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Teaching Reading and Writing of Procedural or How-to Text

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+ Procedural Text Purpose

- The purpose of procedural text is to instruct a reader in how to do something, typically written by someone who knows how to do the procedure for someone who must rely on the text to properly do the procedure.

Drawn from Purcell-Gates, Duke, & Martineau, 2007

+ Procedural Text Features

Based on a discourse analysis of procedural texts in science appropriate for children in grades 2 and 3, procedural text:

Almost Always

- Has a statement of goal (sometimes in the title) (e.g., "How to Grow a Plant")
- Has a materials section
- Includes methods/procedures/steps
- Uses letters or numbers to indicate the order of the steps

Drawn from Purcell-Gates, Duke, & Martineau, 2007

+ Procedural Text Features, cont.

- Has graphics, and the graphics are almost always demonstrative
- Has an explicit, clear description of materials
- Has explicit information about procedures (how, when, etc.; e.g., "In two weeks look at your plant" versus "Look at your plant later")
- Uses *you*, if any *personal pronoun*
- Employs imperative verbs (e.g., "Put...", "Make...")

Drawn from Purcell-Gates, Duke, & Martineau, 2007

+ Procedural Text Features, cont.

Often

- Has an evaluation of the outcome (e.g., "Now look at your two plants. Which one grew better?")
- Has headings/subcategories
- Lists materials in order of use
- Has a graphic of the end product (e.g., a grown plant)
- Uses units of measure (e.g., centimeters, inches)
- Provides a scientific explanation for the results
- Indicates the expected results
- Has an inquiry question

Drawn from Purcell-Gates, Duke, & Martineau, 2007

+ Procedural Text Features, cont.

Less often

- Includes temporal terms (e.g., first, then, next, before, after)
- Has the procedure represent something (e.g., a "tornado" in a bottle to represent a real tornado; stacking pillows to represent sedimentary rock)

Drawn from Purcell-Gates, Duke, & Martineau, 2007

+ Some Procedural Trade Books

- Katzen, M., & Henderson, A. L. (2004.) *Pretend soup and other real recipes: A cookbook for preschoolers and up*. New York: Tricycle Press.
 - This has wordless procedural texts!
- Pratt, L. (2006). *Fairytale things to make and do*. London: Usborne.
- Pinnington, A. (2004). *Rainy day activity book*. New York: priddybooks.
- VanCleave, J. P. (1992). *Janice VanCleave's 200 Gooney, Slippery, Slimy, Weird and Fun Experiments*. Hoboken, NJ: Wiley, John & Sons.

+ Some Procedural Trade Books

- Whiter, B. (2001). *Balloon animals*. New York: Mud Puddle Books.
- Solga, K. (1991). *Make gifts!* Cincinnati, OH: McGraw-Hill Ryerson.
- Hewitt, S. (2000). *Nature for fun projects*. Brookfield, CT: Copper Beech Books.
- Neuman, M. (2006). *Fabulous hair: Find your best look!* New York: DK Publishing.
- Smith, J. (2007). *How to be a spy in 7 days or less*. Boston, MA: Kingfisher.
- Criswell, P. K. (2003). *A smart girl's guide to friendship troubles*. New York: American Girl Publishers.



+ Real-World Literacy Events

- Have students read and write real-world procedural texts for real-world purposes.
 - Authentic reading of procedural text involves reading for the purpose of enacting, or at least contemplating enacting, a procedure.
 - Authentic writing of procedural text involves writing procedures for people who want or need to enact them.



(Purcell-Gates, Duke, Hall, & Tower, 2006/2007)

+ Real-World Literacy Events with Procedural Text in Science

Second and third graders in classrooms with literacy events with a greater degree of authenticity showed greater growth in procedural reading comprehension in grade 3 and greater growth in the use of procedural text features in writing in grade 2 (but only, in the latter case, in interaction with a greater degree of explicit teaching of those features).



(Purcell-Gates, Duke, & Martineau, 2007)

+ Some Real-World Contexts for Reading and Writing Procedural Text

- Students create computer manuals for people in need of technical assistance.
- Students create a class procedures book for new students.
- Students design a series of experiments and they write texts for other students to conduct those experiments.
- Students create carnival games and compose oral texts to help each other play them.
- Students collect family recipes that reflect their cultural traditions and publish them in a cookbook.

(Credit to Nicole M. Martin, Michigan State University, for collaborating on these ideas.)

+ Some Real-World Contexts for Reading and Writing Procedural Text

- Students research and write a book of seasonally-themed crafts for their kindergarten buddies and their families.
- Students publish a manual on customs of U.S. and other cultures for recent immigrants and long-time residents.
- Students collaboratively create texts to teach each other how to do one of their hobbies (e.g., origami, hairstyling, pitching).
- Students host a family game night with clear, concise directions for how to play the games available.

(Credit to Nicole M. Martin, Michigan State University, for collaborating on these ideas.)

+ A Strategy for Creating Real-World Contexts for Procedural Reading and Writing

- **Identifying a need or problem:** e.g., humans produce pollution and waste that can harm the environment
- **Introducing a solution that involves teaching others:** e.g., schoolchildren teaching others to enact conservation projects on Earth Day
- **Using text to help achieve the solution:** e.g., texts, particularly procedural texts, can show people who don't know how to reduce pollution and waste by reusing household products; selling these texts can help provide funds for the school's recycling program

+ Explicitly Teaching Strategies for Reading Procedural Text

As needed.

For example:

- Previewing
 - Especially examining graphic of end product (if applicable)
- Gathering materials
- Reading in order
- Paying special attention to measurements and other specifications
- Comparing illustrative graphic to what you have done at the end of each step (if applicable)

+ Explicitly Teaching Features of Procedural Text

- The verdict is still out on the impact of explicitly teaching procedural text features. In our study it did have a positive impact on procedural text writing, but not reading comprehension, in grade 2 only.
- We think about four ways of explicitly teaching a genre feature:
 - Naming it
 - Modeling it
 - Describing it
 - Explaining its function

(Purcell-Gates, Duke, & Martineau, 2007)

+ Explicitly Teaching Features of Procedural Text

- Naming it: "They're using the command verbs—put, make, etc."
- Modeling it: "I'm reading to see what do to next. It says 'Then mix. . . I know that's a command verb telling me what to do.'"
- Describing it: "One way you can recognize a command verb is that they don't have endings on them like -s or -ing."
- Explaining its function: "The purpose of procedural text is to tell people how to do things, so the verbs in them are verbs that tell people to do—like place, make, stop, stir, and so on."

(Purcell-Gates, Duke, & Martineau, 2007)

+ Important Components of Procedural Text Instruction

- Raising students' awareness of the ubiquity and usefulness of procedural text
- Providing opportunities for students to read good procedural text for real-world purposes
 - Teach features and strategies as needed
- Providing opportunities to students to critically examine *bad* procedural text
- Providing opportunities for students to write procedural text for real-world purposes
 - Teach features and strategies as needed



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