**Organic pathways**

The synthesis of organic molecules is not an arbitrary process. There are standard pathways, involving catalyst and reagents, used to plan the production of a particular molecule.

Complete the template below, to illustrate these pathways. Propene is the starting point – draw in each molecule in the box provided and write the name of the molecule as well.

propene

KOH

uv

Cr2O72-,H+

H2SO4

*substitution*

*addition*

*oxidation*

*esterification*

NH3

**Solution**

propane

1-chloropropane

propene

KOH

uv

propan-1-ol

propanoic acid

Cr2O72-,H+

propyl propanoate

H2SO4

 propanal

*substitution*

*addition*

*oxidation*

*esterification*

 propan-1-amine

NH3