



A FLOCK OF SMALL WINGS

Written by Laura Smith
Illustrations by Dave McKay

TEXT TYPE: Non-fiction: Procedural—Instructions
GUIDED READING LEVEL: W/X

SUMMARY: This procedural text briefly reviews key principles on the theory of flight, and gives the reader step-by-step instructions on how to build a tetrahedral kite, a kite design used by inventor Alexander Graham Bell.

Note: You may want to focus only on a spread or a specific feature of the text rather than covering this non-fiction text in its entirety.

TEXT FEATURES

- headings/subheadings
- variety of fonts used
- bullets
- table
- bold print
- mathematical and scientific terminology

VISUAL LITERACY

- numbered instructions and illustrations
- captions
- labels
- three-dimensional geometric shapes
- text boxes
- photographs

TEXT SUPPORTS

- sequential format
- some diagrams are colour-coded
- photographs
- headings
- bold print

POSSIBLE TEXT CHALLENGES

- subject-specific vocabulary
- challenging layout
- challenging diagrams
- detailed instructions

FOCUS COMPREHENSION STRATEGY

- sequencing

FURTHER COMPREHENSION STRATEGY

- analyzing

ORAL LANGUAGE OPPORTUNITIES

- Think-Pair-Share strategy
- discussing with a partner
- videotaped instructions (option 3 in Focused Rereading)
- barrier game (option 3 in Focused Rereading)

WORKING WITH WORDS

- language predictability: developing awareness of how metaphors convey meaning
- language predictability: using context to work out word meanings
- high-frequency words: recognizes words linked to science, math

ASSESSMENT OPPORTUNITIES

Observe each student's ability to:

- track information in varying layouts
- use a variety of visual features to support written text
- understand cause and effect
- recognize signal words that indicate sequence
- link one step with another in discussions
- retell main steps in sequence
- provide clear, well-sequenced directions for others to follow

ASSESSMENT TOOLS

Select from the following:

- Sequencing Strategy Checklist
- Comprehension Strategies Anecdotal Record

First Session (pages 1–3)

BEFORE READING

Predicting

Activate and build prior knowledge

- Ask students what type of text they think this will be, based on its title. If not touched on by students, note that this is a ‘procedural’ text. Explain that the purpose of a procedural text is to describe, explain, and detail a process. With this in mind, ask students to describe what they know about procedural texts and the features they include. Record their responses on an anchor chart using the title ‘Procedural Texts’ and post the chart and info listed by students on the wall. Tell students that they will be adding information to the chart as they learn more about this type of text throughout the two Guided Reading sessions.

Language Predictability

- Ask students to predict why they think the author titled this text ‘A Flock of Small Wings.’ If not mentioned by students, note that it is a metaphor, comparing the design of a tetrahedral kite to wings of a group of birds.
- Ask students to share what they think the word ‘tetrahedral’ might mean, based on the clues on the first page. Ask, *Do the images and shapes seen on this page give us clues as to what this word might refer to? Look to the visual features for assistance.* If students cannot infer the word’s meaning using the context and clues found on the first page, note the definition given for the word ‘tetrahedron’ on page 2. Say, *The word ‘tetrahedral’ comes from the word ‘tetrahedron,’ which describes the unique four-faced pyramid shape of the kite featured in this text.*

Evaluating

- Ask students why sequencing is an important strategy to use when reading procedural texts.

Text and Visual Literacy Features

Introduce supports and challenges

- Refer students to the varying layout the text (e.g., vertical, diagonal, under illustrations, many diagrams and labels, and so on). Ask, *How do we know how to track the information as we read? What can we do to make sure we are processing it?*

High-Frequency Words and Making Connections: Text to Self

- Tell students that they will be using science and math terms in the text to help them better understand the theory of flight. Say, *The author has highlighted the following words found on the first page: ‘gravity,’ ‘lift,’ and ‘drag.’ Why do you think she singled out these words? As they read, encourage students to think about what they already know about these flight principles and how they can relate new information presented in this text to their existing knowledge of this topic.*

ESL NOTE: Keep a list of science and math terms on display and indicate the page number that they appear on. At the end of each individual session quickly review the words that came up.

Sequencing

Set a purpose for reading

- Tell students that they will be reading pages 1–3 in this Guided Reading session. Refer students back to the ‘Procedural Texts’ anchor chart. Tell them to place a sticky note beside each text feature that supports them in sequencing information and ideas as they read. Ask students to be prepared to share their sticky note placements and new learning with the group.

Provide for early finishers

- Ask early finishers to review their sticky notes with a partner to discuss their new learning and to note any questions they may have for the After Reading discussion.

DURING READING

Monitor reading

- Use prompts to support students in sequencing the information found in this text. For example, ask, *What clues does the author give that tell us following the order of instructions is important? What causes the kite to rise? What is the effect on a kite if...?*

Observe

- Provide students with feedback on successes and on areas that may require attention. For example, *You figured out the meaning of the word, ‘braced’ (page 3) because you made a text-to-self connection about a time your dad wore a brace to support his wrist after a sports injury. As you read on, it would be great if you could continue to make connections.*

AFTER READING

Revisit the purpose for reading

- Ask students to share their sticky note placements and to articulate which text features helped them with sequencing information and ideas.
- Ask students to also think about the first three pages in relationship to the rest of the text. Ask, *Why do you think the author decided to begin the text with the theory of flight and Alexander Graham Bell’s experiment rather than with the instructions on how to make a tetrahedral kite?*

Check on outstanding challenges

- Encourage students to discuss any areas of confusion and questions they may have about the text at this point. How are students faring with challenging concepts like flight theory and the diagrams that illustrate it? Work as a group to problem-solve answers to these or other challenges.

Sequencing

Note successful strategy use

- Highlight and praise successful strategy use. For example, say, *I noticed that while Ethan was reading about the theory of flight, he looked down several times at the diagrams and captions and reread the main text to self-monitor his comprehension. I also noticed that Jolyn used her dictionary to check on the word ‘aspiring’ (first sentence on page 2).*

Second Session (page 4–end)

BEFORE READING

Analyzing and Synthesizing

Activate and build prior knowledge

- Ask students to briefly summarize what they learned about flight in the first three pages.

Text and Visual Literacy Features

Introduce supports and challenges

- Do a walk-through of the remainder of the text, encouraging students to think about how specific text and visual literacy features will support them in learning how to build a tetrahedral kite (e.g., sequential organization of the headings and subheadings). For example, say, *On page 5, the pink colour of the template helps it to stand out against the rest of the diagram’s gold colour.*

TEACHING TIP:

Please refer to the final page of this teaching plan for a reproducible template to be given to students, as per instruction #7 on page 5.

Sequencing

- Say, *Sometimes the author uses key words and phrases to support us in taking notice of the sequenced instructions. For example, in instruction #2, the author uses the words, ‘second equilateral triangle.’ This means that she has already explained how to make the first equilateral triangle.*
- Ask for a volunteer to follow the first instruction, using the materials, as you or another student read it aloud and the other group members observe. Ask the volunteer and other students, *How did sequencing support you in following instruction #1? Is it easier to read the entire instruction and then follow each of the steps? Or is it easier to read each sentence in the instruction and follow the step immediately? What might happen if the order of the instructions changed?*

Sequencing

Set a purpose for reading

- Tell students that they will be working with a partner to build a tetrahedral kite. Provide a materials kit for each pair of students. Say, *Use the sequencing strategy to help you follow the instructions in their proper order.*

- Point out the ‘Construction Tip’ on page 4. Tell students that they will be recording their own construction tips as they build their tetrahedral kite. Ask them to record any tips they might have on an organizer such as the one below, which might help others to build their own kites. Instruct students to place stickies near key or signal words that helped inform them as to the order to follow.

Steps to Follow	Construction Tip
1. Building a Tetrahedron	Make sure the string is tied tightly so that it keeps the shape of the equilateral triangle.
2. Using the Template	
3. Covering the Tetrahedron	
4. Attaching the Tetrahedron	
5. Attaching the Bridle	

Provide for early finishers

- Ask students who finish early to show their kites to each other and share their construction tips. They should make sure that the steps and tips are in a proper order.

DURING READING

Monitor reading

- Some students may struggle with instruction #7, where they need to align each ‘fold line’ on the template with the two folded sides of the tissue paper. Ask them to think of the principle of symmetry when using fold lines.

Observe

- Make observations on your assessment tools. (See the Sequencing Strategy Checklist and the Comprehension Strategies Anecdotal Record in the *Grade 6 Literacy Support Guide*.)

AFTER READING

Revisit the purpose for reading

- Pose the question: *How did you use sequencing as a strategy to help build your kite?* Have students share their construction tips with the group, using their organizer as a guide to support and reference their thinking.

Sequencing

- Ask students to refer to their stickies that identify words that indicate sequence in the instructions (e.g., ‘Repeat,’ ‘Then,’ ‘second,’ ‘...as you did in Step...,’ ‘Now you are ready...’). Refer to the ‘Procedural Texts’ anchor chart to identify and to asterisk the text features that helped them understand the sequence of the instructions. Ask if there are new additions students would now like to post to the list.

Check on outstanding challenges

- Ask, *Which instructions were hardest to follow? Explain. Which strategies did you use in order to figure out what to do next?* Answers can be discussed as a group or in partners as a Think-Pair-Share activity (see Oral Language Strategies in the *Grade 6 Literacy Support Guide*).

Note successful strategy use

- Prompt students to describe their successful use of the sequencing strategy while building their kite. For example, ask a student working on instruction #10: *How did you figure out how to cover the frame from this instruction? Did you use the labelled diagram or mainly the text—or perhaps both—to help you construct this part of the kite? What would happen if you had used only the illustration, or left out this step entirely? Would you have had the same success?*

FOCUSED REREADING

Three options are provided for focused rereading in the next Guided Reading lesson. Choose an activity that meets the needs of your students, or you might select a Reader Response activity from the *Grade 6 Literacy Support Guide*.

Written

- Students can research how to build another type of kite and create a procedural text explaining how to build it. They should include diagrams to support the instructions.
- Students imagine that they are to interview Alexander Graham Bell about his experiment with the tetrahedral kite made up of 3960 tetrahedral cells. They should prepare a list of questions they would like answered.

Artistic

- If students could invent something that flies, what would it be? Ask them to create a design (and build it if they are inclined) and explain how it works, using scientific and mathematical terminology. What might some of the challenges be in making their object fly? How might they overcome those challenges? They can test their invention and report back on its success.

Sequencing and Making Connections: Text to Text

Self-monitoring

Synthesizing

Oral/dramatic

Synthesizing

- With a partner, students can produce a video on building a tetrahedral kite. They should make a list of what needs to be done and decide upon each student's role and responsibilities. When writing the script, students should include an introduction, sequential instructions, and a conclusion. They can read the instructions aloud from their procedural text while adding construction tips. They should try to include scientific and mathematical terminology in the script.

Sequencing

- Students play a 'barrier' game. The object of the game is for one partner to design or build something and then explain the instructions to their partner so that they can draw or build the same object by listening to the instructions. An added challenge is a barrier set up between partners so that the design or object can't be seen by the person following the instructions. When finished, compare the drawings or objects built. How are they the same? How are they different? Were any steps in the instructions missed? Which steps were followed exactly? Switch roles for the next barrier game.

Template For Cutting Tissue Paper

To make cells for your tetrahedral kite, cut out the shape below and use it as a template for cutting the tissue paper.

