Brainstorming and Outlining

The first major task in a technical communication process is planning. The larger the project, the more you need to plan it. Planning will give you a better product, but it will also save you time in the long run! It’s far easier to rearrange or redesign in the early stages.

Many of us were forced to do outlines in high school, but few of us benefitted from the exercise. At first, outlines seem an unnatural way to do things. As a preliminary step, consider brainstorming. One way is to use Post-It Notes™.

1. Relax, clear your mind, and think about your project. As each thought comes to you, jot it on its own note. Don’t worry about grammar, spelling, whole sentences vs. words, pictures vs. text, or any other detail – just capture whatever comes into your mind. When you get tired, take a break and then come back to it. When you finish, stick the notes on a wall.

2. Look at them, then move them around until they are grouped into similar topics. If you find duplicates, keep just one. If you think of something new, make a new note.
3. Organize the groups into the sequence you think should be in the final report.

4. Organize each group into subtopics, details, etc. Add more notes as you think of things. Feel free to create several levels of subcategories.

5. Translate your thoughts into outline form on paper or in a word processor. Use any letters, Roman numerals, numbers, etc. that you want – nobody will care!
6. The wall becomes…

Outlining and Heading Formats in Word

Word has a powerful Outline feature that is well-integrated with its heading format and automatic Table of Contents generator. Unlike OpenOffice Writer, you can easily switch back and forth between Outline and normal views.

Creating an Outline:

1. Click the View tab, then Outline (in the Document Views pane).
2. Type the text of a heading. By default, it will be in ordinary Body Text format.
3. In far left side of the menu, click the single left arrow to promote the text to become a level-1 heading.
4. Press Enter to advance to the next line, which will still be in level-1 heading format.
5. To demote the text to Body Text, click the double right arrow, or to demote it to level-2 head format, click the single right arrow.
6. To rearrange material, drag the “plus” or “minus” icon in the left margin of the text to the desired place.
7. To collapse a heading and its contents so only the heading shows, click the Minus sign in the menu below the single and double arrows. To expand it back, click the Plus sign.
8. At any time, to switch to Word’s normal view, click the Close Outline View “X” in the menu bar.
Setting Heading Levels:
You can set heading levels in existing text, or you can set heading levels as you type:
1. Click the Home tab.
2. Highlight the text you wish to turn into a heading, or set the cursor at the beginning of the line where you intend to type a heading.
3. Choose Heading 1, Heading 2, or Heading 3 in the Styles area to turn the highlighted text or text you’ll type into a heading.
4. To turn a heading into normal body text, highlight it and choose ¶ Normal.

Changing Heading Formats:
1. Click the Home tab.
2. Change the font, color, bold, point size, etc. of a heading to the format you wish.
3. Right-click on the heading’s box in the Styles area.

Outlining and Heading Formats in LibreOffice (OpenOffice) Writer
Writer does not have as fancy an outline feature as Word does, and creating an outline and formatting headings are two separate processes. It's much easier to not use Writer’s outliner feature. Instead, just write your outline in the normal view, and format the various levels as headings.

Setting Heading Levels:
1. Type the heading's text, but don't press Enter, so the cursor remains on the text's line. (Or select an existing heading you wish to format.)
2. In the far left side of the menu, locate the dropdown list to the left of the font selector dropdown. It will probably say “Default”. Alternately, click Format, then Styles and Formatting, to bring up a movable box that displays all heading levels you can choose.
3. Click the dropdown's arrow and choose the heading level you want, or double-click on the desired heading level in the box.
4. Repeat this process for other headings, or choose “Default” for body text.

Changing Heading Formats:
1. Click Format, then Styles and Formatting, to bring up a movable box that displays all heading levels you can choose.
2. In the movable box, right-click on the heading level of that heading, and choose Modify.
3. Select the tab that corresponds with what you want to change, then make the changes. When done, click OK. All headings of that level will change to the new format.

Using the outliner feature (if you really want to):
1. Click the Format menu, then choose Bullets and Numbering.
2. Choose the outline style you want, then click OK.
3. The numeral/number/letter for the first level-1 head will be placed in the text.
4. Click after it, then type the text of the heading.  
5. Press Enter once, and the next heading label will appear.  
6. To “demote” any head to the next lower level, put the cursor to the left of the numeral and press Tab. To “promote” a head, press Shift-Tab.  
7. To add ordinary body text after a head, put the cursor at the end of the head and press Enter twice.  
8. If you move a heading and its subordinate material using cut-and-paste, the pasted material will all become top-level heads (inconvenient!).  

Note that setting outline numbering does not apply a heading style; that must be done separately. The outline numbering will remain even after the heading style has been applied. To get rid of the numbering, highlight the heading(s) and click the Numbering button on the menu bar (once or twice, as needed to get rid of the numbers.)

A Couple of Theories of Learning

You can do several things to help your readers understand and stay oriented:

- **WPW:** Use a “Whole-Part-Whole” structure. Give them an overview for context, then explain the details, then tie it all back together with a summary. (You did this in cover letters, with the A-G O → details → C-T-A C structure.)
- **K2U:** Structure in “Known to Unknown”. Tell them things they’re familiar with first, then use those as a foundation for new terms, ideas, etc. It’s fine to use analogies, definitions, descriptions, etc.

These two techniques work for whole papers, single paragraphs, and everything in between.

Technical Reports

Technical reports or research papers are common in both college and industry. Specialized versions include dissertations and theses, project reports, lab notebooks, etc.

A technical report and the sections within it should follow the basic “1. Tell ‘em what you’re going to tell ‘em, tell ‘em, tell ‘em what you told ‘em,” whole-part-whole, known-to-unknown structure. There should be no suspense.

Technical reports have some or all of the following components, usually in this order:

1. [Optional] Some form of “front matter”: cover, table of contents, copyright information, acknowledgements, dedication, etc.
2. A clear and descriptive title
3. [Optional] An abstract (scientific/educational) or executive summary (business) that tells the whole story of the report (no suspense!).
4. An Introduction that states the thesis (if you intend to prove something) or purpose of the report. It introduces both the subject and the structure of the paper; it also gives the “flavor” of what’s to come.
5. The “body” of the report (which is not labeled “Body”!), which likely contains a number of topics, each with its own level-1 heading (and likely, subheadings).
6. Conclusion or Summary that recaps the material (but which, in an objective report, does not persuade).

7. [Optional] One or more appendices, containing things that aren’t in the “flow” of the body. For example: references/works cited, glossary, index, detailed or extensive data, comparison of similar projects, historical information, etc.

8. [Optional] Some form of “back matter”: back cover, etc. (Note: The line differentiating appendices and back matter varies greatly.)

The “body” may contain:
- Problem statement.
- History of the situation/topic.
- Literature search (to see what’s already been done on or is known about the subject).
- Experimental results and processes, etc. (if not a pure book-research type project).
- Analysis and/or comparison
- Conclusions/results
- Recommendations (if persuasion is permitted), projections/extrapolations
- Etc.

(To be continued…)