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# Nature Place-Based Learning Field Experience Planning Guide

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# EXECUTIVE SUMMARY

This planning guide is designed to support educators in developing meaningful, nature-based learning experiences that connect students to the local environment while meeting educational goals. Thoughtful planning is essential to creating experiences that are engaging, developmentally appropriate, and rooted in a sense of place.

By using this guide, educators will be able to design lessons that foster curiosity, critical thinking, and connect students' learning with their lived experiences. The guide provides practical tools and reflective prompts to help teachers intentionally plan, implement, and adapt nature-based learning opportunities that deepen students' understanding of the natural world and their role within it.

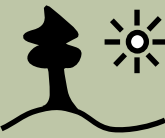
Nature Place-based Learning (NPBL), as a pedagogical approach is aligned to five core competency areas: Learning in a Natural Space, Learning with Others, Learning from the Natural Space, Learning for the Natural Space, and Reflecting on the Relationship with the Natural Space (Figure 1) [1].

NPBL encompasses structured learning experiences aligned to classroom curriculum which take place in outdoor spaces to include school grounds, outdoor spaces within the local community, or outdoor spaces visited during school trips [1, 2]. These localities constitute "natural spaces" as identified in this document.

**NATURE** is defined as "the phenomena of the physical world collectively." [3] We encourage educators to engage students in learning through and with the natural world, helping students to understand that we are part of the nature world, with the responsibility to care for each other and our surroundings.

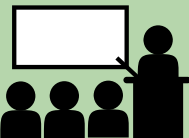


# Nature Place-Based Learning Competencies



**Learning in a Natural Space**

- **Awareness** of Local Cultures
- Situated in Biophysical **Context**



**Learning with Others**

- Psychological and Socio-Cultural **Understanding**
- School and Community **Collaboration**




**Learning from the Natural Space**

- Interdisciplinary **Knowledge** and Experiential Learning
- **Attitudes** of Awareness, Appreciation, Curiosity, Concern and Responsibility
- **Skills** of Observation, Communication, Collaboration, Problem-Solving & Synthesis



**Learning for the Natural Space**

- **Application**
- **Service-Learning**
- Environmental **Stewardship**
- Civic **Engagement**



**Reflecting on the Relationship with the Natural Space**

- Identity **Exploration**
- Independent **Action**

Figure 1. Source: McMillan, 2026

# Overview of Planning for Nature Place-Based Learning

Aligned with the Louisiana Educator Advancement and Development System (LEADS) [4], Louisiana Environmental Education key principles and concepts [5], and Nature Place-Based Learning Competencies [1], this document is organized into five sections: designing lessons, planning experiential learning trips, pre-trip preparation, implementation, and reflection. Collectively this document is designed to support intentional lesson development, effective field experiences, and ongoing refinement of teaching practice.

## Designing Lessons for Place-based Experiential Learning

The first section, Designing Lessons, guides educators through the process of crafting lessons that connect academic standards to meaningful, locally relevant experiences. Educators identify key standards and concepts they can connect to their students' lives and livelihood, then select Science and Engineering Practices (SEPs) and Crosscutting Concepts (CCCs) to guide inquiry. Lessons begin with an engaging, hands-on experience that sparks curiosity and leads to student questioning. Those questions anchor learning as students investigate explanations and apply understanding to real-world contexts. Built-in opportunities for collaboration, reflection, and evaluation help both teachers and students link classroom learning to authentic community applications.

## Experiential Learning Trips

The Experiential Learning Trips section focuses on creating field-based learning experiences that extend classroom lessons into the community. Experiential learning trips immerse students in real-world phenomena where they collect and analyze data, observe systems in context, and apply SEPs and CCCs. Structured around a local storyline, these experiences integrate multiple disciplines and highlight how science and engineering shape everyday life. A well-planned trip connects observation to understanding, helping students develop environmental awareness, critical thinking, workforce connections, and a deeper sense of place.

## Logistical Pre-Trip Planning

The Pre-Trip Planning section guides educators through the logistical planning needed for a successful field experience. Tasks include arranging transportation, confirming permissions, coordinating with partner sites, and ensuring safety protocols. Teachers also prepare materials, communicate expectations, and plan for accessibility or weather considerations. Thoughtful preparation creates the structure and safety that allows everyone to focus on learning in the field.

## Implementation of Field Activities

The Implementation section focuses on facilitating learning during the field experience itself. Educators act as guides and co-learners, supporting students as they explore, investigate, and connect concepts to real environments. Through observation, discussion, and documentation, students engage deeply with natural and human systems while strengthening reasoning and collaboration. Effective facilitation helps translate field exploration into genuine understanding and connection to place.

## Reflection and Assessment

The Reflection and Assessment section centers on bringing the learning process full circle. Educators guide students in synthesizing field experiences, connecting local observations to broader global issues such as sustainability, conservation, and community resilience. Reflection activities, through writing, dialogue, or creative expression, help students articulate their learning and its relevance to their own lives and communities. Educators also assess student growth and evaluate their own instructional strategies, identifying successes and opportunities for refinement. This ongoing process of reflection strengthens both teaching practice and students' capacity to apply their learning beyond the classroom.

### Reflection

"Reflective thinking turns experience into insight." - John C. Maxwell



# Part 1: Designing Lessons for Nature Place-Based Experiential Learning

This section offers a practical framework for planning active, place-based lessons. Use the steps below to connect standards to locally rooted, hands-on learning that builds curiosity and understanding. Move flexibly through the process—adapting, reflecting, and refining as ideas evolve. Use the templates and prompts to ensure lessons remain authentic, student-centered, and grounded in local relevance.



## Section 1.1

### Identify Standards within Your Content Area that are Locally Relevant

- Standard: \_\_\_\_\_
- Think: What is the big takeaway I want students to understand by the end of this lesson?
- Ask: How does this connect to where students' live? Why would it matter in their lives?

## Section 1.2

### Decide on the Science and Engineering Practices (SEP) and Crosscutting Concepts (CCC) [6]

Clarify the skills and concepts you want students to utilize.

- Science & Engineering Practices (SEP)
  - Asking Questions and Defining Problems
  - Developing and Using Models
  - Planning and Carrying out Investigations
  - Analyzing and Interpreting Data
  - Using Math and Computational Thinking
  - Constructing Explanations and Designing Solutions
  - Engaging in Argument from Evidence
  - Obtaining, Evaluating, and Communicating Information

- Crosscutting Concepts (CCC)
  - Patterns
  - Cause and Effect
  - Scale, Proportion and Quantity
  - Systems and System Models
  - Energy and Matter
  - Structure and Function
  - Stability and Change

### Section 1.3 Engage: Introductory Hands-On Experience

- Create an activity that provides an opportunity for students to explore the phenomenon in a tangible, low-barrier way.
- Incorporate social interaction and movement if possible.
- The key: The activity should naturally make students wonder why or how something happens.
- This could be:
  - Building or testing a model (like simulating erosion in trays of soil).
  - Observing a real object, sample, or artifact.
  - Conducting a short investigation or simulation.
  - Engaging in a role-play or problem-solving scenario.

### Section 1.4 Explore: Structure Opportunities for Student Questioning

- After the activity, pause and let students notice, discuss, and wonder.
- Use prompts like:
  - What did you see happening?
  - Why do you think it worked that way?
  - What questions do you have about this?
- Capture their questions on chart paper, sticky notes, or a digital board.

### Section 1.5 Explain: Transition into Direct Instruction - Use Their Questions as a Bridge into the Core Content

- Provide data, readings, videos, maps, or mini lectures that explain the science, history, or cultural connections behind the phenomenon.
- Connect back explicitly: This is why you saw \_\_\_ happen in our activity.

## Section 1.6

### Elaborate: Apply & Extend – Give Students a Chance to Use Their New Understanding

- Redesign their models or try new solutions.
- Analyze a local case study.
- Create a product (poster, presentation, recommendation) for how to address or explain the issue in their community.

## Section 1.7

### Evaluate: Reflection & Sharing

- How will you assess what the students have learned and identify misconceptions? Be creative!
- Provide time for student reflection on the learning experience. This reinforces both the academic content and the place-based relevance.
  - What new understanding do you have about our local place?
  - Why does this matter for our community?

### Summary:

Choose a phenomenon > Decide the core concept > Plan a hands-on hook > Capture student questions > Provide instruction > Apply learning > Evaluate & Reflect

## NOTE

Lesson design is an iterative process. While this guide presents the process as a series of steps, it is expected that educators will revisit earlier stages as ideas are refined and expanded. A process of continuous refinement and reflection should occur throughout the lesson design and implementation.

# Part 2: Experiential Learning Trips

Experiential learning trips expand on classroom lessons by connecting learning to real-world, locally relevant experiences. Use this section to plan field trips that turn local sites into active learning environments. Follow the guidance to align trips with standards and learning goals, build a cohesive storyline, and engage students in authentic investigation. The planning tools and examples here will help you design experiences that inspire curiosity, problem-solving, and connection to community.



## Section 2.1

### Connecting NPBL to Learning Goals, Standards & Objectives

- **Alignment to Louisiana Student Standards and curriculum unit:**
  - Subject: \_\_\_\_\_
  - Curriculum: \_\_\_\_\_
  - Unit Focus: \_\_\_\_\_
  - Standards: \_\_\_\_\_
  - Identify the local knowledge sources that relate to your learning standards.
  
- **Locally Significant Natural Site Options**
  - Local Watershed or River Basin
  - Urban Nature Preserve or Greenbelt
  - Wetlands, Marsh, or Estuary
  - Historic or Cultural Lands
  - Coastal or Barrier Island Ecosystems
  - Forest
  - State or City Park
  - Agricultural or Working Landscapes

## Section 2.2

### Creating Interest

- **Teacher Content Preparation**
  - Review site-specific content (ecology, history, culture)
  - Anticipate student misconceptions
  - Gather accurate background information to share in the field
  - Create a storyline to connect everything together.
- **Student Engagement**
  - Use a short video, image set, or local story to spark curiosity
  - Introduce a focus question. Example: “Why does this place matter?”
  - Class brainstorming: Facilitate pre-trip discussion about the site and its significance
  - Connect field site to students’ prior knowledge and lived experiences
- **Career Connections**
  - Highlight how the phenomenon, skill, or content relates to real careers in the local community.
  - Connect lessons to workforce sectors relevant to your region and the location of the place-based learning experience (e.g., coastal restoration, agriculture, environmental science, energy, healthcare, manufacturing).
  - Show how professionals use similar practices to build relevance, such as modeling, data analysis, problem-solving, and designing solutions.
  - Incorporate short career spotlights, local industry examples, or authentic problems tied to local jobs.
  - Invite students to consider, “Who does this work in our community?” and “Why does this career matter here?”
  - Integrate artifacts, tools, scenarios, or datasets used in local professions (e.g., soil samples for agriscience, water quality data for environmental jobs, design challenges used in engineering roles).

## Section 2.3

### Providing and Experience

- **Observation & Exploration Activities**
  - Nature scavenger hunt
  - Data collection (water quality, soil samples, species count)
  - Interviews with community members or experts
  - Sketching landscapes or species
  - Nature journaling
  - Photo documentation

- **Experiential Learning Opportunities to Promote Thinking and Problem-solving Through Hands-on Learning (Examples)**
  - Tree ring analysis using cross-sections
  - Soil or water testing using field kits
  - Habitat restoration (in field or classroom)
  - Mapping natural and human features using compasses or GIS tools
  - Creating natural dye from plants on-site\*
  - Measuring biodiversity through transect lines/quadrants
  - Building simple weather instruments (rain gauge, anemometer)
  - Participating in citizen science projects (e.g., iNaturalist, eBird, Merlin)
  - Exploring erosion or land change through hands-on modeling
  - Conducting a cultural artifact scavenger hunt (with community leader input)
  - Other:
- **Inquiry Questions**
  - “What do you notice?”
  - “Why is this important to our community?”
  - “How does this connect to what we’ve learned in class?”
  - “What solutions or next steps could we imagine?”
- **Higher-Order Thinking Tasks**
  - Analyze field data and patterns
  - Compare findings to classroom learning
  - Evaluate environmental or community impacts

## Section 2.4 Reflecting

- **Weave reflection throughout the learning process:**
  - Ask students to articulate what they notice in the place and how it shapes their understanding of the content they are learning about.
  - Post-Activity Debrief: Students connect discoveries from the field to key concepts, vocabulary, and standards and how they will use field trip learning in upcoming lessons/projects.

\* Some state parks will not allow this.

# Part 3: Logistical Pre-Trip Planning

Strong place-based learning starts with thoughtful preparation. This section walks educators through the key steps for organizing a field trip. From securing approvals and transportation to preparing students and chaperones, use the checklists, sample schedule, and timeline to stay organized and adjust for your site's specific needs. Careful preparation ensures a smooth experience and keeps the focus on meaningful learning once in the field.



## Section 3.1

### 6 Weeks Prior: Begin Planning in Advance and Utilize a Workflow to Account for Time

- Event date
- Location of event
- Plan communicated via email with school leadership
- Field trip request form
  - Relevance to curriculum documented
  - Spending request and approval for meals and incidentals
  - Make release forms and waivers accessible
  - Total number students
  - Guest list (list of students and adults – tentative)
- Field site identified and approved
  - Restroom access verified
  - Ask location for release
- Transportation arranged (reserve school bus)
- Request substitute teacher
- Tentative agenda: See Example Schedule

<b>Sample Schedule</b>		
8:15 AM	Bus Departs School	
8:50 AM	Student Arrival, Orientation, and Form Groups at LSU Center for River Studies	
9:00 AM	Tour Facility	
10:00AM	Career Interviews	
10:30 AM	Drive to Park for Activities	
10:45 AM	Arrival at Park	
11:00 AM	Rotations Begin	
	Importance of the Wetlands	Water Chemistry
11:00 AM	Group 1	Group 2
11:25 AM	Group 2	Group 1
11:50 AM	Buses Return to School	
12:30 PM	Arrival at School	

### Section 3.2

#### 4 Weeks Prior

- Meet with location contact to review agenda
- Finalize agenda and activities
- Give the nurse a copy of the student list and verify any medical/emergency needs
- Let the cafeteria know you will be gone on the day of the trip and if they will need to prepare the lunches
- Send email to faculty about upcoming trip with list of students
- Send home release form

### Section 3.3

#### 2.5 Weeks Prior

- Follow-up with location and share agenda
- Finalize food plan
- Confirm bus schedule

### Section 3.4a

#### 1.5 Weeks Prior

- Reach out to vendor and place food order if not getting lunches from school
- School communication: reminder to the teachers, admin, cafeteria
- Verify final numbers
- Copy agendas (team, teachers, bus drivers, support staff)
- Prep supplies and items to pack:
  - Tables
  - Shade tents
  - Chairs
  - Clipboards or hard writing surfaces
  - Journals/booklets
  - Field guides
  - Chart paper/markers/Pencils

## Section 3.4b

### Social Structure

- Plan and structure grouping based on tasks and activities.
- Have a plan for student groupings
  - Mixed ability
  - Like ability
  - Rotating stations
- Group roles assigned
  - Recorder
  - Photographer
  - Presenter
  - Question-asker
  - Timekeeper
  - Other: \_\_\_\_\_
- Accommodations made for students with:
  - Academic needs
  - Medical needs
  - Social/emotional needs
- How will these plans be communicated with adults and students?
- Assign chaperones to groups and brief them on the plan.

## Section 3.5

### 1 Day Prior

- School communication reminder to admin and teachers
- Get school credit card and tax-exempt form
- Bring permission forms with you on the day of the trip
- Confirm destination address
- Confirm estimated arrival time with location
- Safety expectations clearly communicated to students
- Reminder to parents and tips for success: bring a water bottle, and wear sunscreen and/or bug spray as needed. Have a water-filling station and paper cups if students need water and don't have a water bottle
- Pre-assessment (if applicable)



# Part 4: Implementation of Field Activities

The day of your place-based learning experience is when planning turns into practice. This section provides prompts and strategies to help you lead engaging, inquiry-driven learning in the field. Use the checklists and reflection tools to guide students through exploration, discussion, and documentation. Encourage curiosity and active participation through flexible grouping, guided stations, and shared reflection moments. Stay present, adaptable, and enthusiastic. Your modeling of curiosity will fuel authentic learning.



## Section 4.1 Prompts & Strategies

- Bring your storyline to life by engaging the students. Begin with an entry prompt.
  - Example: "What do you already know about this place?"
- Add interest and experiential learning [Insert from planning].
- Move into active exploration: [Insert from planning]
- Facilitate and Guided Connection:
  - Examples:
    - Teacher/guide provides explanations, connects observations to academic content.
    - Share historical background, ecological concepts, or cultural context.
- Check for Understanding:
  - Examples:
    - "What did you record?"
    - "How do you know?"
    - "What does this tell us?"
    - In-the-Moment Reflection:
      - "What are you noticing right now?"
      - "What's surprising to you?"
    - Exit Reflection:
      - "What surprised me most today was..."
      - "This field site made me think about..."



## Part 5: Post-Trip Reflection

Learning from a place-based experience continues well after returning to the classroom. Use this section to help students reflect on, express, and apply what they've learned. The prompts and activities support journaling, discussion, and project-based synthesis that tie field observations to academic concepts. Build in opportunities for students to celebrate their work and explore how their learning contributes to community well-being and environmental awareness.



### Section 5.1 Synthesis & Evaluation

- Teacher feedback:
  - Field journals
  - Group discussions
  - Reflections
  - Presentations
- Summative measure of understanding: Student products
  - Written reports
  - Visual models
  - Oral presentations
  - Art installation or digital media
  - Other: \_\_\_\_\_

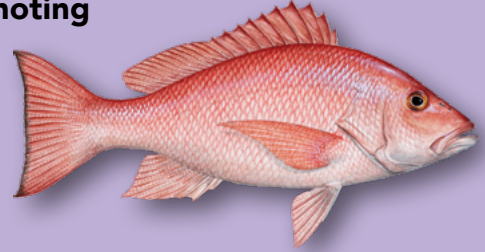
### Section 5.2 Application, Service Learning & Stewardship

- Class or group action project
- Local habitat restoration
- Community event or education
- Cultural preservation
- Participation in citizen science
- Advocacy or public speaking
- Student-generated solutions or recommendations
- Other: \_\_\_\_\_



## Part 6: Educator Self-Assessment

Reflection is an essential part of professional growth and continuous improvement in place-based learning. Use this self-assessment rubric and reflection guide to evaluate the effectiveness and intentionality of your planning process, from aligning objectives to managing logistics. Rate each component honestly, noting successes and areas for growth. The prompts that follow will help you analyze what worked, what could improve, and how to strengthen future lessons and trips. Treat this as an evolving tool for professional learning and instructional growth.



### Reflection Questions

- Which part of your planning are you most proud of? Why?

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- Which part needs more development or revision for next time?

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- How did this planning experience support your understanding of nature place-based learning?

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- What is one action you'll take to strengthen your next field experience?

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**Use the scale below to evaluate each part of your planning process. Circle or check the box that best represents your current planning. Be reflective, this is for you and your students.**

PLANNING COMPONENT	4 I DID THIS THOROUGHLY & INTENTIONALLY	3 I DID THIS WELL	2 I DID THIS SOMEWHAT	1 I NEED TO IMPROVE THIS
1. I aligned learning objectives to standards and clearly connected them to the field site experience.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I selected a site that is locally relevant and connected learning to both the natural and cultural elements of the place.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I designed activities that encourage observation, inquiry, and critical thinking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I incorporated hands-on, experiential learning that connects with interdisciplinary content.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I intentionally structured collaboration with group roles and supports for all learners.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I planned for meaningful reflection before, during, and after the trip.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I addressed all logistics (transportation, materials, safety, accommodations, communication).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I integrated STEM aligned workforce connections throughout the learning experience.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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## Generative AI Statement

The development of this planning guide incorporated the use of ChatGPT, a generative artificial intelligence tool. The authors engaged in an iterative process in which prompts, contextual details, and draft language were provided to the tool, which then generated suggested text. These outputs were systematically reviewed, revised, and refined by the authors to ensure accuracy, disciplinary alignment, and contextual appropriateness. The final version reflects the authors' expertise and editorial judgment, with ChatGPT serving as a drafting and idea-generating resource rather than a determinative author.

# Credits

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