8/28/15

The science of litter

Decomposition made simple

The breaking down of a material into its smaller parts (atoms are smallest particle)

Exposure of a material to wind, water, air, soil will aid in decomposition

Definitions:

1. Organic – refers to any material that has carbon in it
2. Inorganic – materials that contain all other elements except carbon

Types of decomposition

1. Abrasion – the breakdown of a material by physical contact with another material and is not a chemical reaction. Wind and water are examples of the abrasion process. All litter is effected by abrasion.
2. Biodegredation - the breakdown of a material by biological processes of living organisms. Decay or rot. Occurs with microbes – bacteria and fungi. Break organic items into CO2 and H2O. Aerobic – require oxygen. Anaerobic – Absence of O2. Speeds up the decay of organic materials.
3. Corrosion – the gradual deterioration of metals through chemical reactions. Example: rusting. Iron Fe + O2 Ferric Oxide. Steel
4. Photo Decomposition – decomposition due to light. The process by which a material is broken down chemically by radiant energy such as the ultraviolet light in sunlight