

# Solving the Problem

This modelling the tools is incorporated into critical challenges at Kindergarten, however, it can be adapted for use at all grade levels.

## Overview

The detailed activities that follow help students identify an effective solution to assist someone facing a challenge or difficulty. (This lesson focuses on helping a newcomer to the school or community, but may be adapted to address other situations.) The emphasis is on helping students tailor their proposed solutions to the particular needs of the individual. Students learn about the concepts of problem and solution by matching cards that describe familiar problem situations with cards that describe relevant solutions. Students then compare their experiences on the first day of school with those of the child in a story. Students list the child's difficulties and identify possible solutions for each problem. After developing criteria, students generate three possible solutions and choose the best response to a fictional or actual challenge faced by a new student or neighbour. Finally, students role-play their welcoming action.

## Preplanning

Preview story.

- Session Two uses the story, *From Far Away*, by Robert Munsch to introduce the difficulties that newcomers face when adjusting to a new cultural setting (see References). This story is based on an actual 7-year-old girl's letters that describe her early school experiences in Canada after moving from Lebanon. Note that this story describes the nervous young girl peeing on her teacher's lap and also refers to Halloween. *Franklin's New Friend*, by Paulette Bourgeois, could also be used to introduce the idea of welcoming newcomers in the neighbourhood or school (see References). You may prefer to select other books, depending on the kind of problem you want students to consider.

## Session One

Distribute problem and solution cards.

- Prepare students for the main theme of the lesson by inviting them to identify solutions that match various problems. Duplicate and cut out the eight cards found on [Problems and Solutions](#). (Print each set on a different colour paper for ease in sorting.) Give each pair of students a set of cards and ask them to organize the cards in some way that makes sense. If desired, read the cards aloud to the class or invite students to read the cards in small groups. With very young students, reduce the number of cards and complete the activity as a class.

Share sorted categories.

- Invite them to share what they noticed when they sorted the cards. Draw out from the discussion that half of the cards describe problems and the other half describe corresponding solutions. If they have not already done so, invite students to match the relevant solution to each problem.
- Ask students to describe what they know about the concepts of problem and solution. Record these ideas on a chart, such as the one below.

### Comparing Problems and Solutions

Problems...	Solutions...
• <i>need to be fixed</i>	• <i>are answers to a problem</i>
• <i>are things we don't like</i>	• <i>fix the problem</i>
• <i>happen all the time</i>	• <i>often come from someone else</i>
• <i>happen to everyone</i>	• <i>sometimes come from the person with the problem</i>

Practise matching problems and solutions.

- Explain that a good problem solver is able to match the problem with a specific solution. Distribute a copy of [Matching Problems with Solutions](#) to each student or pair of students. Ask students to cut out the 10 cards and sort the cards into two piles: problems and solutions. Before proceeding, confirm that students have five cards in each pile. Ask students to print in the small square in each box the letter S on the cards in the solutions pile and the letter P on the cards in the problems pile. Then, invite students to match each problem card with an appropriate solution card. With very young students, reduce the number of cards and complete the activity as a class.

Paste matched pairs.

- Distribute a copy of [Matched Pairs](#) to each student or pair of students. Ask students to paste each matched pair of cards in one of the rectangular boxes, with the problem cards on the left and the solutions cards on the right. Review students' answers, inviting them to explain why the match solution is likely to solve the problem. The correct pairings are listed below, although the ordering of these pairs will differ.

## Matched Pairs

Problems		Solutions
#9	matches with	#1
#2	matches with	#8
#3	matches with	#7
#6	matches with	#4
#10	matches with	#5

## Session Two

Recall students' experiences.

- Ask students to recall what it was like when they first came to school in kindergarten. Discuss whether they had feelings of uncertainty about how to do things or what was expected of them; e.g., What problems did you encounter? Did you know where you were supposed to go? Did you know what you were supposed to do? How did you feel?) List the difficulties they encountered. Invite students to speculate what it would be like to go to school in another country where people do not speak their language and things are much different. Explain that you are about to read a true story about a little girl named Saoussan who came to Canada from Lebanon or introduce the alternative story you have selected to read.

Read and discuss story.

- After reading the story, review with students what it was like for Saoussan in her new school. Ask students to suggest some of the things that happened that might have made Saoussan feel badly; e.g., couldn't understand what the teacher wanted, frightened by the Halloween skeleton, peed on the teacher's lap. Record these in a column under the heading, Saoussan's Problems. Invite students to comment on whether or not they think Saoussan's difficulties are very different from their own. Encourage students to share similar experiences they have had in moving to an unfamiliar setting. Help students appreciate that Saoussan did not understand many things about the culture in her new country, might have missed life in her own country and probably felt confused and alone.

Brainstorm possible solutions.

- Ask students to imagine that Saoussan had moved to their school and become a new member of their class. Ask students to suggest how they might have helped Saoussan overcome each of the identified difficulties. As shown below, record students' suggested solutions in a column next to the list of problems. Accept all suggestions and encourage several possibilities for each problem. Use stick drawings to record ideas if students are emergent readers.

## Helping Saoussan

Saoussan's problems	What we could do
<ul style="list-style-type: none"> <li>• <i>couldn't understand teacher</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>show her what to do</i></li> <li>• <i>speak to her in her own language</i></li> </ul>
<ul style="list-style-type: none"> <li>• <i>couldn't talk with other children</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>smile and show her what to do</i></li> <li>• <i>use a few words in her own language</i></li> </ul>
<ul style="list-style-type: none"> <li>• <i>was frightened by the Halloween skeleton</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>show her pictures of children in costume</i></li> <li>• <i>take down the Halloween skeleton</i></li> </ul>
<ul style="list-style-type: none"> <li>• <i>was scared by the teacher jumping up and down</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>explain things to her in a quiet way</i></li> <li>• <i>give her a hug</i></li> </ul>

Develop criteria.

- Review the list of suggested solutions with students. Ask students to consider how they might decide which of the suggestions would be the best for each of Saoussan's difficulties—what factors or criteria should they use? If necessary, offer additional, obviously flawed suggestions (e.g., tell Saoussan to be quiet, send her home until she learns to behave) to help students generate criteria for the solution, such as the following:
  - solves the problem
  - is realistic; i.e., students are able to do it
  - respects her feelings.

Ask students to use these criteria to select the best solutions for the remaining problems. Alternatively, suggest a new problem not mentioned in the story (e.g., Saoussan has no books) and invite students to brainstorm possible solutions before selecting the option that best meets the agreed-upon criteria.

### **Session Three**

Introduce the newcomer scenario.

- Using a real situation, a storybook or a hypothetical scenario, present to the class the predicament of a person who is new to the school or community. In the case of an actual newcomer to the school, introduce this discussion before the student arrives. If using a hypothetical scenario, develop a set of problematic circumstances, as suggested by the following example:

Kamik is eight years old. He has just moved here from a very small town in the far north of Canada. He is not used to living in a community with lots of other people and he misses his friends and the open spaces of his former home. The games he played at school are very different from the ones played at our school.

Present the critical challenge.

- As a class, identify and make a list of the problems that the newcomer is encountering. Invite students to work individually or with a partner to address the critical challenge:

*Select the best way to assist with one of the difficulties faced by a newcomer to the class or the community.*

Explain to students that they should think of three possible solutions to the problem they identified. If appropriate, answer the critical challenge as a class or collectively brainstorm possible solutions for each of the identified problems. Distribute a copy of [Identifying Solutions](#) to each student or pair of students. Direct them to identify, on the top of the sheet, the problem they have selected and to draw pictures of and, if able, label their three possible solutions. Encourage students to consult the class list of suggested solutions to Saoussan's difficulties, since some of these ideas may apply to the new scenario. When students have identified and drawn the possible solutions, invite them to consider which of their three options best meets the agreed-upon criteria. If students are uncertain, guide them in their analysis by posing questions about each option's fulfillment of each criterion; e.g., Does this solution respect the person's feelings? Help with the person's problem? When students have selected their best response, invite them to record its number in the box, at the bottom of the page, and to explain why this option is a good choice.

Role-play.

- Ask students, in turn, to pretend they are the newcomer to their classroom. Explain that the student who is acting as the newcomer does not know what to do in the classroom. Introduce the newcomer and identify one of this person's difficulties. Ask students who addressed this particular problem to role-play a proposed solution. Encourage the newcomer to respond, in role, to the helping action. Invite students to consider how well each helping action meets the agreed-upon criteria. If this challenge involves an actual newcomer, decide as a class before the newcomer arrives which, if any, of the proposed actions will actually be implemented and by whom.

## **Evaluation**

Assess decisions.

- Assess students' ability to recognize and select a solution to a newcomer's problem, using the rubric [Assessing Problems and Solutions](#). The sources of evidence and the four criteria for assessment are listed below:

- Use the sorting of the cards found on [Problems and Solutions](#) and [Matching Problems and Solutions](#) to assess students' ability to distinguish problems from solutions.
- Use the paired responses, pasted on [Matched Pairs](#), to assess students' ability to recognize a relevant solution to a problem.
- Use the responses, recorded on [Identifying Solutions](#), to assess students' ability to propose multiple solutions and select a best solution.

Reaching the basic understanding level on the rubric may be appropriate for many primary students.

## **Extension**

Apply the lessons learned.

- When a suitable opportunity arises to welcome a newcomer to the classroom or neighbourhood, invite students to identify some of the problems that the person faces or is likely to face and to suggest several possible solutions to each problem. Then, select a solution to implement. Stress the importance of being respectful of the person's feelings when deciding what help to offer.

## **References**

Bourgeois, Paulette. *Franklin's New friend* (illustrated by Brenda Clark). Toronto: Kids Can Press, 1990. (ISBN 1-55074-363-5)

Munsch, Robert and Saoussan Askar. *From Far Away* (illustrated by Michael Martchenko). Toronto: Firefly Books, 1995. (ISBN 1-55037-396-X)

## **Credits**

This lesson is taken from *I Can Make a Difference*, edited by Mary Abbott, Roland Case and Jan Nicol (Richmond, BC: The Critical Thinking Consortium, 2002, ISBN0-86491-262-5) pp. 45-56. Permission granted from The Critical Thinking Consortium for use by Alberta teachers.

## **Documents**

The following documents are referenced in the above modelling the tools. They can be adapted for your needs and re-saved.

Graphic Organizers

- [Matched Pairs](#) 
- [Identifying Solutions](#) 

## Assessment

- [Assessing Problems and Solutions](#) 

## Lesson Material

- [Matching Problems with Solutions](#) 
- [Problems and Solutions](#) 