# A Guide on Creating Kinderforest Lesson Plans

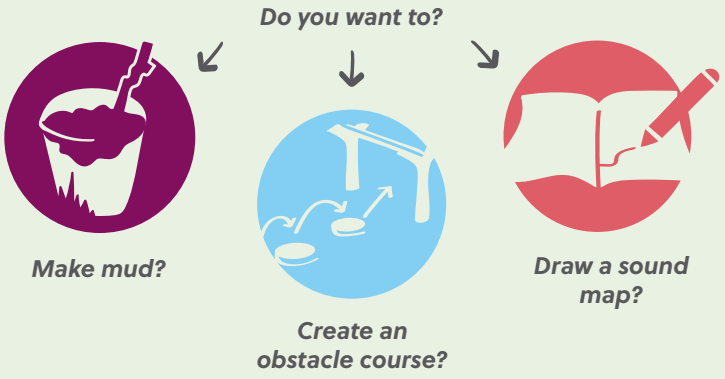
*Using Kinderforest's pedagogical approach to connect nature-based activities with classroom curriculum can be challenging. To help with this, these guidelines describe best practices when developing facilitated activities for a Kinderforest day. They can be used as a guide when choosing activities, writing lesson plans and preparing accompanying materials.*

## Elements of Kinderforest Guided Inquiry:

### 1. Student choice *between* activities

- Choice between activities provides students agency, as well as increases the likelihood each individual becomes engaged.
- Ideally, activities are immersive, intriguing and memorable. They might employ imagination, investigation, novel materials or processes, be highly sensory and more.
  - For reference, page 4 includes a sample outdoor lesson activity.
- Activities should **hook** students' interests with minimal directions required.

**STUDENT CHOICE BETWEEN ACTIVITIES**




**HOOKING STUDENTS' INTEREST:**

Effective activities are so compelling to students that minimal explanation is required to draw their attention or spark their imagination. Some effective ways to 'hook' students' interests may involve: new materials or equipment, a challenge, or opportunities for creativity.

**SOME EXAMPLES INCLUDE:**

- Inviting students to construct a shelter for a small animal *("What does a toad need for a home?")*
- Engaging in water play by splashing in puddles, building bridges, measuring depth, scooping, mud play, etc.
- Experiencing novel seasonal changes *(Allow students to engage in ice play near a frozen wetland)*

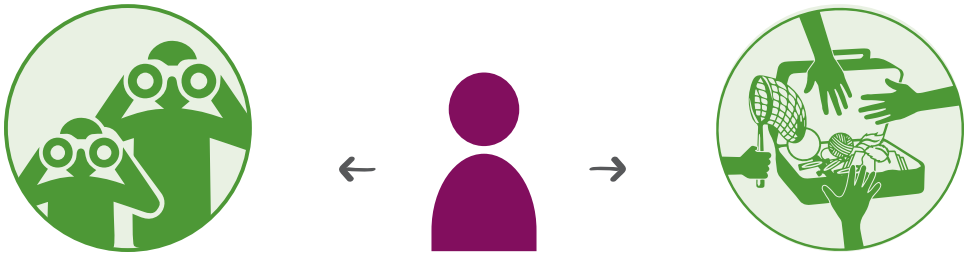
# Elements of Kinderforest Guided Inquiry: *(continued)*

## 2. Student choice *within* activities (allow novel ways of engaging):

The most engaging and successful activities offer students many options for **how to do the activity, how to use the materials,** or **otherwise interact** with the content.

- Can students use a variety of skills to complete the activity? **For example:** large motor skills, writing or problem solving.
- Does it involve sensory-rich elements? **For example:** building and constructing, social interactions or using all 5 senses.
- Does the activity offer students the chance to surprise instructors with their creativity? In our experience, students often worked outside expected parameters. **For example:** when making mud, some students added smells to their mixtures like a black walnut husk — something we did not expect!


## 3. The instructor's role is to empower and support the students as:




a. **Co-discoverers with the students.** Educators should model curiosity and inquiry as an avenue towards discovery. This encourages students to engage in wonder, emerging interests or problem solving.

- Ask open-ended questions to stimulate new ideas for students or ways to draw in unengaged learners. The lesson plan should include suggestions like:
  - *How are you going to...? How else could you do it?*
  - *What would happen if you...?*
  - *What other materials can you use?*
  - *What does the ___ look like? Feel like? Smell like?*
  - *What do you see? Why is the ___ like that?*
  - *Can you make it ___(bigger/longer/shorter/with fewer/more, etc.)?*

b. **A facilitator for encouraging student-directed learning.** Kinderforest lesson planning should evolve throughout the year to:

- **Empower students' continued growth.**
  - Educators actively monitor and support students' development: *Ex: their increasing familiarity with the woods, or the tools necessary for scaffolded exploration.*
- **Balance student interest with intended outcomes.**
  - The instructor should be able to easily identify the **purpose** of a specific activity, and be ready to **support** how each student connects to and achieves that purpose. *(Ex: is the activity's goal to support writing skills?, reinforce math concepts?, allow for large-motor development? etc.)*
  - Supported student agency will inevitably connect to curricular outcomes within a well-designed lesson.

# Elements of Kinderforest Guided Inquiry: *(continued)*

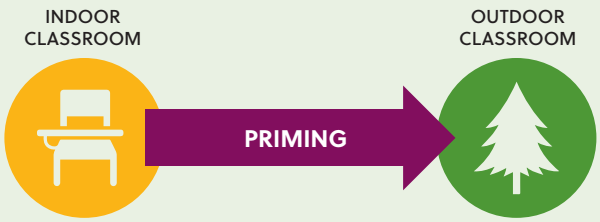
## 4. Connection to the indoor classroom:

Connecting Kinderforest activities and indoor classroom work makes the learning during a Kinderforest day both deeper and more meaningful. Simple ways to do this include:

**Alignment:** Correlate and time Kinderforest activities with year-long classroom curriculum.


**For example:** once shapes are introduced in class, apply this knowledge on a Kinderforest day by looking for and making shapes in a natural setting.

**Priming:** Research the activity or topic in advance.




**For example:** before building nests at Kinderforest, study bird homes in class and the properties of materials birds use to make their homes.

**Practicing:** Use *skills* in advance and reinforce them during Kinderforest.


**For example:** paint with traditional paints and paper in class, then practice these skills in the woods, using natural materials to make and use paint (like mud, berries, bark, etc).

**Sparking:** Experiences in the woods often sparks new and emergent interests!


**For example:** seeing migrating birds can lead to classroom activities on migration, hibernation and more.

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# Appendix A: Kinderforest outdoor lesson activity example

## Discovery Activity: Makin' mud

**1) OVERVIEW:**

Students explore mixing two materials (water and soil) to create a substance with new properties (mud). Students experiment with process, materials, proportions and physical characteristics.

**2) DIRECTIONS:**

**a. Hook:** Explain to students that in this activity, they will experiment with making mud... but they have to figure out how to make it and what to do with it!

1. Novel materials: spray bottle/cup of water and dirt
2. Spark imagination: What could you do with these two things? Individually? Together?

**b. Show** students where they can access water and dirt to help with this activity (e.g. a cooler, bucket or stream)

**c. Encourage** and facilitate free-form, self-directed exploration.

*Note: Educators shouldn't direct students to "do" anything specific with the mud. Students will inevitably choose what they want to create or do with the mud, whether that's make a mud pie or use mud as finger paint. See extensions below for suggested facilitation techniques and avenues of inquiry.*

*These directions are intentionally vague and open-ended! If students ask clarifying questions like, "Where can I find some dirt? How can I get the dirt?" reflect the question back to them. For example: "What do you think? What ideas do you have?"*

**3) EXTENSIONS AND QUESTIONS FOR FACILITATORS:**

**a. These broad questions** can be used to instigate or prompt students to describe their thinking:

1. How are you going to make the mud?
2. What other materials can/did you add to the mud?
3. How could you _____?
4. How did you _____?

**b. Here are more** specific suggestions to encourage or identify student learning and prompt curiosity:

1. What would happen if you added more water? Soil?
2. Describe the texture: what does it feel like, smell like, etc.? Is it sticky? Dry? Does all mud feel the same? Why or why not?
3. How quickly does/did it dry? Can/did you make it dry faster somehow?
4. Does/did the color change when you _____?
5. Where else is mud found? How does it change throughout the year? Is it always possible to make mud?

**4) MATERIALS NEEDED:**

**a.** Cups or other containers for mixing mud (optional)

**b.** Water cooler (if no water source nearby)

## Connections to Indiana Academic Standards:

*From a curriculum development standpoint, connections to academic standards are not the driving force in allowing students to make mud. Rather, this activity is chosen because it provides a rich experiential opportunity, divergent avenues of inquiry dependent on individual choice, multiple modality options and other pedagogical reasonings. Nonetheless, within this example, students' muddy investigations directly connect to multiple academic standards:*

- Students must plan and conduct their investigation, using senses to describe and classify objects by their properties **(K.PS.1)**, by communicating with others, and through generating questions **(K.PS.1)** about their process.
- They identify and explain uses for an object (substance) based on its properties and compare with others **(K.PS.2)**.
- Depending on a student's end product, connections also exist for: Life Science **(LS)** (e.g. the smell and color of black walnut husk added to mud mixtures) and Engineering **(E)** standards (e.g. using conversations, tools, and models to create dams, redirect streams of water, construct shelters, etc.).

### PHYSICAL SCIENCE

- **K.PS.1** Plan and conduct an investigation using all senses to describe and classify different kinds of objects by their composition and physical properties. Explain these choices to others and generate questions about the objects.
- **K.PS.2** Identify and explain possible uses for an object based on its properties and compare these uses with other students' ideas.

### LIFE SCIENCE

- **K.LS.2** Describe and compare the physical features of common living plants and animals.

### ENGINEERING

- **K-2.E.1** Pose questions, make observations, and obtain information about a situation people want to change. Use this data to define a simple problem that can be solved through the construction of a new or improved object or tool.
- **K-2.E.2** Develop a simple sketch, drawing, or physical model to illustrate and investigate how the shape of an object helps it function as needed to solve an identified problem.