SKIMMING & SCANNING

Skimming and scanning are reading techniques that use rapid eye movement and keywords to move quickly through text for slightly different purposes. Skimming is reading rapidly in order to get a general overview of the material. Scanning is reading rapidly in order to find specific facts. While skimming tells you what general information is within a section, scanning helps you locate a particular fact. Skimming is like snorkeling, and scanning is more like pearl diving.

Use skimming in previewing (reading before you read), reviewing (reading after you read), determining the main idea from a long selection you don't wish to read, or when trying to find source material for a research paper.

Use scanning in research to find particular facts, to study fact-heavy topics, and to answer questions requiring factual support.

Skimming to save time

Skimming can save you hours of laborious reading. However, it is not always the most appropriate way to read. It is very useful as a preview to a more detailed reading or when reviewing a selection heavy in content. But when you skim, you may miss important points or overlook the finer shadings of meaning, for which rapid reading or perhaps even study reading may be necessary.

Use skimming to overview your textbook chapters or to review for a test. Use skimming to decide if you need to read something at all, for example during the preliminary research for a paper. Skimming can tell you enough about the general idea and tone of the material, as well as its gross similarity or difference from other sources, to know if you need to read it at all.

To skim, prepare yourself to move rapidly through the pages. You will not read every word; you will pay special attention to typographical cues-headings, boldface and italic type, indenting, bulleted and numbered lists. You will be alert for key words and phrases, the names of people and places, dates, nouns, and unfamiliar words. In general follow these steps:

1. Read the *table of contents* or *chapter overview* to learn the main divisions of ideas.
2. Glance through the main headings in each chapter just to see a word or two. Read the *headings of charts and tables*.
3. Read the entire *introductory paragraph* and then the *first and last sentence* only of each following paragraph. For each paragraph, read only the first few words of each sentence or to locate the main idea.
4. Stop and quickly read the sentences containing *keywords* indicated in boldface or italics.
5. When you think you have found something significant, stop to read the entire sentence to make sure. Then go on the same way. Resist the temptation to stop to read details you don't need.

6. Read *chapter summaries* when provided.

If you cannot complete all the steps above, compromise: read only the chapter overviews and summaries, for example, or the summaries and all the boldfaced keywords. When you skim, you take a calculated risk that you may miss something. For instance, the main ideas of paragraphs are not always found in the first or last sentences (although in many textbooks they are). Ideas you miss you may pick up in a chapter overview or summary.

Good skimmers do not skim everything at the same rate or give equal attention to everything. While skimming is always faster than your normal reading speed, you should slow down in the following situations:

- When you skim introductory and concluding paragraphs
- When you skim topic sentences
- When you find an unfamiliar word
- When the material is very complicated

Scanning for research and study

Scanning, too, uses keywords and organizational cues. But while the goal of skimming is a bird's-eye view of the material, the goal of scanning is to locate and swoop down on particular facts.

Facts may be buried within long text passages that have relatively little else to do with your topic or claim. Skim this material first to decide if it is likely to contain the facts you need. Don't forget to scan tables of contents, summaries, indexes, headings, and typographical cues. To make sense of lists and tables, skim them first to understand how they are organized: alphabetical, chronological, or most-to-least, for example. If after skimming you decide the material will be useful, go ahead and scan:

1. Know what you're looking for. Decide on a few key words or phrases–search terms, if you will. You will be a flesh-and-blood search engine.
2. Look for only one keyword at a time. If you use multiple keywords, do multiple scans.
3. Let your eyes float rapidly down the page until you find the word or phrase you want.
4. When your eye catches one of your keywords, read the surrounding material carefully.

Scanning to answer questions

If you are scanning for facts to answer a specific question, one step is already done for you: the question itself supplies the keywords. Follow these steps:

1. Read each question completely before starting to scan. Choose your keywords from the question itself.

2. Look for answers to only one question at a time. Scan separately for each question.
3. When you locate a keyword, read the surrounding text carefully to see if it is relevant.
4. Re-read the question to determine if the answer you found answers this question.

Scanning is a technique that requires concentration and can be surprisingly tiring. You may have to practice at not allowing your attention to wander. Choose a time and place that you know works for you and dive in.

COMPREHENSION

Comprehension is defined, according to one of the dictionaries, as an exercise consisting of a previously unseen passage of text with related questions, designed to test a student's understanding. For a person to have a comprehension he must know the rules by which the passage is written or spoken. Only then can the person comprehend what is written or spoken.

To be a good reader or listener one must know the language well. Knowing the language well is achieved by learning grammar, spellings, pronunciation, different parts of speech and the various nuances of the language. It is said that practice makes perfect and the best way to learn is through reading and listening carefully.

FACTUAL COMPREHENSION

Reading comprehension may be classified into several types depending upon what is being written. One of the types is factual writing. In factual writing there is very little scope for diverse interpretation and the writer writes what is factually there. Many news stories are factual writing and are printed in newspapers and reach hundreds or thousands of readers. Learning to comprehend factual writing is very useful in daily life, especially when it is related to information that affects your, such as tax information, legal issues and news stories.

INFERENTIAL COMPREHENSION

Inferential comprehension is the ability to process written information and understand the underlying meaning of the text. This information is then used to infer or determine deeper meaning that is not explicitly stated. Inferential comprehension requires readers to:

- combine ideas
- draw conclusions
- interpret and evaluate information

- identify tone and voice.

A higher and more complex level of comprehension involves critical analysis which requires readers to:

- be critical
- form opinions
- identify authors' points of view and attitudes
- identify and consider the authority of texts and their messages
- infer motives of characters and themes.

Critical analysis can be introduced in very early reading. The use of the 'Six Thinking Hats' strategy is one effective way of developing critical thinking skills.

Inferences are the conclusions we draw based on what one already knows and judgments we make based on given information. This strategy helps students make connections between their personal experiences and their comprehension of a text. Rather than stopping students during the reading process to comment on specific points, this strategy focuses on their thinking and how new information reshapes their prior knowledge. Inferential reading can be taught using a variety of reading material beyond assigned textbooks (i.e. cartoons and bumper stickers can be used as a way to help students think about what authors imply). As students develop inferential reading skills they learn to:

- understand the intonation of characters' words and relationships to one another
- provide explanations for ideas that are presented in the text
- offer details for events or their own explanations of the events
- recognize the author's view of the world including the author's biases
- offer conclusions from facts presented in the text
- relate what is happening in the text to their own knowledge of the world

Students can also use inferential reading to help them with new or difficult vocabulary by figuring out 1) antecedents for pronouns, 2) the meaning of unknown words from context clues, and/or 3) the grammatical function of an unknown word.

PREDICTING

Predicting is an important reading strategy. It allows students to use information from the text, such as titles, headings, pictures and diagrams to anticipate what will happen in the story (Bailey, 2015). When making predictions, students envision what will come next in the text, based on their prior knowledge. Predicting encourages children to actively think ahead and ask questions. It also allows students to understand the story better, make connections to what they are reading, and interact with the text.

Making predictions is also a valuable strategy to improve reading comprehension. Students are able to make predictions about a story, based on what they have already heard, read, or seen. This in turn, will allow students to become actively involved in the reading process. To determine if their predictions are correct, students should be required to reread portions of the text to recall facts about the characters or events within the story. Picture walks can serve as a tool to organize information within a story, which can also increase a child's comprehension. During a picture walk, students are able to activate their prior knowledge and connect the visual images in the story to their own personal experiences.

Students can also use a graphic organizer to predict the outcome of a story. They can do this by identifying clues within the text to predict how characters will behave and how significant problems in the story will be solved. When using a graphic organizer, students are able to stay fully engaged in the story as they capture their thoughts in a logical way. It is important for teachers to encourage children to record clues that either support or deny their predictions. Teachers can also allow students to revise their predictions in order to reflect on the clues that are found within the text.

Making predictions encourages readers to use critical thinking and problem solving skills. Readers are given the opportunity to reflect and evaluate the text, thus extracting deeper meaning and comprehension skills. Students will also be more interested in the reading material when they connect their prior knowledge with the new information that is being learned.

Visuals and Graphics

Technical writers are experts at determining topic organization, tone, flow, and verbiage when it comes to documentation. However, one component that is often overlooked or shied away from is balancing visuals and text in technical documentation. This article is intended to provide a deeper understanding into how technical writers – not graphic designers – can use visuals to enhance their work and help them to develop highly effective documentation by addressing the following questions:

- How should you determine when visuals – graphics, illustrations, drawings, plots, or screenshots – are necessary?
- What considerations should you think about when editing visuals and adding labels?
- How do you mitigate the risk of misinterpretation when connecting text to visuals?

When are Visuals Necessary?

Visuals can help readers quickly understand complex concepts and processes, and form part of your documentation strategy. They allow readers to visualize relationships and events, whereas the same information in text can be more difficult to grasp. They also give readers' eyes a break when reading text, and can help invigorate interest in lengthy content that can, at first look, feel quite daunting.

For example, when writing procedural documentation you often spend time thinking of the most efficient and clear way to describe an action. Once that is written, the user must then read the text and fully visualize what they need to do to successfully follow that step. Some steps may be very simple and an associated graphic would not have much impact or be of any help in gaining clarity. However, more complex steps may benefit from a graphic to help enhance the reader's understanding.

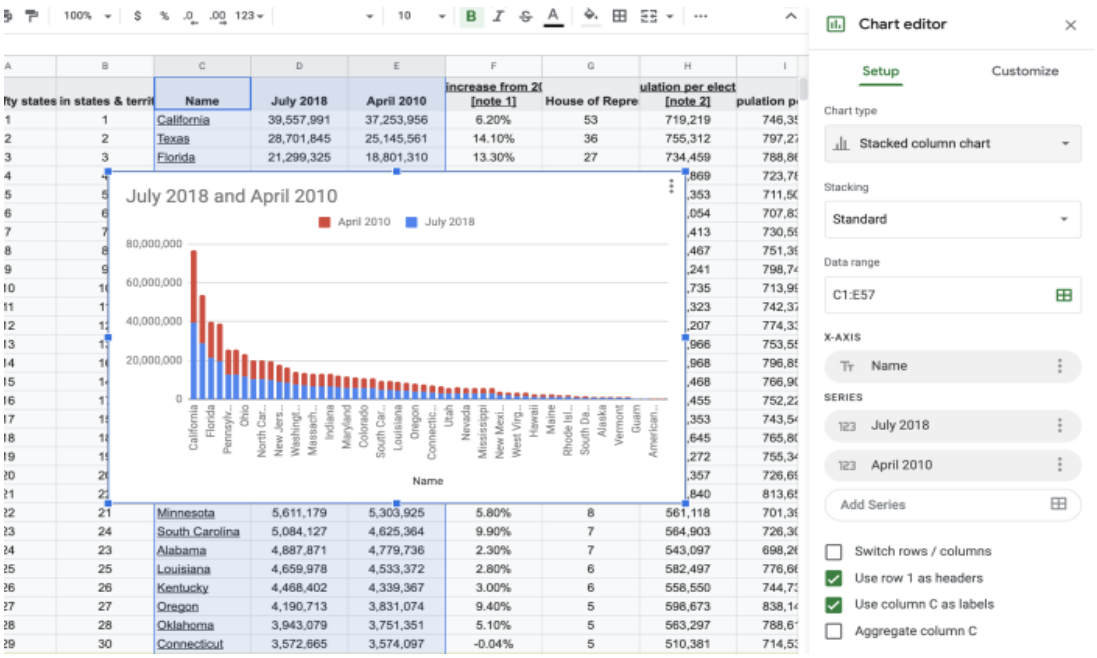
Complex steps that involve multiple actions or visual identification of any parts or components can be clarified by a labeled graphic. For example, an image of how to install "part A" to secure "part B" to "part C" will show the reader how the parts need to be assembled in a secure fashion with minimal room for misinterpretation. Alternatively, if the reader needs to identify "vial 3" from "vial 4," a picture showing the differences between the vials will allow the reader to quickly identify which vial needs to be used.

These more complex actions can be very difficult to visualize without an example, and so the image guides the reader what to look for or do specifically. In turn, this allows the reader to quickly understand and complete the procedure in shorter time frames. This naturally leads to happier readers.

Screenshots can also provide readers with easy direction when text may take too long to describe visual content. For example, a screenshot showing where on the website a user can change account settings can often be accompanied just by simple, concise text: "click on the dropdown

menu circled in red in the screenshot below and select account settings.” This is far more efficient than describing how to locate the dropdown menu on the web page only in text.

Plots and other graphical representations of data are also particularly important and useful in the proper context. Oftentimes, report documentation that discusses data or results could include the associated plots to allow the reader to quickly and easily recognize trends and interesting results. No board member wants to spend hours reading data points when the information could have been summarized in graphical form.



		Name	July 2018	April 2010	increase from 2([note 1]	House of Repre	ulation per elect [note 2]	pulation p
1	1	California	39,557,991	37,253,956	6.20%	53	719,219	746,35
2	2	Texas	28,701,845	25,145,561	14.10%	36	755,312	797,27
3	3	Florida	21,299,325	18,801,310	13.30%	27	734,459	788,86
21	22	Minnesota	5,611,179	5,303,925	5.80%	8	561,118	701,36
23	24	South Carolina	5,084,127	4,625,364	9.90%	7	564,903	726,30
24	23	Alabama	4,887,871	4,779,736	2.30%	7	543,097	698,26
25	25	Louisiana	4,659,978	4,533,372	2.80%	6	582,497	776,66
26	26	Kentucky	4,468,402	4,339,367	3.00%	6	558,550	744,73
27	27	Oregon	4,190,713	3,831,074	9.40%	5	598,673	838,14
28	28	Oklahoma	3,943,079	3,751,351	5.10%	5	563,297	788,61
29	30	Connecticut	3,572,665	3,574,097	-0.04%	5	510,381	714,53

When to Use Visuals – A Summary

- Images visualizing how to complete complex steps that involve multiple actions or that may otherwise have room for misinterpretation
- Pictures for easy and fast visual identification of any parts or components
- Screenshots can provide readers with easy direction when text may take too long to describe visual content
- Report documentation that discusses data or results could include associated plots (as applicable) to allow the reader to quickly and easily recognize trends and interesting results.

Use and interpretation of visuals and graphics in technical writing

Using graphics is an essential part of creating technical documentation. They help you convey complex information in a more understandable and clear way for the readers. Graphics can be visuals, images or designs that are used to inform, explain, or illustrate. Nowadays graphic elements require a lot of attention as they can be interpreted the wrong way. Here are some tips to be sure you are using them correctly.

- Avoid senseless graphics. First of all, you should remember that graphic elements are meant to explain information, but not to decorate the document. Elements with no meaningfulness are useless for the readers. You should avoid content-free graphics.

- Make sure you are using legible graphics only. If a reader barely understands how to deal with your graphics — it ruins the idea of clarity and simplicity of the text.

- Use graphics of high quality only. Poorly designed graphics look unprofessional and careless. Your documentation should be attractive and appealing to your readers showing that you have done your best creating it.

- Use simple graphics. Simplicity is the key to efficient documentation. Your graphics should be easy to read and understandable from the first glance. Thus there are standard symbols created by the International Organization for Standardization. If they are appropriate in your document you can use them.

    - Mind the color of your graphics. Often, they are black-and-white or grey-and-white. But if you are willing to use some other color — be sure your readers will interpret it correctly. Let`s say in some cultures the red color may be interpreted as a danger and in other cultures as prosperity. One more aspect of the color choice in graphics is accessibility. It is highly important as your readers may have visual impairments. You should check carefully which color combinations and contrast suit all categories of readers.

- Pay attention to the order of your graphics and their placement in general. In some countries, the audience will read them from left to right. In others — vice versa.

- Use only neutral graphics. You should avoid nudity or things that are considered to be offensive in different cultures.