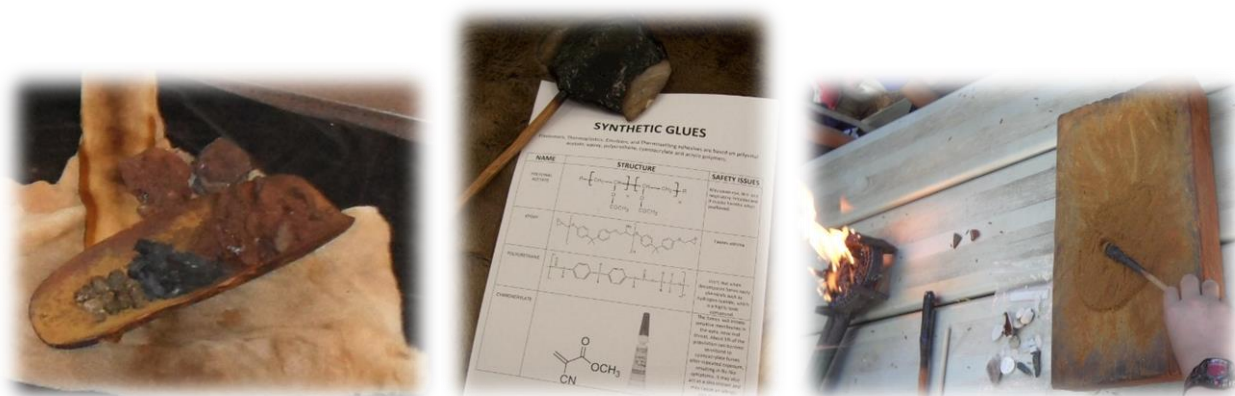


ACTIVITY 5 Aboriginal and Synthetic Glues

Background

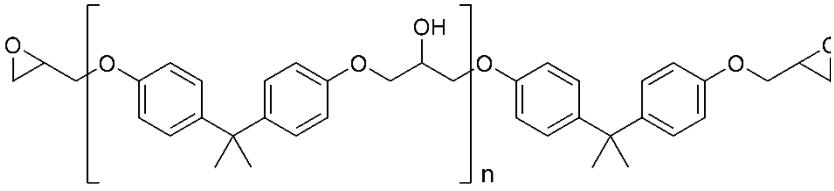
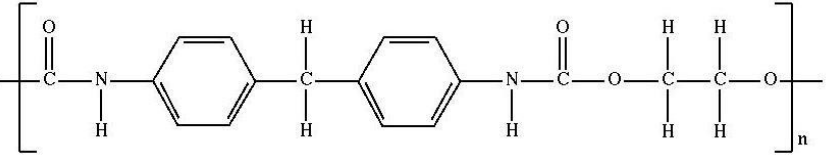
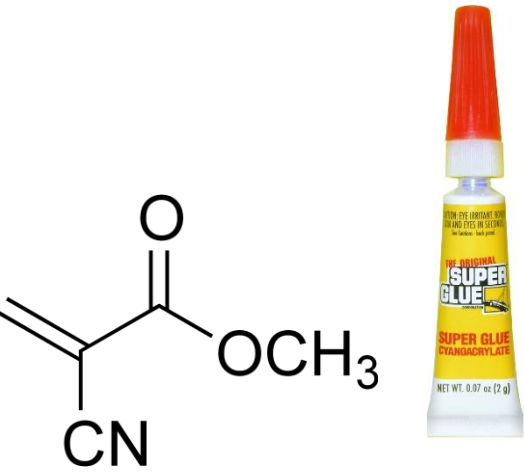
Did you know that Aboriginal people used the woolly material found around the base of the fronds on top of the trunk of Zamia Palm as a nappy, many years before modern science developed polymers, such as polyacrylic acid.



SYNTHETIC GLUES

Elastomers, Thermoplastics, Emulsion, and Thermosetting adhesives are based on polyvinyl acetate, epoxy, polyurethane, cyanoacrylate and acrylic polymers.

NAME	STRUCTURE	SAFETY ISSUES
POLYVINAL ACETATE	$R - \left[\begin{array}{c} \text{CH}_2 - \text{CH} \\ \\ \text{O} \\ \\ \text{COCH}_3 \end{array} \right]_n - \left[\begin{array}{c} \text{CH} - \text{CH}_2 \\ \\ \text{O} \\ \\ \text{COCH}_3 \end{array} \right]_n - R$	May cause eye, skin and respiratory irritation and it maybe harmful

		when swallowed.
EPOXY		Causes asthma
POLYURETHANE		Inert, but when decomposes forms nasty chemicals such as hydrogen cyanide, which is a highly toxic compound.
CYANOACRYLATE		The fumes will irritate sensitive membranes in the eyes, nose and throat. About 5% of the population can become sensitized to cyanoacrylate fumes after repeated exposure, resulting in flu-like symptoms. It may also act as a skin irritant and may cause an allergic skinreaction.

