

LESSON 1-6 BENCHMARK

Show what you know!

Free Choice

Choose Your NGSS Cross-Cutting Concepts and Journaling Strategies for Your Next Journal Entry

MAKING IT YOUR OWN

- Nature journaling is a VERY personal experience.
- When you create a journal page, you're doing several things:
 - Observing Nature Deeply
 - Tickling Your Curiosity
 - Expressing Your Very UNIQUE Style
 - LEARNING

WHAT YOU'LL DO

1. Keeping in mind all we've learned so far, you'll create your own journal entry of anything (or things) you'd like to study.
2. Incorporate as many of the strategies and NGSS Cross-Cutting Concepts as you can in this journal entry.
3. Express your own unique style and personality.
4. Write your own reflection.

LET'S REVIEW

The Basics

- **METADATA**: Day, Date, Time, Location, Weather
- **ABC**
 - I Notice,...
 - I Wonder...
 - (Could It Be...),
 - This reminds me of...
- **123**: The Metrics:
 - height, distance, speed, weight, length, area, elevation, etc.
-  Drawing, Sketch, Diagram (labeled)

JOURNALING STRATEGIES

- **COMPARE AND CONTRAST**

- Showing how two things are the same and different
- Venn Diagram

- **ZOOM IN/ZOOM OUT**

1. Life Size View
2. Close-up, Magnified View
3. Distance View

NGSS CROSS-CUTTING CONCEPTS

• **PATTERNS**

- Nature is full of patterns and scientists often use patterns to group or categorize species, or as clues to underlying processes or forces at work.
- A pattern exists when a set of numbers, colors, shapes, or sounds are **repeated**.
- Patterns can be found everywhere: in animals, plants, and even the solar system!
- Some specific patterns are called fractals or spirals. Fractals are patterns that repeat at different scales.

NGSS CROSS-CUTTING CONCEPTS

CAUSE AND EFFECT

- Events have causes. We can think of nature as a world full of mysteries, or “effects,” and try to explain what might have caused what we see. Cause and effect relationships may be used to predict events.
- In scientific practice, deducing the cause of an effect is often difficult, so multiple hypotheses may coexist. (Think about the different hypotheses about the extinction of dinosaurs – a meteor, climate change, starvation and more.)
- Cause and Effect can be answered with COULD IT BE... hypotheses.

NGSS CROSS-CUTTING CONCEPTS

SYSTEMS AND SYSTEM MODELS

- A system is a collection of parts which are **interconnected** and they continually affect each other over time.
- A system can carry out functions its individual parts cannot.
- To understand systems, the relationships between or among the parts must be examined.
- Studying systems is about studying the **interconnections** and **relationships** between things.
- **Models** can be used to represent systems and their interactions—such as inputs, processes and outputs—and energy and matter flows within systems.

NGSS CROSS-CUTTING CONCEPTS

STRUCTURE AND FUNCTION

- A *structure* is anything made up of parts. Plants and animals have many structures that help them survive.
- An object's shape and structure relate directly to how it functions. We can observe structures and attempt to explain how they work.
- Natural structures can be analyzed to determine how they function.
- The functions and properties of organisms can be inferred (could it be...) from their overall structure, and the way their components are shaped.

YOUR TURN

- Create a journal entry on **anything** you're interested in studying. Use **TWO pages** to complete this journal entry.

1. Include ALL the basics

- Metadata
- ABC, 123, 

2. Include **at least** one strategy

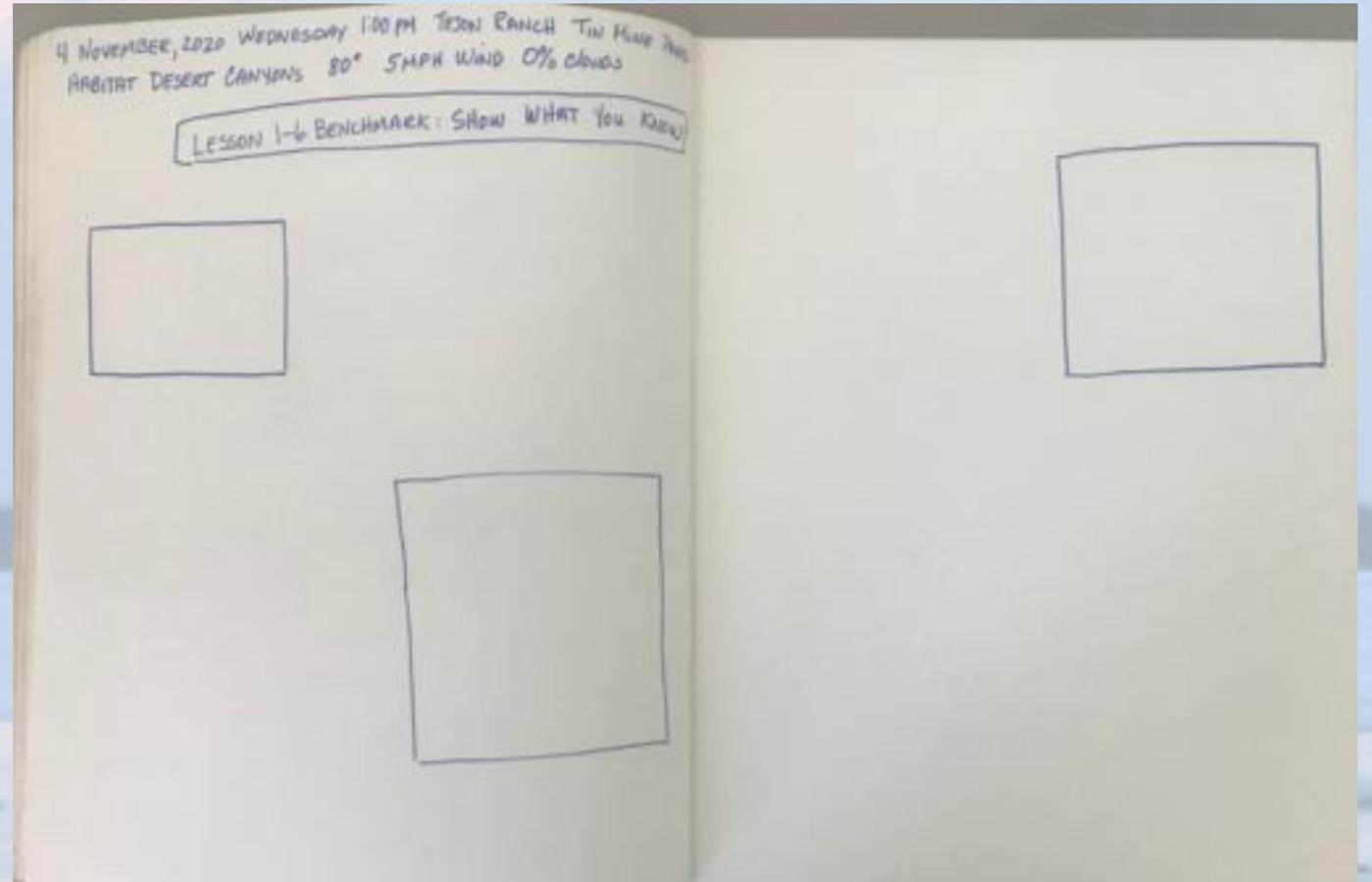
- zoom in/zoom out,
- compare/contrast,

3. **And at least** one NGSS Cross-Cutting Concept

- Patterns,
- Cause & Effect,
- Systems & System Models,
- Structure & Function

PLAN AHEAD

- Once you have selected the subject or subjects you'll be journaling, take the time to plan the layout of your journal pages before you begin.



Additional Research

- Once you have finished your journal entry in the field, return to your computer and do a little additional research about your subject.
- Remember to evaluate your sources. Anyone can post to the internet, but that doesn't make the information correct.
- When researching scientific information, the best sites are educational institutions or non-profit environmental organizations.
- Web addresses that end in **.edu** or **.org** will offer the best information.
- Always cite the source of your information in your journal.

REFLECTION

- After you complete your journal page, write a reflection.
 - Options:
 1. Scientific Paragraph (as you have been doing).
 2. Diary Entry (thoughts and feelings while you were journaling).
 3. Poem
 4. Letter to yourself in the future.
 5. Letter to a younger student, teaching them what you learned.

CHECKLIST

WHEN YOU FINISH, USE THIS CHECKLIST TO ENSURE YOU DIDN'T FORGET ANYTHING

METADATA

DATE, DAY, TIME

LOCATION - PLACE AND HABITAT

WEATHER – TEMPERATURE, WIND, CLOUD COVER

TITLE: Lesson 1-6 Benchmark: Show What You Know

Page Layout

The Basics

ABC

123

Picture, drawing, or labeled diagram

Strategies

Compare/Contrast

Zoom in/Zoom Out

NGSS Cross Cutting Concepts

Patterns

Cause & Effect

Systems and System Models

Structure and Function

Reflection

Scientific Paragraph

Diary Entry

Poem

Letter to self

Letter to younger student

**BYE FOR NOW
THANKS FOR JOINING ME.**



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