

# Amino Acids

Pre-lesson assignment – Textbook pg 478-480 (revisit p470)

## Revise the following key words in context

- Amine
- Carboxylic acid
- Amide

## Make notes on amino acids

Use the following questions to structure your notes.

1. Amides are made by reacting acyl chlorides with amines.
  - a. Write an equation for the formation of N-methylethanamide from ethanoyl chloride and methylamine.
  - b. Explain why the conditions for this reaction are *anhydrous*. Give two reasons, one relating to each reactant.
2. Amino acids are biological molecules that contain two functional groups.
  - a. Draw the structure of an  $\alpha$ -amino acid. Label the functional groups.
  - b. Show the reaction between glycine ( $R = -H$ ) and hydrochloric acid.
  - c. Show the reaction between serine ( $R = -CH_2OH$ ) and sodium hydroxide.
  - d. Show the reaction between alanine ( $R = -CH_3$ ) and ethanol.