

Chapter 3: Problem Solve



Technology Integration

This technology integration lesson features the following technology.

- SMART Board
- Survey Monkey (www.surveymonkey.com)
- Google Share
- Pinterest (www.Pinterest.com)

Digital Integration Task

After teaching students all they need to know about this skill from the provided material, have students solve the following problem about student tardiness in the classroom.

*“Two students are regularly late to class. Tardy slips and detention have not worked.
What can the teacher do to change the students’ habit?”*

Have students, in teams, brainstorm and rank possible solutions. Collect the highest-ranking solution from each team and compile these into a single class list. Do not allow any duplication of ideas; teams whose highest-ranking idea is already posted can submit the next idea from their list.

Within each team, assign each individual a role: (1) a recorder, to capture the tardiness data on the team’s computer; (2) a coach, to ensure the team finishes all steps; and (3) a reporter, who will share data. Sign in to the free version of Survey Monkey (www.surveymonkey.com), and create a survey so students can depict their opinions about each of the highest-ranking solutions in the class list. Allow students time to collect their data by rating each solution, and tabulate the results on Survey Monkey. Then, display the results on the SMART Board or share them with team computers. Using the data, brainstorm some specific solutions to the problem of tardiness. If time allows, vote to identify the top three solutions.

Show the SOLVE acronym (page 40) on your SMART Board and invite each team to share a statement about how they think their survey readies them to develop ideas to solve the problem of tardiness.

Grade-Level Digital Variations

The following sections provide grade-level variations for incorporating technology into lessons.

► Elementary Level

Open the document “10 Games That Promote Team Problem-Solving Skills” (www.stenhouse.com/sites/default/files/public/legacy/pdfs/8247ch10.pdf). After using this chapter’s Instructional Strategy (page 40), follow with one or more of these games, and adopt an age-appropriate grading rubric to allow you to guide students to improve their problem solving throughout the school year. (An example rubric can be found online

at www.rcampus.com/rubricshowc.cfm?code=Q78X25&sp=yes&). You may wish to use a batch of these games and the rubric in a sequence, or space them over a quarter or semester interspersed with other lessons.

▶▶ Middle Level

Find an age-appropriate problem-solving rubric by searching Pinterest (www.pinterest.com), and present it to the students. Be sure to pick a rubric that highlights the problem-solving process. Adjust the rubric to match the important process elements in this lesson for your students. Present the rubric at the start of the lesson, guide a student self-review during the lesson, and conclude the lesson with a summative assessment.

▶▶▶ Secondary Level

Invite teams to make a three- to seven-slide shareware display. After you model how to make a shareware display, send a quality control rubric to each team's computer or display it on your SMART Board to guide their collaboration. Monitor the teams as they prepare the slides showing the problem, possible solutions, details on the solution they deem most successful, and reasons for selecting that solution as the best option. Remind them to use the quality-control rubric as a day-to-day checkup.