Analyze the Results of Trial-and-Error Research

1. Focus

Explain Analyzing the Results of Trial-and-Error Research

Say: We have a good idea for a procedural text. We've gone through the steps ourselves to see if it works. We've made notes about problems or missed details. Now what do we do? Today we'll practice analyzing the notes we took. Then we'll decide if we need to make changes to the procedure.

Model Analyzing the Results of Trial-and-Error Research

Display the modeling text (without revisions) and the notes you took as you did your trial-and-error research in the previous lesson.

How to Draw a Piece of Happy Toast

Supplies:
• paper
• pencil
• eraser

Directions:
Draw a horizontal rectangle. Use a delicate touch and draw light lines. Next, draw an arch in each upper corner. Erase the faint lines under the arch. Now you’re ready to draw the rest of the character. Finally, color your character.

Modeling Text

Trial-and-Error Notes:
rectangle—direction?
extra step needed—erase lines
need eraser
after drawing arches, lines are hard to erase

Sample Trial-and-Error Notes

Sample Think-Aloud

Say: My first note about the procedure says “direction?” I want this cartoon character to look right, so I should tell readers how to draw the rectangle. I'll add the word horizontal to the first step. (Make the correction on the modeling text.) The next note refers to an extra step. I remember that I need to tell my readers to erase the lines in the rectangle. And, I forgot to write eraser in the supplies list. I'll do that now. (Model adding to the text.) That comment about the lines being hard to erase reminds me that I should probably add a step that

Objectives

In this mini-lesson, students will:
• Learn to analyze the results of the trial-and-error research they used to evaluate a procedure.
• Practice analyzing the results of the trial-and-error research and make adjustments to the procedure.
• Discuss the strategy and how they can apply it to their independent writing.

Preparation

Materials Needed
• Chart paper and markers
• Notes from the first trial-and-error research lesson
• Interactive whiteboard resources

Advanced Preparation
If you will not be using the interactive whiteboard resources, copy the modeling text (without revisions) onto chart paper. If necessary, copy the sentence frames from “Strategies to Support ELs” onto chart paper.

Make sure you have your notes from the previous research mini-lesson and that students have the notes they took during the practice activity.
2. Rehearse

Practice Analyzing the Results of Trial-and-Error Research

Invite students to work with their partners to analyze the notes they made during their trial-and-error research. Have them note whether they need to add supplies and ask them to write down any steps that they may need to add to make the directions clearer.

If your class includes English learners or other students who need support, use “Strategies to Support ELs.”

Share Ideas

Bring students together and invite volunteers to share the ideas they generated with their partners about their notes. Ask students what changes they would make to the steps in the procedure. Ask students to discuss how they can apply this strategy to their independent research.

3. Independent Writing and Conferring

Say: Today we learned about analyzing the results of trial-and-error research. It doesn’t do us any good to do the research but then do nothing with the results. So we read over our notes and then decide what we can do about the problems we encountered during the procedure. We can add details to the steps. We can rewrite steps. We can add steps. All of these changes will make a procedure clear and easy for readers to follow.

Encourage students to analyze their notes from their trial-and-error research. Ask them to revise their procedures based on their findings. During student conferences, reinforce students’ use of this and other strategies using the prompts on your conferring flip chart.

4. Share

Bring students together. Invite volunteers to share revisions they made based on what they learned from analyzing their notes about their procedures.

Strategies to Support ELs

Beginning
Pair beginning ELs with fluent English speakers during the partner activity. Keep in mind that they will not be able to contribute many ideas orally. You will want to work with them individually to reinforce concepts while other students write independently.

Intermediate
Pair ELs with more fluent English speakers during the partner activity. Write the following sentence frames on chart paper and model how students can use them to contribute ideas; for example:

*The steps did not show ______.*
*The supplies did not include ______.*

Advanced
Pair ELs with fluent English speakers during the partner activity.