**Arguments: Deductive Reasoning**

It is helpful to keep in mind that there are two basic patterns of thinking and presenting our thoughts that are followed in argumentation—**induction** and **deduction**.

*Inductive reasoning,* the more common type of reasoning, moves from a set of specific examples to a general statement. In doing so, the writer makes an *inductive leap* from the evidence to the generalization. For example, after examining enrollment statistics, we can conclude that students do not like to take courses offered early in the morning or late in the afternoon.

*Deductive reasoning,* in contrast, moves from a general statement to a specific conclusion. It works on the model of the **syllogism**, a three- part argument that consists of a major premise, a minor premise, and a conclusion, as in the following example:

*a.* All women are mortal. *(Major premise)*

*b.* Jeanne is a woman. *(Minor premise)*

*c.* Jeanne is mortal. *(Conclusion)*

A syllogism will fail to work if either of the premises is untrue:

*a.* All living creatures are mammals. *(Major premise)*

*b.* A butterfly is a living creature. *(Minor premise)*

*c.* A butterfly is a mammal. *(Conclusion)*

The problem is immediately apparent. The major premise is false: Many living creatures are not mammals, and a butterfly happens to be one of the non-mammals. Consequently, the conclusion is invalid.

More Examples:

All dogs have four legs. Rover is a dog. Rover has four legs.

This channel only plays shows for children. "Lucky Duck" is a show that comes on this channel. "Lucky Duck" is a show for children.

All birds have two legs and wings. A dove is a bird. A dove has two legs and wings.

Reptiles do not have fur. A crocodile is a reptile. Crocodiles do not have fur.