

جامعة الانبار

كلية التربية للعلوم الانسانية

قسم اللغة الانكليزية

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اسم المادة باللغة العربية: طرق البحث العلمي

Methods of Scientific Research

المحاضرة الرابعة عشر

الفصل 13: الرسوم التوضيحية

Chapter 13: Illustrations:

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Illustrations:

When you're leafing through a book or journal, isn't your attention drawn almost automatically to the illustrations? Yet, except for technical subjects, few students think of using illustrations in their papers. In the paper you're writing, could you make something clearer or more interesting by illustrating it? A good illustration could be one of the high points of your paper. Of course, don't put in a picture of a mountain range just because you're writing about mountain climbing; that will not help the reader understand your paper. But do use illustrations to clarify or emphasize important points.

KINDS OF ILLUSTRATIONS

There are two kinds of illustrations: tables and figures. A table lists information in rows and columns-horizontally, vertically, or both. A Figure is any illustration that isn't a table, such as a graph, drawing, photograph or diagram. Also, a combination of table and figure -for example, Columnar data combined with a graph-is a figure.

When you number your illustrations, number them consecutively by kind (Table 1, Table 2, and so on; and Figure 1, Figure 2, and So on).

TABLES

There are numerous ways to present information in a table, depending on the complexity of the data you have to tabulate. Always, however, your aim should be to arrange the information so it is easy to understand. Thus, layout should be simple, not showy. The following is a suggested format for fitting the table into the text of the paper:

- *Quadruple-space between the text and the table number and descriptive title.*
- *Center the table number and descriptive title above the table.*

- ***If your table presents material gained from research, place the appropriate parenthetical reference or footnote number at the end of the descriptive title.*** (The sample below illustrates a parenthetical reference; a footnote, of course, would go in the same place.)
- ***With black ink or pencil, neatly draw a box around the table.*** (This step highlights the information, further setting it apart from the text. You may find other ways you prefer to fulfill that purpose, but whatever method you use, make it neat and keep it simple.)
- ***Quadruple-space between the bottom of the table and the paper's text.*** Here's a sample table, one that might appear in a paper discussing technical mountaineering in the Garden of the Gods, Colorado:

Table 2. Popular Technical Rock Climbs in the Garden of the Gods
(Stanley 127).

<u>Climb</u>	<u>Successful Ascents in 1980</u>
Anaconda	3
Amazing Grace	5
Borderline	11
Max's Mayhem	12
Borghoff's Blunder	84
Dust to Dust	86
Henry the Pig	94
Monster	105
Snuggles	117
Lower Fingertip Traverse	176
Potholes	253

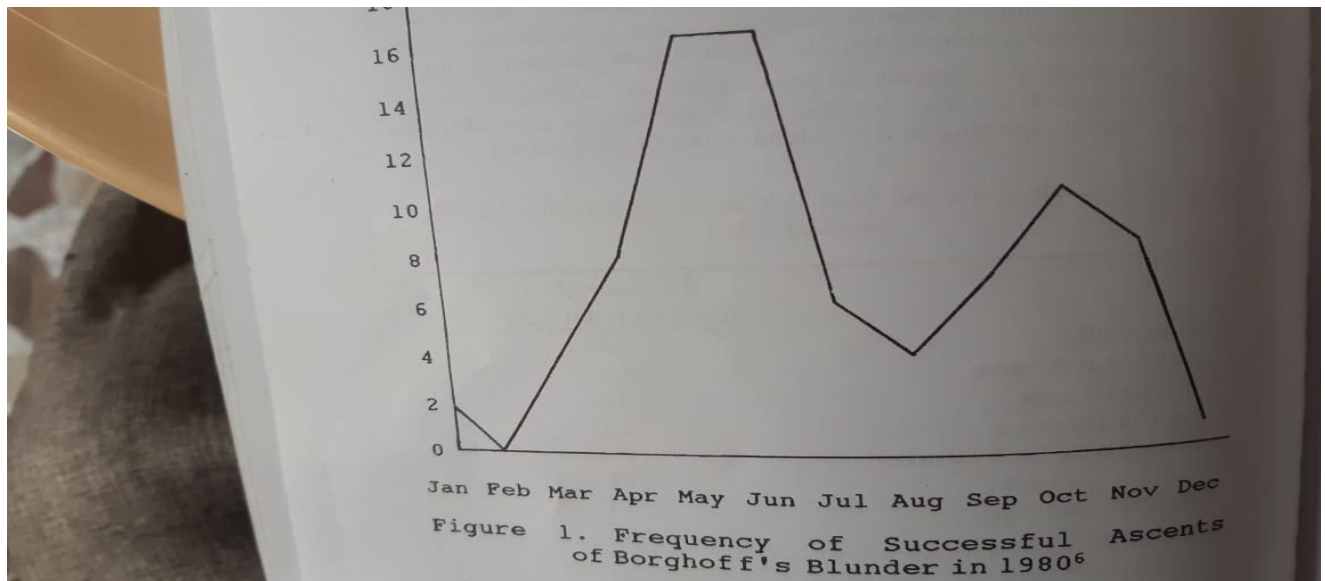
FIGURES:

Here is a suggested format for integrating figures with your paper:

- ***Quadruple-space from the text to the top of the figure.***
- ***Double-space from the bottom of the figure to the figure number and descriptive title.***

- ***If appropriate, place a parenthetical reference or footnote number at the end of the descriptive title.*** (Again, the sample following illustrates a parenthetical reference.)
- ***. Quadruple-space from the figure number and descriptive title to the text of your paper.***

The following is a sample figure-in this case, a graph presenting data to support the point that most climbing in the Garden of the Gods takes place in the spring and fall:



(Note: In this graph the meanings of the horizontal and vertical axes are obvious, so labels such as "Months" and "Number of Successful Ascents" are unnecessary. However, you should label the axes if readers might have difficulty understanding what the units stand for.)

SUCCESSFUL ILLUSTRATIONS

There's more to a successful illustration than following these formats for fitting the material onto the page. Here are some tips:

- ***Don't cramp the illustration.*** Make the illustration large enough that the information is easy to see. Also, allow enough space on the page so that the

illustration doesn't seem jammed into your paper. You'll have to plan ahead when you type-maybe even type a draft on a sheet of scratch paper.

- ***Keep the illustration uncluttered.*** Don't try to do so many things at once that an illustration seems busy. Three or four simple, uncluttered visuals will be much more effective than one that attempts everything.
- ***Label the illustration clearly.*** A good illustration has the potential to stand alone-independent of the text of the paper. Of course, an illustration is related to the text: The illustration supports a point in the paper, so the text helps explain the illustration, and vice versa. Nevertheless, readers shouldn't need to look back and forth to understand either the text or the illustration. Therefore, don't depend on the text to explain the markings on your illustration; instead, label as necessary so that the illustration can be independent. At the same time, as the sample figure in this chapter shows, you don't need to clutter the illustration with unnecessary labels.
- ***Refer to the illustration in the text and explain the point it makes.*** You wouldn't bother to illustrate a point if it weren't important, so be sure do two things: Make the point in the text of your paper- not just in the illustration; and, while you're making the point in your text, refer the reader to the illustration.
- ***Place the illustration close to where you mention it.*** But don't put the illustration before the place you discuss it. If necessary, use a facing page-an extra, unnumbered page that would be the left page if you opened your paper like a book. That way, both the illustration and the discussion face the reader at the same time.
- ***Be neat.*** Type all labels you can and use a straightedge wherever possible.

- ***Be imaginative.*** A vivid presentation can create for the reader that picture that substitute for many words. Consider using colors for contrast in figures (but if you plan to copy the paper, remember that most copying machines reproduce colors only as shades of gray). And although the illustration shouldn't be flashy, it should be pleasing to look at, perhaps even decorative.