

# How to Use “Raising Scores in Problem Solving”

Here are some quick, useful ideas from some of Vermont’s leaders in curriculum and instruction, using specific page references.

## **On the “Problem Solving Process” (page 2)**

- Provide teachers with professional development and support in the pedagogy needed to teach the parts of the process.
- Present students in cooperative learning groups with the page as a format for working together on problems. Have the student group leader and process leader use the format to double-check the group’s completeness and consistency in approaching a problem.
- Provide direct instruction to students on the parts of problem solving.
- In Action Planning, use the page as a team-based process guide.
- Help teachers learn to design complex problems and tasks that call upon many abilities of a group and that require the group to work together succeed in a task.

## **On “Comparing the Vermont Mathematics Portfolio and the New Standards Reference Exam” (page 8)**

- First, assemble the school’s local results. Ask participants in Action Planning to look for patterns in the results and in local practices. Match the patterns against the lists on page 8. Do students get the opportunity to learn what they need in order to succeed?
- Have a curriculum and planning group examine page 8 to see where the two assessment tools support each other and where there are overlaps.
- Use the page to raise awareness of assessment design with school board and public.

## **On “Understanding the differences between tasks...” (pages 9 – 15)**

- Have groups of teachers read and discuss these pages to raise awareness of the need to match assessment tools with the targets of assessments.

- Collect and provide samples of the different types of assessments teachers use and compare those with the types used to measure skills, concepts and problem solving.
- Provide time and incentives for teachers to design, critique and improve their own examples.

### **On the “Generic Questions” (page 21)**

- Laminate this page and place it in every classroom that teaches problem solving.
- Ask students in cooperative learning groups to use the questions as they tackle complex tasks.
- Use the questions as prompts between mentors or teacher leaders and teachers, including preservice educators and students.
- Teach parents how to use the questions to review problems and tasks at home.
- Use the questions to raise awareness with school boards, administration and district committees, and the public.
- Have teacher groups create new pages of generic questions focusing on the assessment criteria and big ideas of content in other statewide and local assessment areas such as fine arts, science, technology, social studies, and language arts.