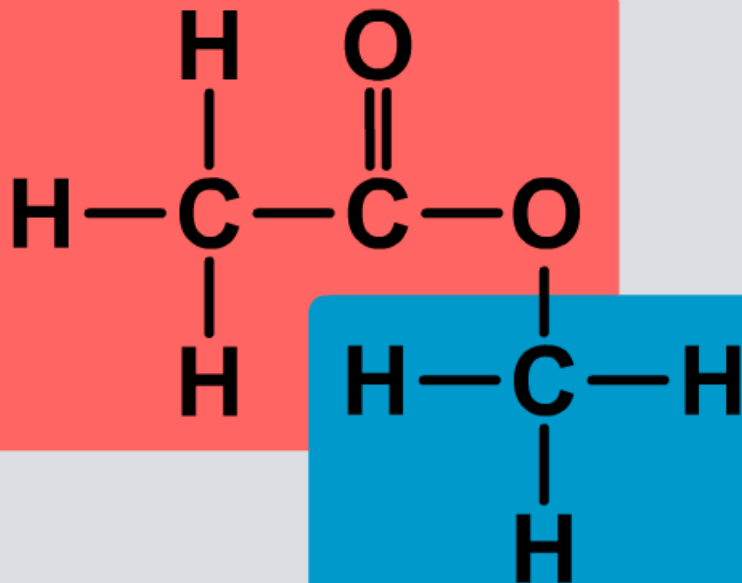


# Esters



# What are esters?

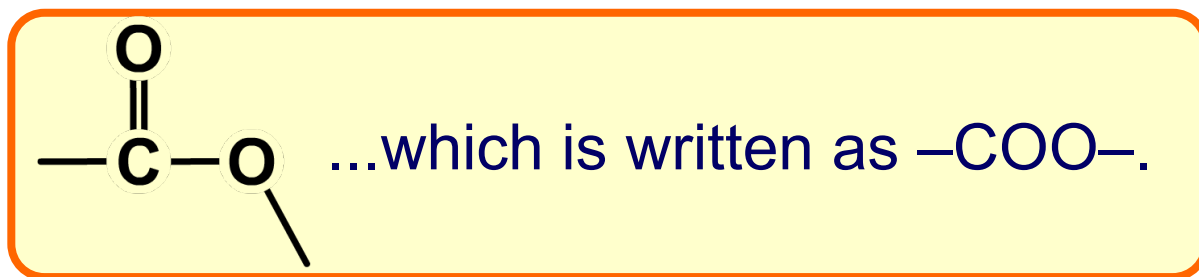
Esters have characteristic smells, and are often used in flavorings and perfumes.

For example:

- propyl ethanoate smells of pears
- butyl butanoate smells of pineapple
- methyl butanoate smells of apple.



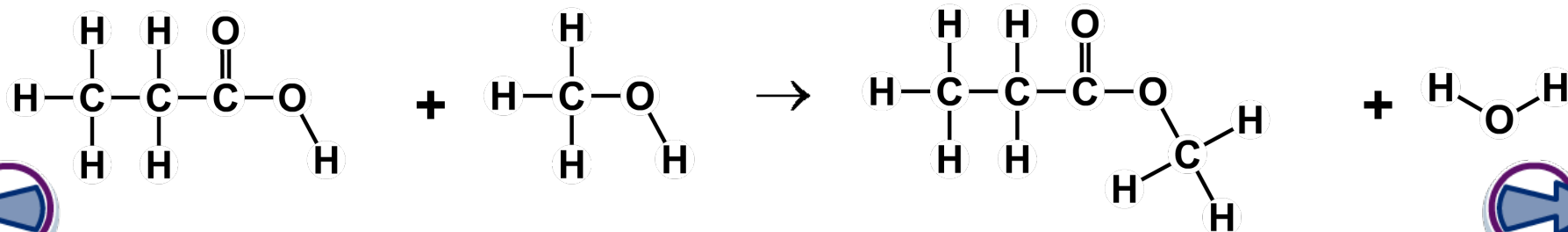
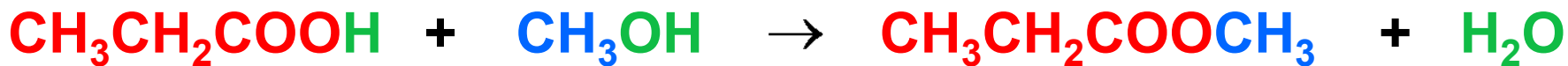
**Esters** contain this group of atoms:



Esters are made from the reaction of a carboxylic acid with an alcohol:



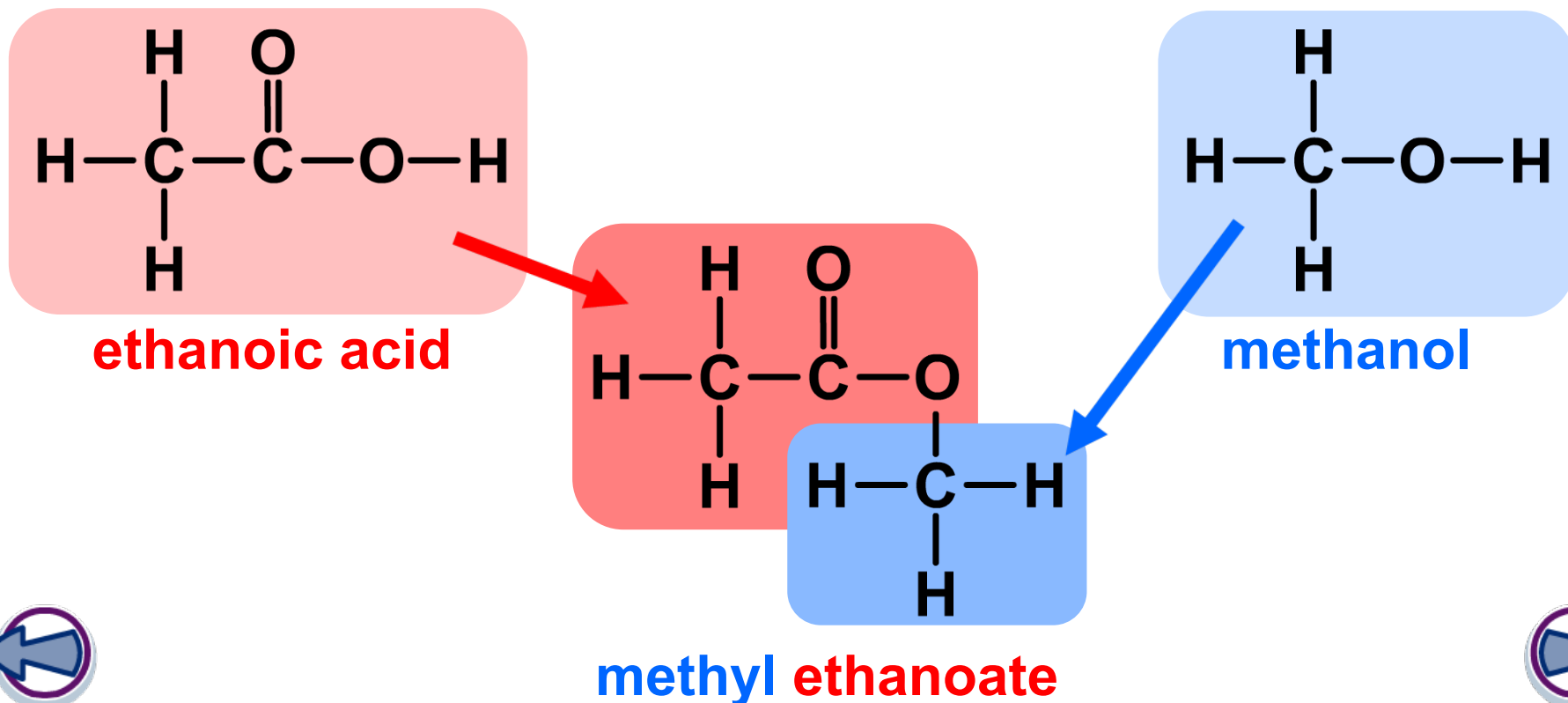
**propanoic acid** + **methanol**  $\rightarrow$  **methyl propanoate** + **water**



# Naming esters

Esters are named after the alcohol and the carboxylic acid from which they are made. The alcohol gives the first part of the name, and the carboxylic acid gives the second. Esters always end in “-anoate”.

For example:



# Matching carboxylic acids to their esters



Match each carboxylic acid to an ester it can form

methanoic acid

butanoic acid

propanoic acid

ethanoic acid

hexanoic acid

pentanoic acid

decyl pentanoate

ethyl ethanoate

ethyl butanoate

propyl hexanoate

hexyl methanoate

methyl propanoate



solve



# Practicing naming esters

Fill in the missing information in the table

carboxylic acid	alcohol	ester
propanoic acid	?	ethyl propanoate
?	methanol	methyl ethanoate
?	propanol	propyl methanoate
decanoic acid	?	methyl decanoate
butanoic acid	propanol	?
ethanoic acid	ethanol	?

ethanoic acid



solve

