Principles of fire behavior

Science, Chemistry

The paper " Principles of Fire Behavior" is an excellent example of an essay on chemistry. Combustion is the chemical process that takes place when two or more combustible fuels react in the presence of an oxidizer (usually the oxygen in the air) and Fire is usually the visible sign of the combustion process (Quintierre, 1997).

Though Fire and combustion are typically the same scientifically, there exist some conventional differences between them. Combustion usually takes place before the emergence of fire. Conventionally, fire is not usually the intended outcome of a combustion process, while combustion is a controlled fire. Fire is an uncontrolled combustion process that involves the application of some basic scientific principles. Another relevant difference between combustion is that while combustion refers to the process that places between two or more combustible fuels, fire is usually the product of that process or reaction. Combustion is an independent chemical reaction that yields heat energy or products such as a fire in some cases. Fire is a rapid, dependent oxidation process (as it depends on the combustion process to exist) which is usually accompanied by the illumination of light and heat of different intensities. Combustion could be either rapid or slow depending on the purpose the combustion was intended for, while the fire is usually rapid. Fire needs oxygen to survive, while the process of combustion does not necessarily need oxygen for it to take place. During the combustion process, the ignition temperature has to be reached before the emergence of fire and fire could only be ignited if the combustion process is rapid enough to produce this end result.

It should also be noted that while the result of the process of combustion is

desired as it is done for an intended purpose, such as the production of power, for use in industrial processes; the result of fire is not always desired as it could be sometimes hazardous if it occurred as a result of an accident.