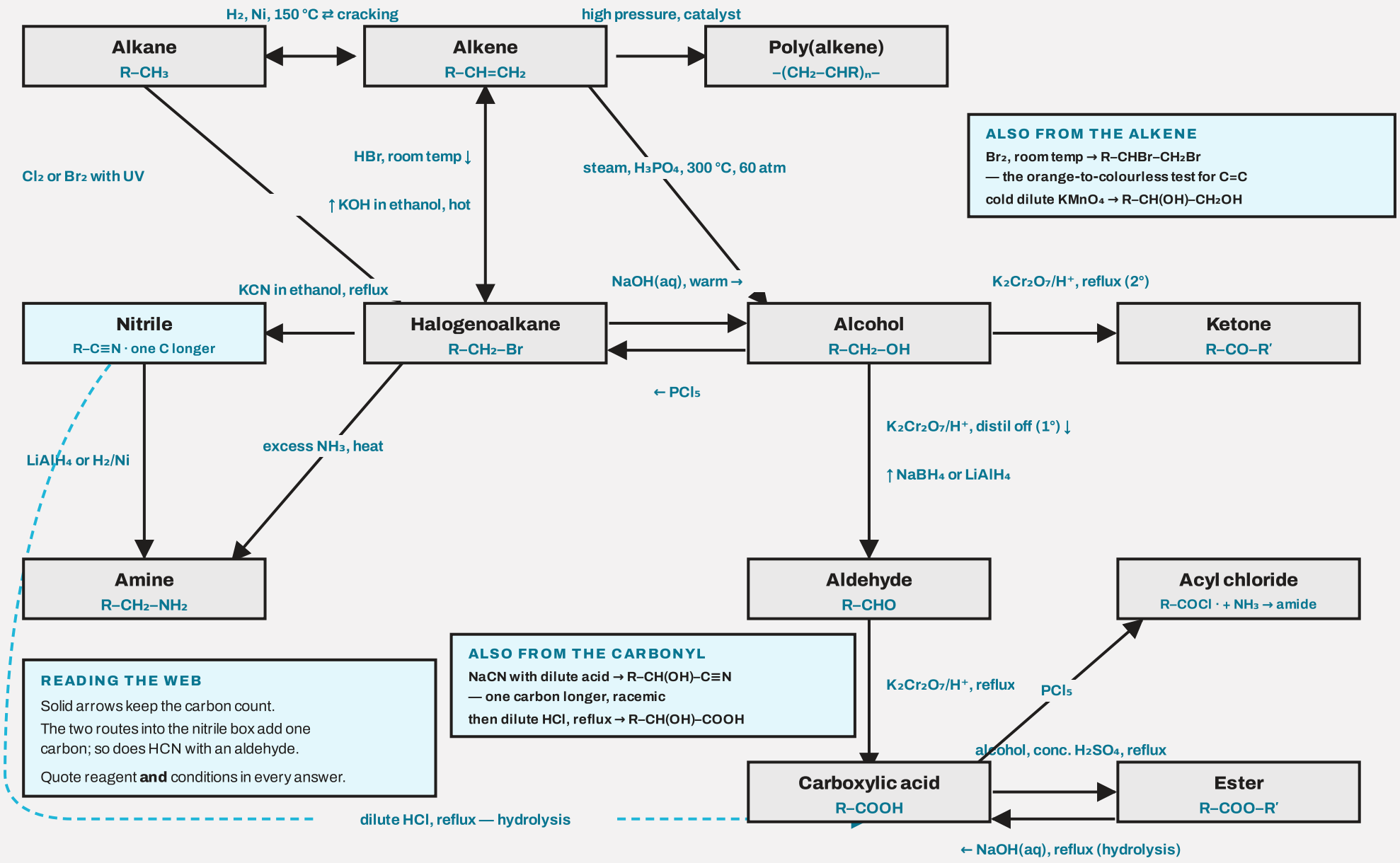
9701 CHEMISTRY · TOPICS 21 & 35 · AS + A LEVEL

Organic Synthesis — Reaction Web

EVERY ARROW CARRIES REAGENT + CONDITIONS



ALSO FROM THE ALKENE

Br_2, room temp → R–CHBr–CH_2Br
— the orange-to-colourless test for C=C
cold dilute $KMnO_4$ → R–CH(OH)–CH_2OH

READING THE WEB

Solid arrows keep the carbon count.
The two routes into the nitrile box add one carbon; so does HCN with an aldehyde.
Quote reagent **and** conditions in every answer.

ALSO FROM THE CARBONYL

NaCN with dilute acid → R–CH(OH)–C≡N
— one carbon longer, racemic
then dilute HCl, reflux → R–CH(OH)–COOH