Introduction to Technical Writing

1st Year Engineering Students
Effective Writing

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Introduction to Technical Writing

1st Year Engineering Students
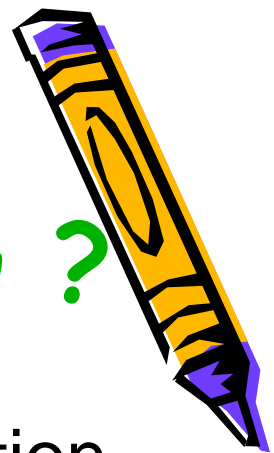## Writing Process

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REFERENCES

- Leo Finkelstein, Jr.; Pocket Book of Technical Writing for Engineers and Scientists, McGraw-Hill's Best, 2005.

- Technical & Business Writing (ENGL 2311 at ACC).htm

- Communications\Introduction to Communication Skills - Mind Tools.htm

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What is Technical Writing ?

"Technical writing conveys specific information about a technical subject to a specific audience for a specific purpose…The words and graphics of technical writing are meant to be practical: that is, to communicate a body of factual information that will help an audience understand a subject or carry out a task."
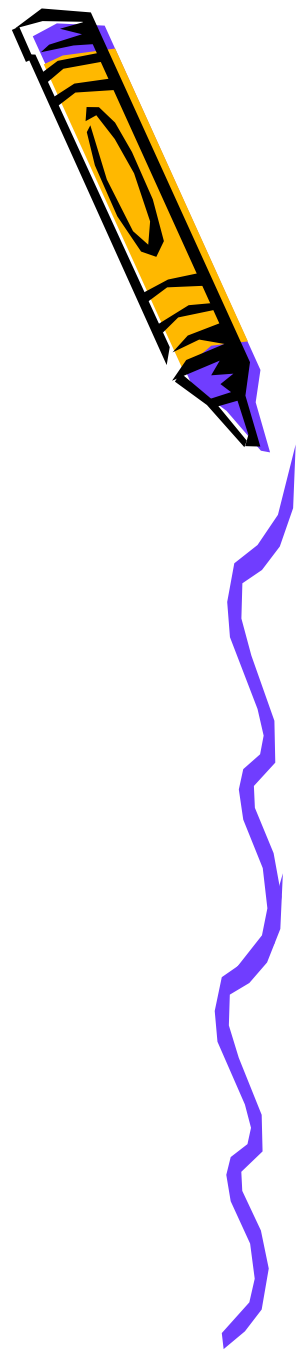
-Michael H. Markel

Boise State University

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Writing at Work

- Memos and e-mail
- Letters
- Reports
- Proposals
- Brochures
- Newsletters
- Fliers
- Resumes
- Web sites
- Online help screens
- User manuals
- Etc.....

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# Basic Concepts to Communicate Technical Information Effectively

1. Criteria for writing effective technical documents and know how to find and use sources for help;

2. Write reports, data sheets, presentations, etc., to technically communicate information;

3. Use written and electronic resources to communicate and handle data, e.g., charts, graphics, etc.;

4. Utilize computer software to prepare technical presentations;

5. Adhere to the ethics of technical writing and usage of resources.

Consider These Statements....
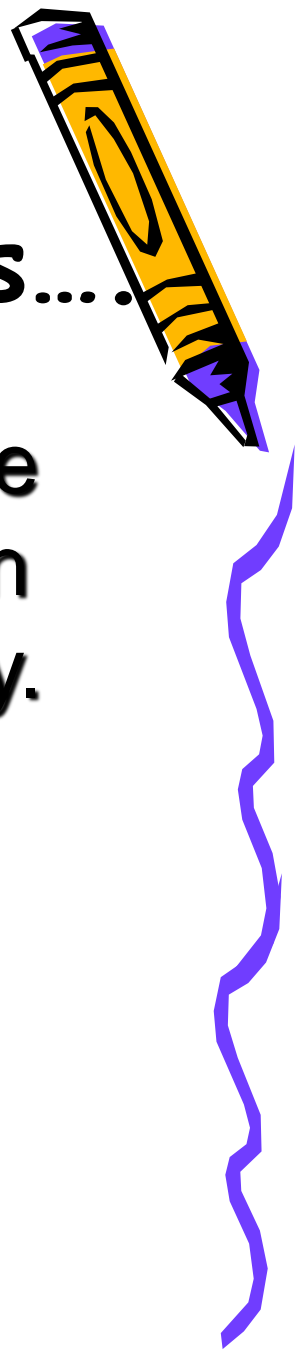
- Looking into the azure blue sky one could see the golden orb of the sun slip gently beneath the western sky.

- The sun set in the west.

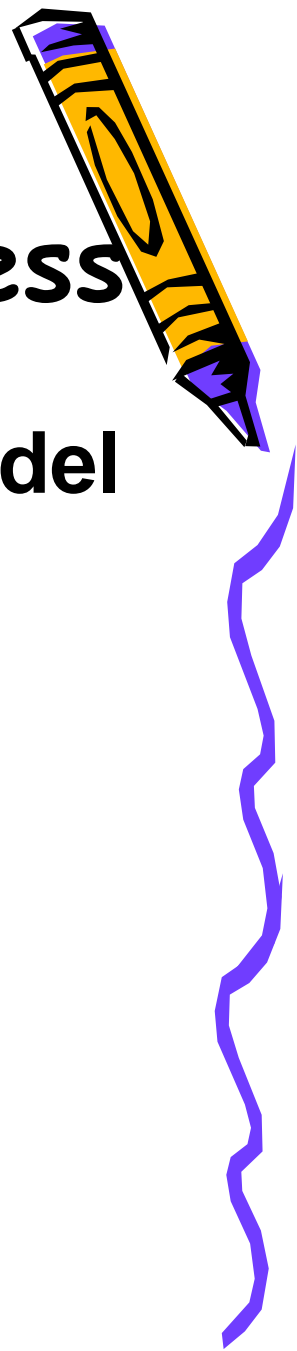# Characteristics of Effective Technical Writing

The four C's:

- **Clarity** -- it is easily understood by your intended audience

- **Comprehensiveness** -- all of the necessary information is present

- **Conciseness** -- it is clear without excess verbiage

- **Correctness** -- it is grammatical and follows conventions

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Steps in the Writing Process

The ADDIE instructional design model can be used:

1. **A**nalysis
2. **D**esign
3. **D**evelopment
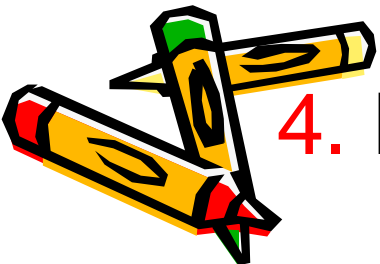4. **I**mplementation
5. **E**valuation

Theory of Design

Good design is:

1. Visually simple and uncluttered.

2. Highlights structure, hierarchy, and order.

3. Helps readers find information they need.

4. Establishes the organization's image.

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How to Organize Instructions

1. **Title**--explains what a reader will do.

2. **Introduction**--explains what the instructions should accomplish, who should follow them, lists any needed tools, knowledge, cautions, or definitions.

3. **Body**--describes steps in a sequential order, it may include graphics to clarify instructions.

4. **Conclusion**--describes expected results.

Ethics of writing.

Before starting to write your text, report, essay, or paper do not forget to consider ethics of writing.

Ethics is a set of rules and standards for using communication skills and resources when writing a technical document.
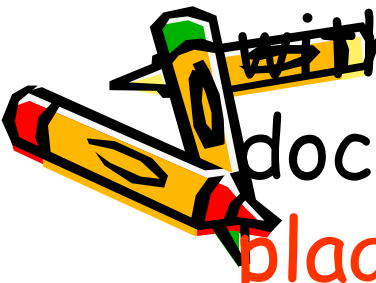
before starting to report or analyze your technical work remember you must be correct and honest in your work.
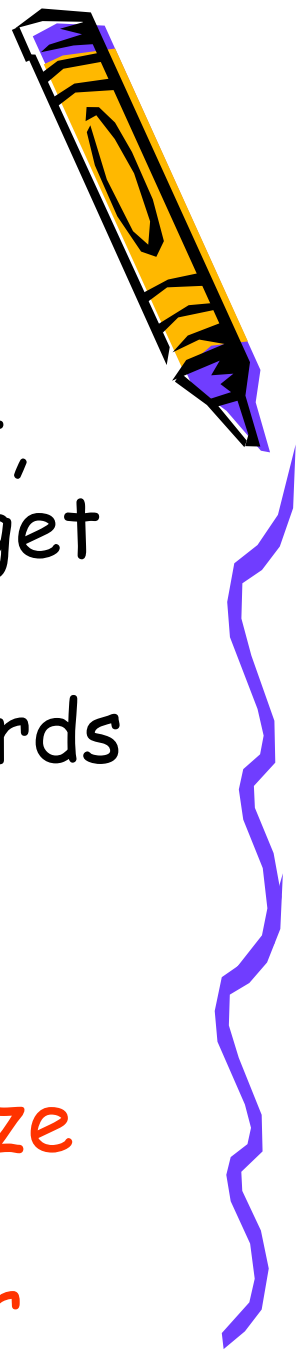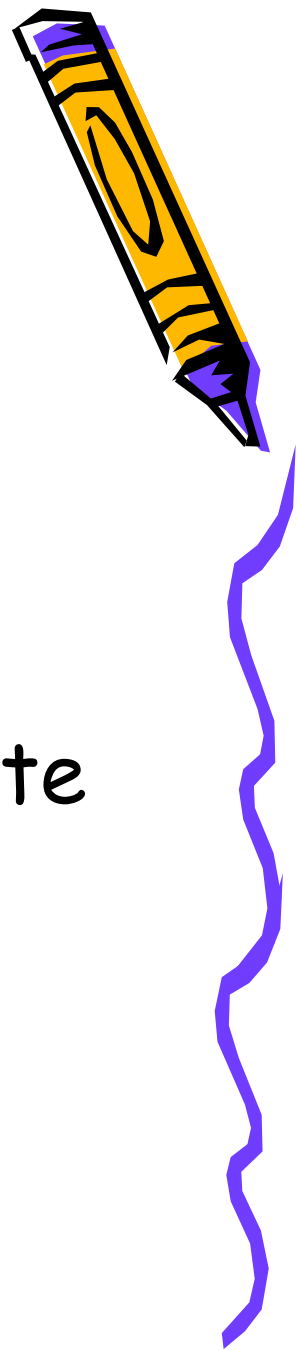
Ethics of writing
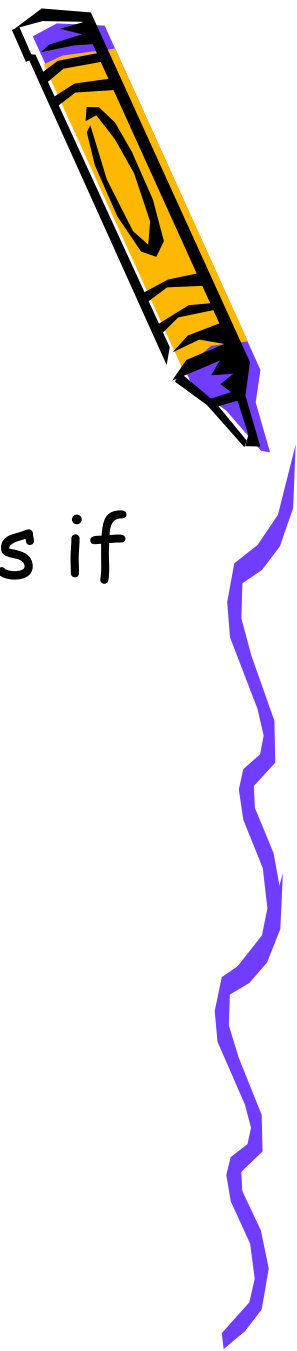
- Base your opinion on facts and separate between opinion and facts if different.

- Do not hide any ambiguous data or data which are contrary to your thesis.

- Do not use any ideas from others without mentioning, crediting and documenting that. Remember plagiarism is an act of theft.
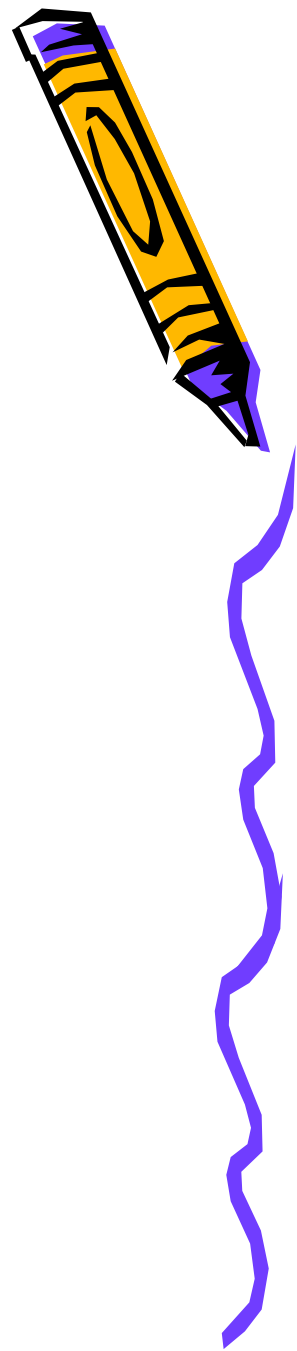
Ethics of writing

- Do not violate copy write laws by asking for permission and documenting the original source.

- Do not lie with statistics, manipulate data or graphical presentation of data.

- Try as much as possible to be objective.

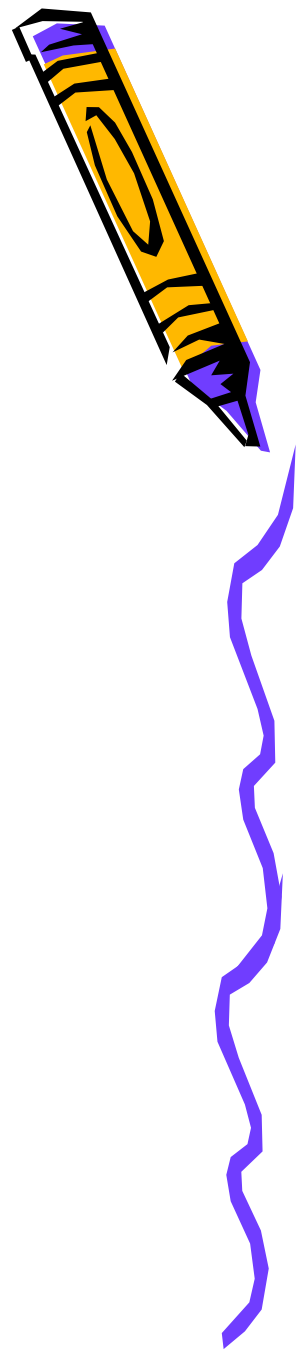# Ethics of Technical Writing and Usage of Resources

Honesty
Vs
Plagiarism

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Sources of Information

- Print-on Paper Resources

- Electronic Resources

- Non-print Resources

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What is Plagiarism?
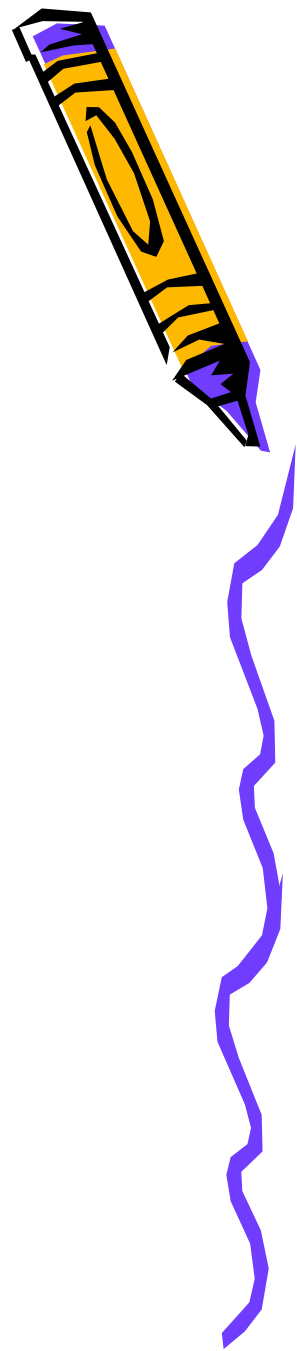
- Plagiarism is defines as the act of passing off the ideas or writings of another as one's own.

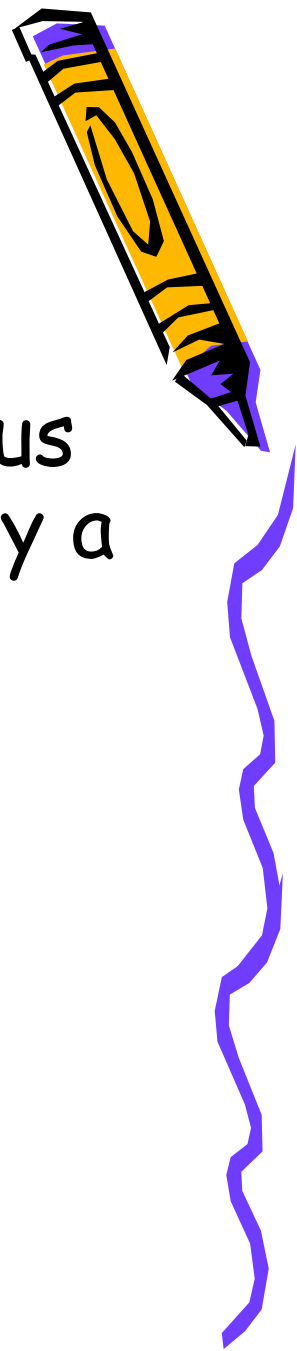Original ideas belong to those who had them first.
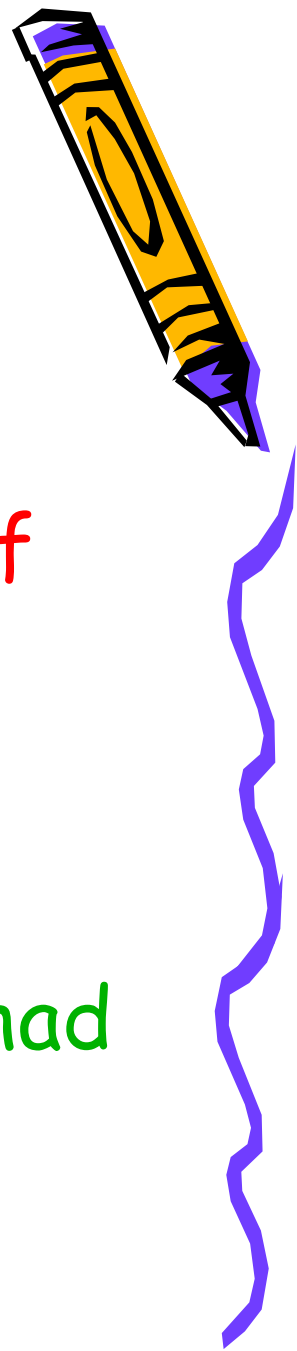
Types of Plagiarism

- Copy & Paste Plagiarism
- Word Switch Plagiarism
- Idea Plagiarism
- Self-Stealing Plagiarism
- Collaborative Work Plagiarism
- Labour of Laziness Plagiarism

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Common Knowledge

- Facts that can be found in numerous places and are likely to be known by a lot of people do not require documentation of the source.

  Example:

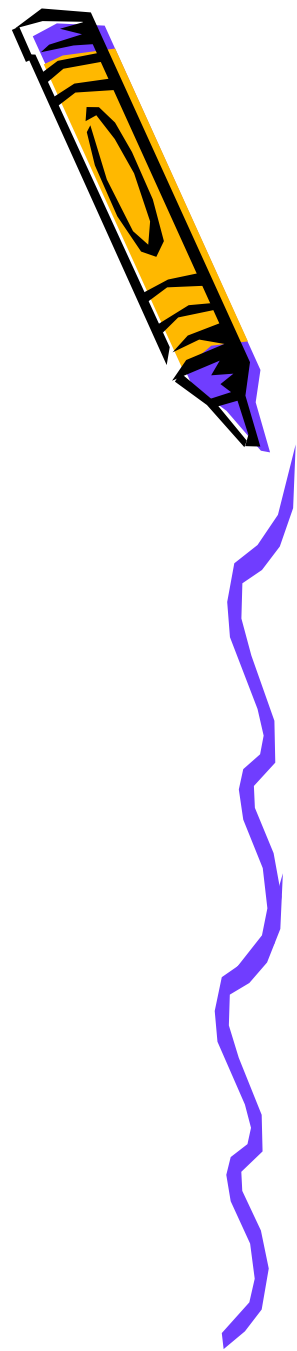 John F. Kennedy was elected President of the United States in 1960.

Why Avoid Plagiarism?

Stealing from another:
- Unethical
- Copyright

It hurts the learner:
- Cheating oneself
- No self-development
- No chance for self-presentation
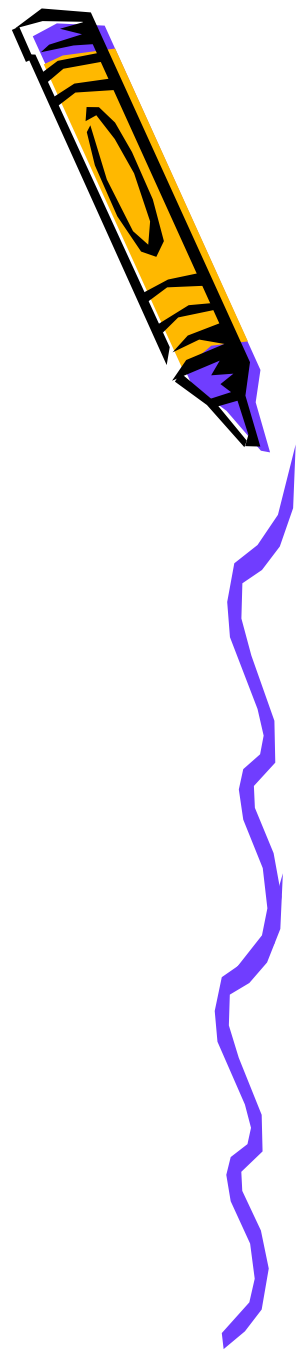- Subject to penalties

I really did not do it!

Responsibility vs. Ignorance

How to avoid Plagiarism?

Acknowledging the source while
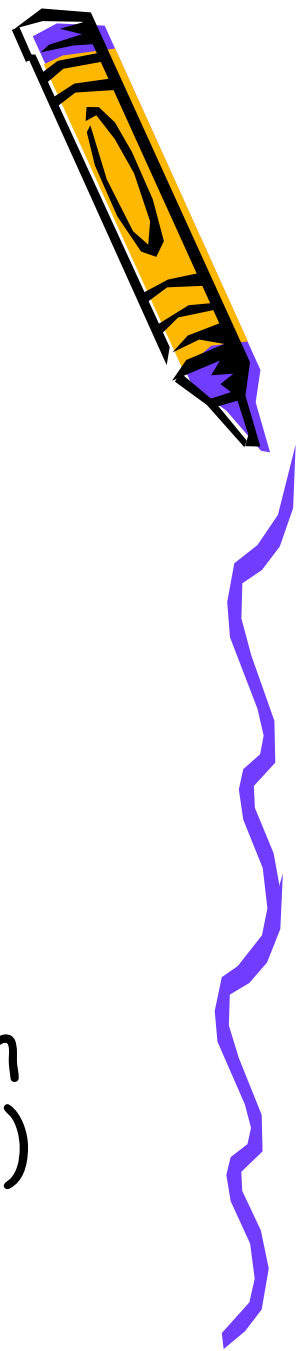
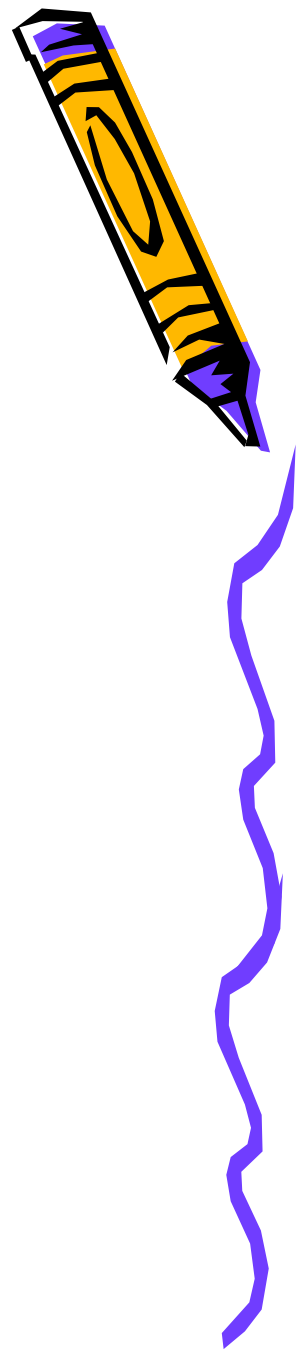- Quoting
- Paraphrasing
- Summarizing

Quoting … " "

Put in Quotations everything that directly comes from the text.

Example:

According to Peter S. Pritchard is USA Today, "Public schools need reform but they're irreplaceable in teaching all the nation's young" (14)
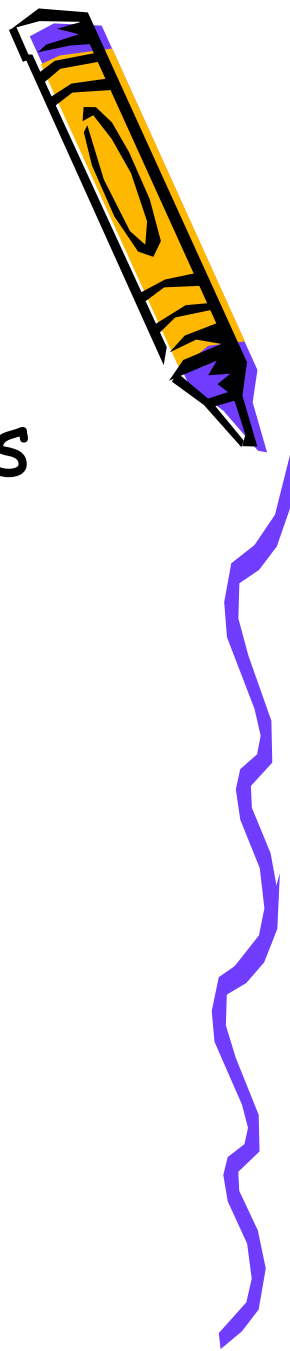
BUT …

The following should be avoided:

- Stringing quotes together without discussion

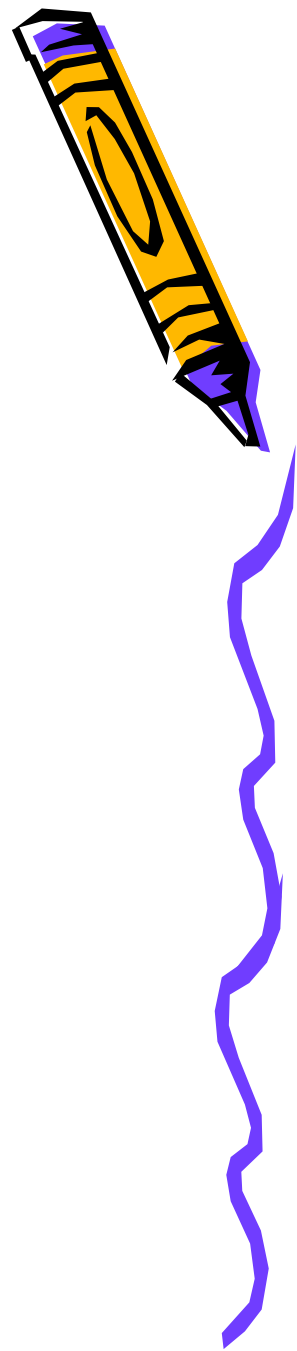- Writing a paragraph that consists only of a quote

- Overusing quotations

Paraphrasing

A good paraphrase finds new words to express the original meaning. It changes the wording <u>but not the message</u>.
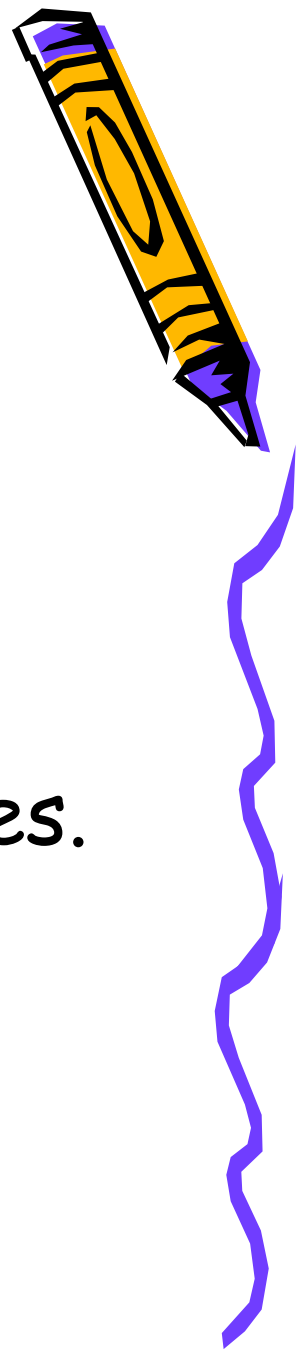
How to Prevent Plagiarism?

- Make the assignment clear
- Change assignment
- Require specific components
- Require process steps
- Require oral reports

What makes writing not effective?

- Grammar mistakes.

- Vocabulary mistakes.

- Spelling mistakes.

- Mechanics and punctuation mistakes.

- Sentence errors.

- Pattern errors.

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Check tools

- Thankfully, today's technology makes memo, letter and proposal writing much easier by providing reliable tools that check and even correct misspelled words and incorrect grammar use. Unfortunately, these tools are not fail proof and will require your support, making your knowledge in this area important.

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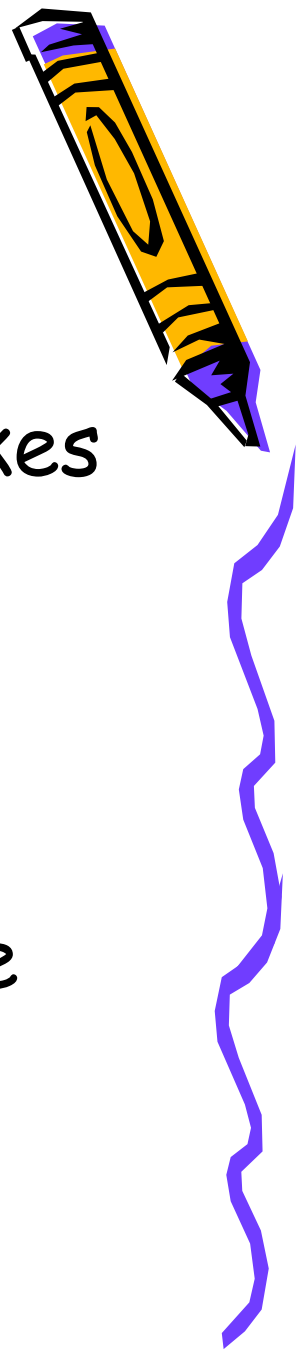
How to improve your writing skills?

Before You Write It Down, Know This:

- Many people are intimidated by writing. Even so, there are times when writing is the best way to communicate, and oftentimes the only way to get your message across. But for this your writing has to be effective to be sure that it carries exactly the message you want to send, and it should be understood by the receiver this way.

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