

Wisconsin Future Problem Solving  
An Affiliate of Future Problem Solving Program International

# LEAP!

## LEarning About Problem Solving

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For Grades 1-5



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### Welcome to LEAP for Grades 1-5

Welcome to LEAP – **LE**arning **AB**out **P**roblem Solving. This component is designed to introduce creative problem-solving skills to students in Grades 1-5 as a part of the curriculum, in enrichment groups, or in other clubs or groups. LEAP starts students on the path to gain the life skills needed to become effective problem solvers, using critical and creative thinking skills. The program allows students and teachers to learn the Creative Problem Solving process in a simplified format, taking into consideration the students' comprehension and skill levels.

### Why LEAP?

- **Simplified model:** LEAP teaches a systematic model for problem solving that is less complex than the competitive model used in grades 4-8. It parallels almost any other problem solving model you can find.
- **Authentic thinking skills:** Students learn to use both critical thinking and creative thinking to make informed choices and to address complicated situations. Students learn how to think, not what to think.
- **Collaborative experience:** Teachers model the problem solving process and guide students to work together in a collaborative, non-threatening manner towards a common goal.
- **Adjust for age level:** For younger students in grades 1-2, most of the work will be done through large group discussion, with the teacher recording the students' ideas. Older students could still participate through large group discussion, or could work in groups of 2-4 students with the guidance of the teacher, doing some of their own writing.
- **Flexible options:** LEAP can be implemented as an extension to curriculum units, in exploratory classes, in enrichment groups, with English Language Learners, in out-of-school clubs or groups, and more. It could be used with older students in certain situations, for example, English Language Learners of any age.



**Register online:** You can register for LEAP at [wisfps.org](http://wisfps.org). Go to the Registration and Fees page and click on the Registration Form. A \$60 registration includes *Instructional Lessons* that can be used with an entire class and *LEAP with Challenge Scenes* to be used after completing the lessons. The work on Challenge Scenes may be submitted for feedback for \$10 per booklet. Each teacher using the materials should have a separate registration. You may continue to use the materials with your students each year.

## The LEAP Program Has Two Parts

You will receive both parts when you first join the program.

### PART 1: LEAP Instructional Lessons

This part provides you with lesson plans for your students' first experiences with problem solving. You can use these lessons with your students every year.



- **Adjust to student skills:** When introducing the problem solving process, model each step as much as you can. For younger students, you may continue to record all of the work. Students who are able to write fairly well may complete parts of the writing themselves as they become more experienced. Teach one step at a time – modeling, discussing, and adapting as student needs emerge.
- **Templates for the problem solving steps:** There are templates for writing each of the problem solving steps. These include brainstorming jotboards, “fill-in-the-blank” sentences, selecting ideas from a list, and answering specific questions. For younger students, some of the writing is optional and the teacher will record the rest.
- **Integrate the steps into curriculum:** As you are working through the lessons, and after you complete them, look for places to practice the problem solving steps one or two at a time using your regular curriculum material. Reading, social studies, and science may all have areas in which students can practice their thinking skills. There are suggestions in the Appendix.
- **Note:** Each teacher who uses the lessons should have their own purchased copy.

### PART 2: LEAP with Challenge Scenes

In addition to the Part 1 LEAP Instructional Lessons, you will receive Part 2 LEAP with Challenge Scenes. Part 2 has materials in three documents to use with students.



- **Plan a second and even a third experience:** Using the materials from LEAP with Challenge Scenes, plan for students to have additional problem solving experiences after completing the Instructional Lessons in this document,.
- **Multiple Challenge Scenes:** Part 2 materials includes 10 Challenge Scenes on multiple topics so that you can select ones that best fit your students and your situation. As an alternative, you can create your own. You may use these scenes with as many students as you want.
- **Submit for feedback:** Completed Challenge Scenes booklets may be submitted at any time for feedback, for \$10 per booklet. Submitting for evaluation is not required, of course, but we strongly recommend that you do so. Trained evaluators will provide feedback on the work. You may continue to use the materials with as many of your own students as you wish.

## How do the Instructional Lessons work?

**Based on Short Situations for Problem Solving:** The basis for the problem solving work in the Instructional Lessons are short nursery rhymes and fantasy events.

**Six step process:** Students learn to apply a 6-step problem solving process to the Short Situations for Problem Solving. (In competitive Global Issues Problem Solving, Steps 4 & 5 are separated.)

- Step 1 – Identify Challenges
- Step 2 – Select an Underlying Problem
- Step 3 – Produce Solution Ideas
- Step 4/5 – Generate and Apply Criteria
- Step 6 – Develop an Action Plan



### Getting Started

**Choose a set of materials:** The LEAP Instructional Lessons includes three sets of materials, so that the instruction can be repeated in several grade levels

at a school without repeating the content. For example, teachers in Grade 2 use Set A, in Grade 3 use Set B, in Grade 4 use Set C. Read through the Short Situations for Problem Solving and the Possibilities for the situations in the Appendix and select ONE set. Then select ONE of the options from the set to use for the instruction – the nursery rhyme or the fantasy scene. If you have teachers in multiple grade levels using the materials, coordinate so you are each using a different set.

Set A	Set B	Set C
Brainstorming prompts	Brainstorming prompts	Brainstorming prompts
Choice of 2 Short Situations	Choice of 2 Short Situations	Choice of 2 Short Situations
Possibilities for both situations	Possibilities for both situations	Possibilities for both situations
Criteria with candy bars	Criteria with cookies	Criteria with games

**Review the problem solving steps:** Read through all of the instructions in this document and look through the Appendix. Plan to teach one or two lessons at a time.

**Use the Possibilities carefully:** The Challenge Scene Possibilities documents are your “cheat sheets” but they are NOT RIGHT ANSWERS! They were developed by Wisconsin high school students who are experienced problem solvers. They are intended for your background thinking, but during the instruction the thinking and ideas should be those of the students. You may use an idea from the Possibilities if the students seem completely stuck, but use very sparingly.

**Recording the work:** There are multiple options for recording student work. Do keep a record of the student work on the lessons so you can revisit it later and share with parents.

**Remember to have fun!** There is no one right answer when problem solving. Ideas should be relevant to the situations but do not need to be realistic in today’s world! The goal is to engage students in the critical and creative thinking skills of problem-solving.

# LEAP Lessons Instructional Plan



Getting Started	Lesson 1	Start with Brainstorming
	Lesson 2	Introduce the Short Situation
<b>Step 1</b> Identify Challenges	Lesson 3	Identify Challenges
	Lesson 4	Write Challenges
<b>Step 2</b> Select an Underlying Problem	Lesson 5	Select an Underlying Problem
<b>Step 3</b> Produce Solution Ideas	Lesson 6	Produce Solution Ideas
	Lesson 7	Write Solution Ideas
<b>Step 4</b> Generate and Apply Criteria	Lesson 8	Learn About Criteria
	Lesson 9	Rank Ideas with Criteria
	Lesson 10	Generate Criteria for Underly Prob
	Lesson 11	Apply Criteria to Solution Ideas
<b>Step 5</b> Develop an Action Plan	Lesson 12	Develop an Action Plan

Note: Lessons 4 and 7 are optional for younger students