

AGENDA

- Starter
- Recycle It
- The Two-Foot Race
- Count the Ways
- Conclusion
- Student Assessment

Objectives

Students will review the decision making process and learn that they can use this process to solve problems.

Students will gather information and explore options in order to solve a problem.

Students will identify options that generate possible solutions to problems.

Materials Needed

• One copy of the "How Could I Do This?" activity sheet for each student (Part III)

PROBLEM SOLVING | IDENTIFYING OPTIONS

• **Starter** (3 minutes)

Ask students to list all of the possible ways that they could get home from school. Tell them to include all means of transportation, all possible routes, and any other ways that they can think of.

Ask students to recall the definition of the word "option," which they discussed in "Lesson 3: Identifying Options" of Module Two: Decision Making. (Students should respond: a chance to pick what is wanted.) Explain that the class is going to review the decision making process and see how it applies to problem solving.

Part I Recycle It (10 minutes)

Purpose: Students review the decision making process and learn that they can use this process to solve problems.

1. Students review the decision making process.

Ask students to describe the decision making process. Invite students to describe how they would go about making a decision or a choice. To prompt their thinking, ask them to describe what they would do before choosing a cell phone or another high-priced electronic item to buy.

Through questions and comments, help students identify the basic steps of the decision making process. Summarize the discussion by outlining the process on the board:

- 1. Gather information.
- 2. Identify as many options as possible.
- 3. Weigh the pros and cons of each option.
- 4. Make a decision.

2. Students apply the decision making process to solving problems.

Point out that students can use the steps outlined to answer the question, "What should I do?" Explain that they can also use the process to answer the question, "How should I do it?" Point out that when they answer these questions, they begin to solve their problems.

Suggest that students look through past notes for this class to see if they have written the steps of the decision making process that are outlined on the board. If they haven't, give them time to do so now.

Circle the first two steps on the board, and explain that today, students will see how these two steps apply to problem solving.

Part II The Two-Foot Race (20 minutes)

Purpose: Students gather information and explore options in order to solve a problem.

1. Students participate in and observe a demonstration.

Clear a path from one wall to another that is wide enough to allow two teams to move across the room at the same time. If you need more space, ask students to move chairs and desks aside. Ask four volunteers to join you at the front of the classroom.

Divide the volunteers into two teams. Explain that the teams will race each other across the room. Emphasize that there is only one rule: only two feet from each team can be on the floor during the race.

Give the teams time to work out a strategy. Have the rest of the class think silently of possible options for solving this problem. Tell them to observe the methods that each team uses to finish the race. When the teams are ready, have them begin the race.

2. Students discuss options for running the race.

Congratulate the winners. Ask students to describe the methods that the teams used to finish the race. Write their responses on the board. Then, ask the teams if they discussed other ways to finish the race. If they did, list those as well.

Challenge students to think of other options for how the teams could have run the race. Remind them of the "two feet" rule. Write student responses on the board. Encourage students to think of all possibilities, regardless of how silly or impractical they seem. (Students might respond: one team member stands on the other's feet and they walk together; each team member holds one foot up, then both join arms across one another's shoulders and hop; one member holds the other's feet and "walks" them across on their hands; one team member never starts, but sits with their feet up while the other member runs.)

If students don't suggest having only one member run the race, suggest that option now.

3. Students review the list of options.

Have students review the list and identify options that they think would work best. Prompt them to give reasons for their choices. After some discussion, place a star beside the two options that students agree would work best and allow them to win the race. Then, ask students to identify which of these options they would choose. If all students choose the option of having only one member run the race, congratulate them on their excellent decision making and problem solving abilities.

4. Students review steps of the decision making process.

Direct attention to the first two steps of your outline on the board. Ask, "Why was it important for you to know about the race's rule? Would the teams have been able to successfully finish the race if they didn't know the rule?" Explain to students that without this information, they would not have been able to solve the problem. Point out that it's important for them to take the time to get information they need about a problem.

Point to the list of options on the board as you discuss the importance of identifying and considering as many options as possible. Explain that people often get their best ideas when they consider things that seem impossible. Remind students that what may seem to be an "impossible" option might open up winning ideas that they may never have considered.

Save the list of options on the board for use in the next lesson.

Part III Count the Ways (15 minutes)

Purpose: Students identify options that will generate possible solutions to problems.

1. Students identify options.

Distribute copies of the "How Could I Do This?" activity sheet. Explain that students are to think about both of the problems presented and list as many ways as possible to solve them.

Tell students to number the options they list for each problem. Point out that they may want to list options in ways other than writing (e.g., by drawing). Suggest that they use the back of the activity sheet if they need more room.

Tell students to be very specific with the options they list. Explain to students that listing "ask someone for a ride" as an option for getting to their babysitting job is less helpful than listing specific people to ask.

Give students most of the time allotted for this activity to work on their options. Remind them to list all options, even those that seem picky or farfetched.

2. Students share the options they listed.

Ask students to share the options they listed for the first problem. Keep an informal count of the different options suggested. Help students split the general option "ask for a ride" into at least four specific options:

- Ask your parents for a ride both ways.
- Ask your parents for a ride one way.
- Ask the people you will be sitting for if they can give you a ride both ways.
- Ask the people you will be sitting for if they can give you a ride one way.

PROBLEM SOLVING | IDENTIFYING OPTIONS

Tell students to save their activity sheets for use in the next lesson. (Remember to write thelist of options for use in the next session as well.)

Conclusion (2 *minutes*)

Ask students to identify why it is important to list as many options as possible when trying to solve a problem. Elicit from students the following key points that were taught in this lesson:

- Knowing how to make decisions will help you solve problems.
- Take the time to get the information you need about the problem.
- When solving problems, identify as many options as possible before deciding on a solution.

Student Assessment

- 1. How is the decision making process similar to problem solving?
- 2. List three ways that listing different options can help you solve a problem.
- 3. Imagine that you sit down to watch your favorite TV show and your TV doesn't work. List five options for dealing with this problem.

LESSON EXTENSIONS

Using Quotations

"Two roads diverged in a yellow wood/...I took the one less traveled by,/And that has made all the difference."

Ask students to think of a time when they chose a less popular option or one that didn't seem as if it would work out. What happened? Have students write about the results of their decisions.

Addressing Multiple Learning Styles

Have each student create a plan for spending a \$25.00 gift card.

Have students present their detailed plans to the class. Have students discuss the various options for spending their money (e.g., saving it, budgeting it).

Writing in Your Journal

For one week, have students keep track of the problems that they encounter and possible solutions for them.

Have students share the problems they encountered and allow the class to suggest possible solutions to each one.

Using Technology

Have students search the internet for follow-up articles about the conflicts they found during the "Using Technology" extension in Lesson 1 of this module.

Divide the students into groups. Have the groups list possible solutions to each conflict.

PROBLEM SOLVING | IDENTIFYING OPTIONS

Homework

Have students find games that center around problems (e.g., board games, sports, video games).

Have students bring in the game or a description of the game and the options that it provides players.

Additional Resources

Have students read "The Lady, or the Tiger?" by Frank Stockton.

This story always engenders lively discussions. Have students write their own endings to the story and discuss the various ways it can end.

HOW COULD I DO THIS?

List all of the ways that you could solve these problems. Number the options for each one.

PROBLEM 1: You've been offered a great babysitting job on Saturday mornings that pays well, but it's in another neighborhood. How might you get there?

PROBLEM 2: You get to school and realize you forgot to charge your phone last night. You know you'll need to use it after school. What do you do?



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