

Games, Nature, & Experiments Teacher Pacing Guide

This unit was developed with Social Emotional Learning (SEL) Competencies, 21st Century Skills, and Next Generation Science Standards (NGSS) in mind. The activities in this unit provide unique opportunities for students to explore the world around them, complete homemade science experiments, and play bonding games with peers and family members.

These activities are listed in their recommended order, categorized by subject. Most activities are designed to stand on their own, with the exception of the Leave No Trace (LNT) Principles activities. The LNT activities are meant to be completed in order, as listed below. Students may utilize family members or close-by peers to participate in the activities that require more than one person.

Lesson Titles	Grade Levels	SEL Competencies, 21 st Century Skills, & NGSS Standards	Timing	Format	Activity Description	Suggestions for differentiation
Games						
Microwave or Toaster Game	All grades	Critical Thinking, Creativity, Collaboration, Communication, Social Skills	5-10 min	Activity Guide with Game	Students will play a word game to try to guess a mystery item. No materials are needed to play this game.	Students can make this game more challenging by choosing items that are more difficult to guess and vice versa.
The Paper Game	All grades	Creativity, Collaboration, Communication, Social Skills	10-20 min	Activity Guide with Game	Students will play a writing/drawing game that encourages collaboration, creativity, and communication skills.	If flipping cards becomes confusing, students can double the number of cards that they play with, placing words or drawings underneath the stack for every rotation.
In Grandma's Attic	All grades (ideal for younger students)	Creativity, Collaboration, Communication, Social Skills	5-10 min	Activity Guide with Game	Students will play a quick word game using the letters of the alphabet. No materials are needed to play this game.	Students can challenge themselves by having each player come up with an original answer for each letter (without repeating)!
Rock, Paper, Scissors, Split!	All grades	Critical Thinking, Communication, Social Skills	5-10 min	Activity Guide with Game	No materials needed! Students may play this game adapted from Rock Paper Scissors that encourages critical thinking, communication, and social skill development.	When playing with more than two participants, additional players can face the winner of each match.
Game of Things	All grades	Critical Thinking, Creativity, Collaboration, Communication, Social Skills	10-60 min (depending on the number of rounds)	Activity Guide with Game	Students will play a fun game to see how well they know their friends and family members by identifying the "things" they each have chosen.	Students can use the prompt ideas provided, or they can come up with their own!
Beast Master	All grades	Critical Thinking, Creativity, Communication, Social Skills	10-15 min	Activity Guide with Game, and Video	No materials needed! Students will play this game, which is similar to Rock Paper Scissors, to see if they have what it takes to become the next 'Beast Master'.	Students can create their own animals and motions for this game to add variety.
Utter Ridiculousness	All grades	Communication, Social Skills	5-10 min	Activity Guide with Game	Students will play this game to test their reflexes and speed. No materials are needed for this game.	This game can be played with two or more participants. It can also be played tournament-style!



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Games (continued)						
Coyote Snake	All grades	Communication, Social Skills	5-10 min	Activity Guide with Game	Students will play this game to tests their reflexes and speed. No materials are needed for this game.	This game can be made more difficult by playing with both hands!
Five in Ten	All grades	Creativity, Collaboration, Communication, Social Skills	5-10 min	Activity Guide with Game	Students will play a game where they have ten seconds to list up to five items within a designated category.	Students can create their own categories for this game.
Manic Math	All grades	Communication, Social Skills	5-10 min	Activity Guide with Game	Students will play a math game that tests their reflexes and builds social skills.	Students can choose to play with both hands. This will make the game more challenging!
Bottle to Boot	All grades	Critical Thinking, Creativity, Collaboration, Communication, Flexibility, Leadership, Initiative, Social Skills	10-15 min	Activity Guide with Game, and Video	Students will play a game that focuses on teamwork and communication.	The facilitator can choose to alter gameplay by calling different numbers from each side (e.g. the first number called would be for team 'A', and the second could be for team 'B'). Third and fourth numbers can also be added in this same fashion (1st number - team 'A', second number - team 'B', third number - team 'A', fourth number - team 'B'). This would make the game more challenging!
Fish Bowl	All grades	Creativity, Collaboration, Communication, Flexibility, Initiative, Productivity, Social Skills	30-60 min	Activity Guide with Game	Students will play a charades game that builds comradery and communication skills.	There are four different variations/rounds to choose from in this game, and it can be played with or without a facilitator.
Nature-based Activities						
Shark Drawing	All grades	Creativity	10-15 min	Activity Guide	Students will learn about Great White sharks, following the steps to create their own shark drawings.	Students can choose to draw a different species of shark, or create a new species of their own.
Rangeland	All grades (with guidance)	3-LS4-4: Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.	10-15 min	Video and written Activity Guide	Students will learn about the Nevada Rangeland and make connections the various problems that can affect it.	For younger students, read content aloud, and work together to decide how nature is affected by the different rangeland problems.
Leave No Trace (LNT) Principle 1 - <i>Plan Ahead & Prepare</i>	All grades (with guidance)	Self-Awareness, Self-Management, Responsible Decision-Making, Social Awareness	60 min	Written Activity Guide	Students will learn about the 1st LNT principle and complete an activity to demonstrate their new knowledge.	Each of the 7 LNT Principle lessons should be completed to ensure a thorough understanding of each. Students can choose the order in which they are covered based on the time they have available on a given day.
Leave No Trace (LNT) Principle 2 - <i>Travel & Camp on Durable Surfaces</i>	All grades (with guidance)	Self-Awareness, Self-Management, Responsible Decision-Making, Social Awareness	50 min	Written Activity Guide	Students will learn about the 2nd LNT principle and complete an activity to demonstrate their new knowledge.	Each of the 7 LNT Principle lessons should be completed to ensure a thorough understanding of each. Students can choose the order in which they are covered based on the time they have available on a given day.



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Nature-based Activities (continued)						
Leave No Trace (LNT) Principle 3 - <i>Dispose of Waste Properly</i>	All grades (with guidance)	Self-Awareness, Self-Management, Responsible Decision-Making, Social Awareness	50 min	Written Activity Guide	Students will learn about the 3rd LNT principle and complete an activity to demonstrate their new knowledge.	Each of the 7 LNT Principle lessons should be completed to ensure a thorough understanding of each. Students can choose the order in which they are covered based on the time they have available on a given day.
Leave No Trace (LNT) Principle 4 - <i>Leave What You Find</i>	All grades (with guidance)	Self-Awareness, Self-Management, Responsible Decision-Making, Social Awareness	20 min	Written Activity Guide	Students will learn about the 4th LNT principle and complete an activity to demonstrate their new knowledge.	Each of the 7 LNT Principle lessons should be completed to ensure a thorough understanding of each. Students can choose the order in which they are covered based on the time they have available on a given day.
Leave No Trace (LNT) Principle 5 - <i>Minimize Campfire Impacts</i>	All grades (with guidance)	Self-Awareness, Self-Management, Responsible Decision-Making, Social Awareness	20 min	Written Activity Guide	Students will learn about the 5th LNT principle and complete an activity to demonstrate their new knowledge.	Each of the 7 LNT Principle lessons should be completed to ensure a thorough understanding of each. Students can choose the order in which they are covered based on the time they have available on a given day.
Leave No Trace (LNT) Principle 6 - <i>Respect Wildlife</i>	All grades (with guidance)	Self-Awareness, Self-Management, Responsible Decision-Making, Social Awareness	20-60 min	Written Activity Guide	Students will learn about the 6th LNT principle and complete an activity to demonstrate their new knowledge.	Each of the 7 LNT Principle lessons should be completed to ensure a thorough understanding of each. Students can choose the order in which they are covered based on the time they have available on a given day.
Leave No Trace (LNT) Principle 7 - <i>Be Considerate to Others</i> + Answer Key	All grades (with guidance)	Self-Awareness, Self-Management, Responsible Decision-Making, Social Awareness, Relationship Skills	20 min	Written Activity Guide	Students will learn about the 7th LNT principle and complete an activity to demonstrate their new knowledge.	Each of the 7 LNT Principle lessons should be completed to ensure a thorough understanding of each. Students can choose the order in which they are covered based on the time they have available on a given day.
Leave No Trace (LNT) Activity - <i>What's Wrong with this Picture?</i> + Answer Key	All grades	Self-Awareness, Self-Management, Responsible Decision-Making, Social Awareness	10 min	Written Activity Guide	Students will demonstrate their knowledge on the 7 LNT principles by determining what is wrong within each photograph, which principle is being disregarded, and how.	Student who have not yet learned about each of the 7 LNT Principles should look at the 7 LNT lessons prior to completing this activity.
Leave No Trace (LNT) Activity - <i>LNT Jeopardy</i>	All grades (with guidance)	Collaboration, Communication, Media Literacy, Technology Literacy, Flexibility, Leadership, Initiative, Social Skills	30-45 min	Written Activity Guide	Students will use the link provided to access the Online Jeopardy Game that asks questions about LNT principles.	Students can choose how many questions they attempt to answer. Student who have not yet learned about each of the 7 LNT Principles should look at the 7 LNT lessons prior to completing this activity.
Leave No Trace (LNT) Activity - <i>Sort, Recycle, Repeat</i>	All grades	Self-Awareness, Self-Management, Responsible Decision-Making, Social Awareness	10-20 min (per day, indefinitely)	Written Activity Guide with Game	Students will learn about recycling, why it matters, and how they can recycle at home.	Students can review LNT Principle #3 Dispose of Waste Properly, to review the importance of handling waste responsibly, before beginning.

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Lesson Titles	Grade Levels	Standards	Timing	Format	Activity Description	Suggestions for differentiation
Experiments						
Inflating Balloon	6th-8th	MS-PS1-2: Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.	30 min	Activity Guide with Science Experiment	Students will use the Scientific Method to study the chemical interaction between baking soda and vinegar.	Students can experiment with the ratios of baking soda and vinegar to see how it affects the chemical reaction.
Tie-Dye Milk	3rd-5th	5-PS1-1: Develop a model to describe that matter is made of particles too small to be seen.	15 min	Activity Guide with Science Experiment	Using the Scientific Method, students will study the chemical interaction between soap and milk molecules.	If some materials are hard to find at home for this activity, students can improvise for the cotton swab by using a toothpick, skewer, etc.
Water Mixture	6th-8th	MS-PS1-2: Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.	20-30 min	Activity Guide with Science Experiment	Students discover how temperature affects water molecule interactions by using the Scientific Method.	Depending on the colors of food dye at home, students can vary the colors used in this experiment.
Homemade Instruments	All grades (with adult assistance)	Critical Thinking, Creativity	10-30 minutes per instrument	Activity Guide with Craft	Students will create their own homemade instruments from scratch, modifying them to make different sounds.	Students can choose from the instruments listed, and make as many or as few as they would like.
Pots 'N Pans Ping Pong	All grades	K-2-ETS1-1: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	15 min	Activity Guide with Game	Students will experiment with the placement and angle of pots and pans to be able to bounce a ping-pong ball inside of a cup.	Students can alter the number and position of the pans used to make this challenge easier or more difficult.