of this interpretation, because in the 104- page book, there is exactly one page about flowers. Meanwhile, she spends a great deal of the book enthusing over insects, especially their feet and eyes.)

The lace and buttons also sparked an interesting conversation in the writing workshop. Ward was writing for an *audience* of schoolchildren (including girls, who had limited access to science) at a time when microscopes were a novelty. Her book compared scientific observations to everyday objects girls would be familiar with. So what kind of "it reminds me of" would be relatable to YOUR audience? (For example, one workshop participant expressed interest in helping inner city kids connect to nature).

So far we've been writing to think and observe. **For this activity, we ARE writing To communicate.** Pick something in your nature journal you've observed or drawn that made you feel a sense of wonder. Write a paragraph or two to explain the object in more detail, as if you were writing a letter to a young person. Can you help your reader feel the same sense of amazement that you felt? How do we *share* our sense of wonder?

**BONUS CHALLENGE:** Actually send your letter to someone in the mail!

## **Activity 7: Journaling your INNER Landscape**

We bring our whole selves into nature. This affects the experience we have (including if we feel safe and welcomed), the observations we make, and the questions we ask.

We are a PART of the stories we observe. We can use our nature journals to deepen our sense of place and sense of self. Here are some ideas for writing about your INNER landscape.

~~Use the prompt “I notice, I wonder, it reminds me of” to turn inward

~~When we think like scientists, we are supposed to be objective and unbiased. But none of us are, we are all influenced by our emotions! Acknowledging our emotions can help us be better scientists.

~~Bring “regular” journaling into nature. Does being outdoors change the journaling experience? Being in nature can help you **process things happening in other areas of your life**; your journal is there for you, whatever it is that you need in that moment.

~~Write your **feelings about your nature journal page** (I’m really proud of this page; I’m frustrated that this drawing didn’t turn out the way I hoped, etc.)

~~Write your **emotions about what you observe** happening in nature. (For example, does watching a bird sing make you **happy**? Are you **sad** that a tree near your home got cut down? Sometimes our emotions about the environment are **complicated**. To me, a European Starling is a beautiful bird, and I love to see them, when I think of them as individual creatures...but here in the US, they are also an invasive species that bullies native birds. Writing can help us examine these nuances.)

~~When you observe plants or animals, think about any lessons you might be able to learn from them that apply to your own life. Can they help you find solutions to your problems? For instance, a plant growing in a crack in the sidewalk might teach you resilience. A flock of blue jays might remind you of the power of working together.

## **Activity 8: Tell a Story**

**“Stories are everywhere, if we know how to look.”**

- *How to Teach Nature Journaling* By John Muir Laws and Emilie Lygren

Stories are more fun to listen to than lists of observations. We can use story elements to communicate what we learn as scientists in a more compelling way. We can also make up creative, fictional stories based on our nature observations. The 5 main elements of story are: character, setting, conflict, plot, and theme

### **Character**

Who is the story about? And most importantly, what do they WANT? When you're nature writing, the characters might be: you/other people, the creature you are observing, or maybe even the land itself.

### **Setting**

Where does the story take place? What is the environment or ecosystem? In nature writing, the setting affects what type of biodiversity is present, and what resources are available to help the character get what they want.

### **Conflict**

The character wants something. What is getting in their way? In nature writing, the conflict might be a scientific puzzle you are trying to solve; an inner, personal struggle; the challenges of a creature we observe; or an environmental problem such as pollution.

### **Plot**

What HAPPENS in the story? HOW does the character face the conflict that's getting in the way of what they want? How does each event lead to the next? In nature writing, the plot might be our process of making observations to solve the mystery, our movement through the place we're exploring, or the actions of the creature we're observing.

### **THEME**

The “message” or “underlying insight”; the “moral of the story.” Themes might reveal themselves -- you can start writing with a theme in mind, but don't force it. Themes can be obvious or subtle. What is the story “really” about, below the surface level? In nature writing, the theme could be many different things! Themes are as varied as the people writing. This is where our unique perspective has the chance to shine.

## **Resources**

Watch recordings of past Writing Workshops on the **Forest School-to-You** YouTube Channel: <https://www.youtube.com/channel/UCH88AX1a7td87NQc6dWIYVw>

### **Start with a Sense of Wonder**

1. *The Sense of Wonder* by Rachel Carson
2. “The Sense of Wonder” lesson plan, US Fish & Wildlife Service  
<https://www.fws.gov/uploadedFiles/5thSenseWonder.pdf>

### **Think Like a Scientist**

3. *How to Teach Nature Journaling* by John Muir Laws & Emilie Lygren (available as a free PDF at <http://johnmuirlaws.com/journaling-curriculum/> )

### **Travel Through Time**

4. *A Sand County Almanac* by Aldo Leopold
5. The Aldo Leopold Foundation <https://www.aldoleopold.org/>
6. “The Science of Mental Time Travel and Why Our Ability to Imagine the Future is Essential to Our Humanity” by Maria Popova  
<https://www.brainpickings.org/2014/07/01/mental-time-travel-dan-falk/>

### **Interview a Creature**

7. *Interview an Organism* from The Beetles Project  
<http://beetlesproject.org/resources/for-field-instructors/interview-an-organism/>
8. *The Wild Girls* by Pat Murphy  
[https://www.goodreads.com/book/show/410127.The\\_Wild\\_Girls](https://www.goodreads.com/book/show/410127.The_Wild_Girls)
9. The “Nature Fakers” Controversy  
<https://www.americanheritage.com/tr-and-nature-fakers#1>  
<https://www.upress.virginia.edu/title/2814>

### The Grammar of Animacy (Try Ki/Kin Pronouns)

10. *Braiding Sweetgrass* by Robin Wall Kimmerer
11. "Speaking of Nature: Finding Language that affirms our kinship with nature." By Robin Wall Kimmerer, Orion Magazine 2017  
<https://orionmagazine.org/article/speaking-of-nature/>

### Connect with your Audience

12. Full text: "A World of Wonders Revealed By The Microscope"
  - <https://wellcomecollection.org/works/v4mtt8tg/items?canvas=65&langCode=eng>
  - [https://www.google.com/books/edition/A\\_World\\_of\\_Wonders\\_Revealed\\_by\\_the\\_Micro/l-xEAQAAMAAJ?hl=en](https://www.google.com/books/edition/A_World_of_Wonders_Revealed_by_the_Micro/l-xEAQAAMAAJ?hl=en)
13. W is for Ward's World of Wonders  
<https://whipplelib.wordpress.com/2016/12/05/w-is-for-wards-world-of-wonders/>
14. Mary Ward's Amazing World  
<http://www.marywardsamazingworld.com/what-we-offer.html>
15. Herstory: Mary Ward <https://www.herstory.ie/news/2020/2/11/mary-ward>
16. Mary Ward, Mary Treat, Martha Maxwell, and the place of the female naturalist in nineteenth-century science  
[https://www.cabinetmagazine.org/issues/29/richard\\_clark.php](https://www.cabinetmagazine.org/issues/29/richard_clark.php)
17. The Living Bog <http://raisedbogs.ie/>
18. Mary Ward's Microscope  
<https://www.nationaltrust.org.uk/blogs/curators-blog/an-object-i-love-at-castle-ward-mary-wards-microscope>
19. Mary Ward, artist, naturalist, and astronomer: a women for our time  
<https://offalyhistoryblog.wordpress.com/2019/08/30/mary-ward-artist-naturalist-and-astronomer-a-woman-for-our-time/>

## **Journaling your INNER Landscape**

Recommended resources from guest author Shanna Lea

20. Nature Day by Day – A 30 Day Guided Journal

<http://shannaleaauthor.com/2020/05/nature-day-by-day-a-30-day-guided-journal/>

21. 5 Senses Journal–Build Awareness Skills of Your Surroundings

<http://shannaleaauthor.com/2020/05/5-senses-journal-build-awareness-skills-of-your-surroundings/>

22. *Writing Down the Bones: Freeing the Writer Within* by Natalie Goldberg

23. *The Vein of Gold: A Journey to Your Creative Heart* by Julia Cameron

24. *Conscious Nature: The Art and Neuroscience of Meditating in Nature* by Josh Lane

25. *Animal Speak* by Ted Andrews

## **Tell a Story**

26. Story Elements

<https://www.literacyideas.com/teaching-story-elements>

27. Five Essential Elements of a Story

[http://www.katiekazoo.com/pdf/KK\\_FiveEssentialElements.pdf](http://www.katiekazoo.com/pdf/KK_FiveEssentialElements.pdf)

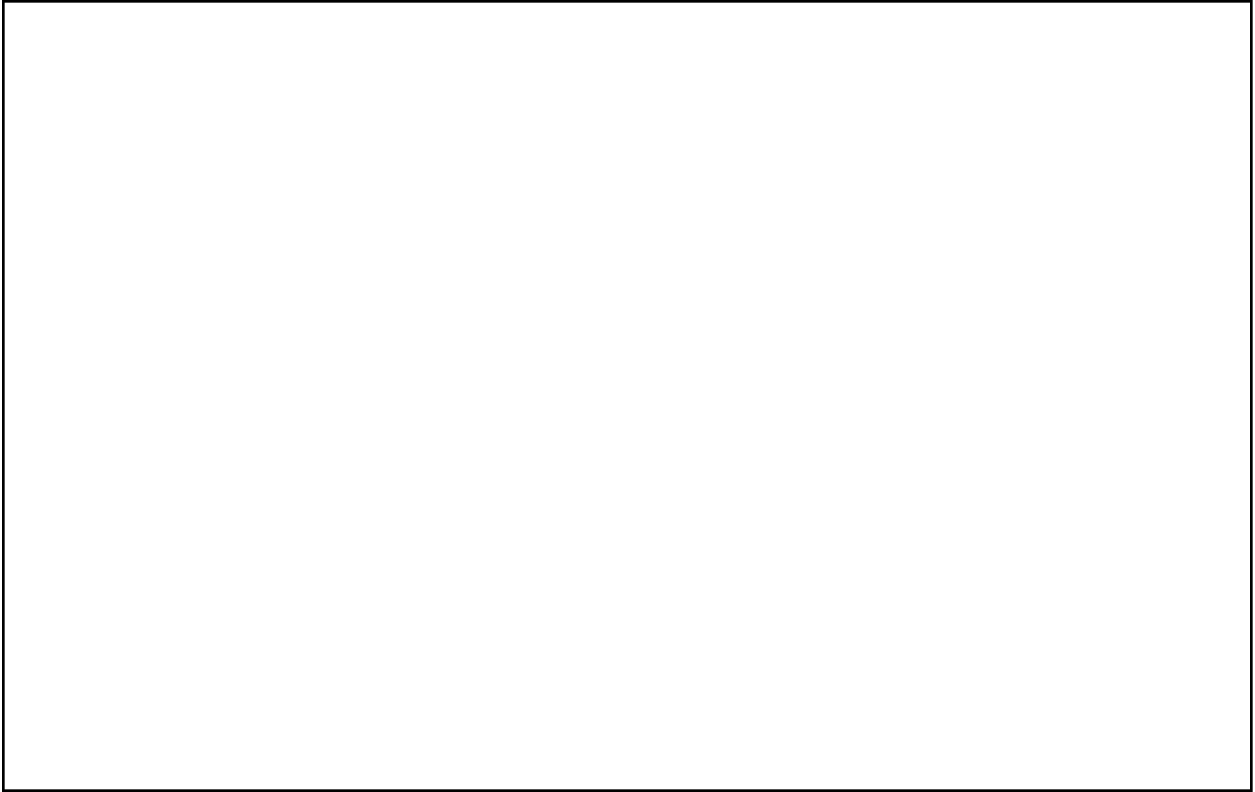
28. *The Hero with a Thousand Faces* by Joseph Campbell

<https://www.icf.org/works/titles/the-hero-with-a-thousand-faces/>

29. The Hero's Journey

<https://tvtropes.org/pmwiki/pmwiki.php/Main/TheHerosJourney>

**Which idea are you most excited to try first in your nature journal? Why?**



**Notes**

