Critical Thinking and Argumentation

In everyday conversation, the word "critical" has a somewhat negative meaning attached to it. Critical thinking, however, is an extremely valuable skill for school, work, and life in general. It’s all about thinking like a scientist. Question everything and pay attention to detail.

Whenever you encounter new information, whether it is presented as fact (verifiable and objective) or opinion (personal and subjective), remember to ask a few questions:

1. What are my existing beliefs and opinions on this topic? What are they based on?
2. What is the source of this information? Is it trustworthy? Does it have a bias or an agenda?
3. Is there evidence of slanted, emotional, or otherwise manipulative language?
4. Are there other views or interpretations that may be equally valid?

All of these can really be condensed into a single question: Why should I believe this?

To build a persuasive argument, writers try to appeal to the reader's emotions (pathos), convince the reader to trust some authority (ethos), and/or use logical reasoning (logos).

When evaluating an argument, look out for the following fallacies (types of illogical reasoning):

- **Slanted Language**: Influencing the reader through words with strong connotations.
- **Emotional Appeal**: Appealing to fear, tradition, or pity; "tugging at the heartstrings."
- **Red Herring, Distraction**: Sidetracking by bringing up unrelated issues.
- **Ad Hominem**: Attacking the person rather than dealing with the issue.
- **False Authority**: Citing an "expert" who has no claim to expertise.
- **Bandwagon, Ad Populum**: Everyone else is doing it, so it must be right.
- **Genetic Fallacy**: The origins of a person or idea determine its worth.
- **Either-Or, False Dilemma**: Oversimplifying an argument by reducing it to just two sides.
- **False Analogy**: Claiming two items are alike when they are actually different.
- **Moral Equivalence**: Comparing minor misdeeds with major atrocities.
- **Hasty Generalization**: Rushing to a conclusion without adequate evidence.
- **Circular, Begging the Question**: The point to be asserted is already included in the premise.
- **Irrelevant Argument, Non Sequitur**: The conclusion does not follow from the premise.
- **False Cause, Post Hoc Ergo Propter Hoc**: One event leads to another when loosely or coincidentally related; if A followed B, then B must have caused A.
- **Slippery Slope**: Some event A will lead to B, which will lead to C, and so on until some bad event Z happens. Therefore, A must be prevented.

Misleading fallacies like these may be used intentionally, but they are more often due to carelessness. Watch for them in your own writing!