

Most carbon-based
molecules are
classified as what?

Ans: organic

This is a type of
reaction that adds a
monomer to a chain.

Ans: dehydration synthesis

When a polymer is separated back into monomers what is added to break bonds?

Ans: water

What happens when a
monosaccharide
undergoes a
dehydration reaction?

Ans: water is released as new bonds are formed

Why are lipids
classified
together?

Ans: They are all hydrophobic (repel water)

What is the
monomer of a
nucleic acid?

Ans: nucleotide

Name the reactions
used to synthesize and
break apart monomers
and polymers.

Ans: dehydration synthesis & hydrolysis

What is the
monomer of a
carbohydrate?

Ans: monosaccharide

What is the
polymer of a
carbohydrate?

Ans: polysaccharide

What is the basic
function of a
carbohydrate?

Ans: energy

What is the basic
structure of a
carbohydrate?

Ans: carbon ring

What common
property categorizes
all lipids together?

Ans: hydrophobic (repel water)

List the three
main types of
lipids.

Ans: fats, phospholipids, steroids

What is the
function of a
fat?

Ans: store energy

What is the
function of a
phospholipid?

Ans: make up cell membrane

What is the
function of a
steroid?

Ans: send signals, chemical messages

How do lipids
interact with
water?

Ans: repel water (hydrophobic)

What is the
polymer of a
nucleic acid?

Ans: nucleic acid

List the two
main types of
nucleic acids.

Ans: DNA & RNA

What is the basic
function of a
nucleic acid?

Ans: make proteins

What is the
monomer of a
protein?

Ans: amino acid

What is a
polymer of a
protein?

Ans: polypeptide

What is one
function of a
protein?

Ans: build muscle, control chemical reactions in cells, long-term nutrient storage

Which part of the
structure makes
each amino acid
unique?

Ans: side group (R group)

What are the
products of a
chemical reaction?

Ans: ending materials from a reaction, what is produced

What are the
reactants of a
chemical reaction?

Ans: starting materials for a reaction, what goes into the reaction

What happens during a chemical reaction?

Ans: molecules are rearranged, bonds are broken and new bonds form

How do enzymes affect a chemical reaction?

Ans: lower the activation energy and increase the rate of the reaction

What does it mean
for any protein to
denature?

Ans: unravel or lose its shape

What might cause
the denaturation of
a protein?

Ans: unfavorable conditions like high temperature or pH outside of normal range

How can denaturation affect protein function?

Ans: can change the shape causing it to no longer work properly

What is the relationship
between a substrate and
the active site on an
enzyme?

Ans: acts like a lock and key.....specific enzyme with the right shaped active site for a specific
substrate

What happens to an
enzyme after a
chemical reaction is
complete?

Ans: they release the substrate (product) and remain unchanged

What is the pH
of a base?

Ans: above 7

What is the pH
of an acid?

Ans: below 7

What is the pH of a neutral substance?

Ans: 7

What is the only
substance that has
a neutral pH?

Ans: pure water