

SYSTEM

M

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THE

DIGES

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SYSTEM

IN

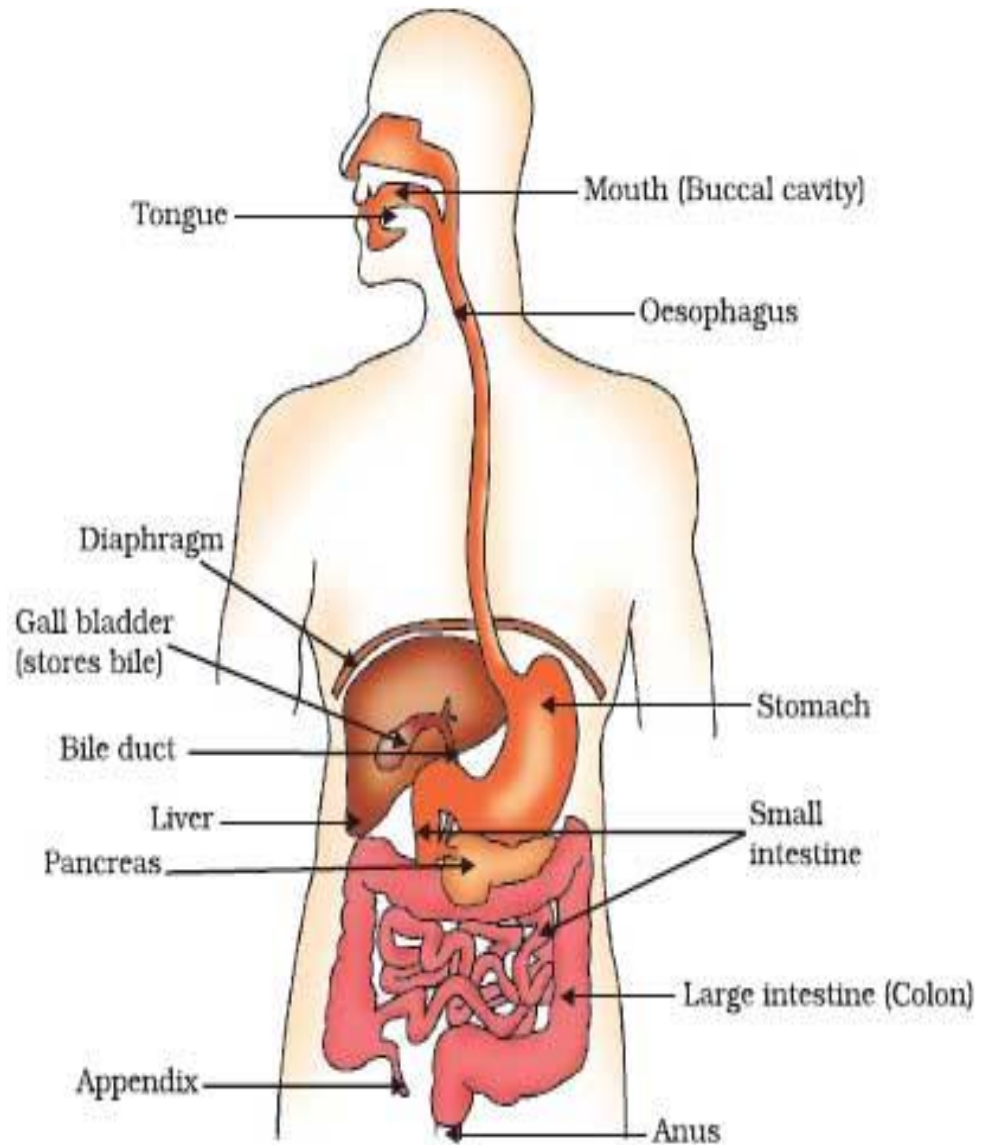
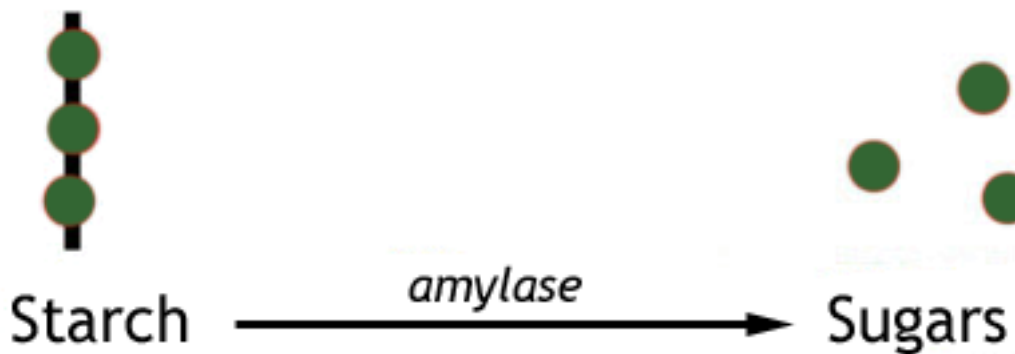
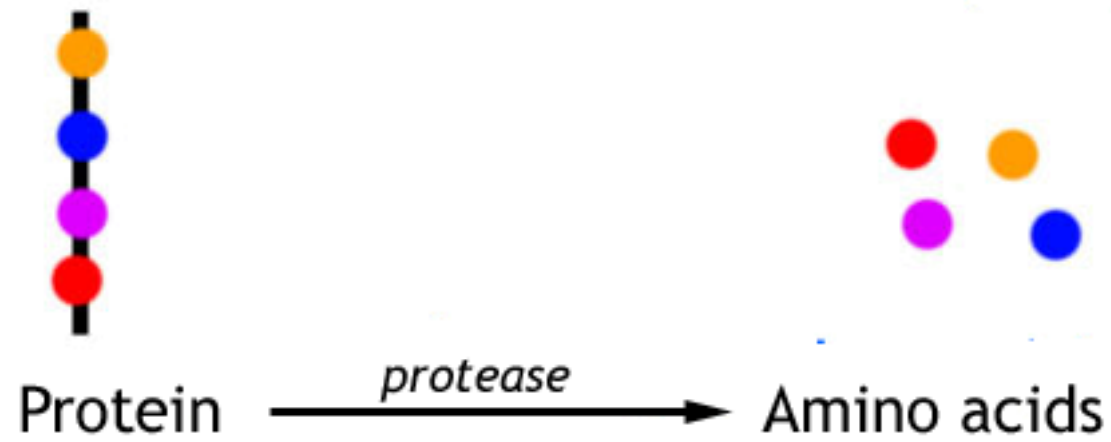
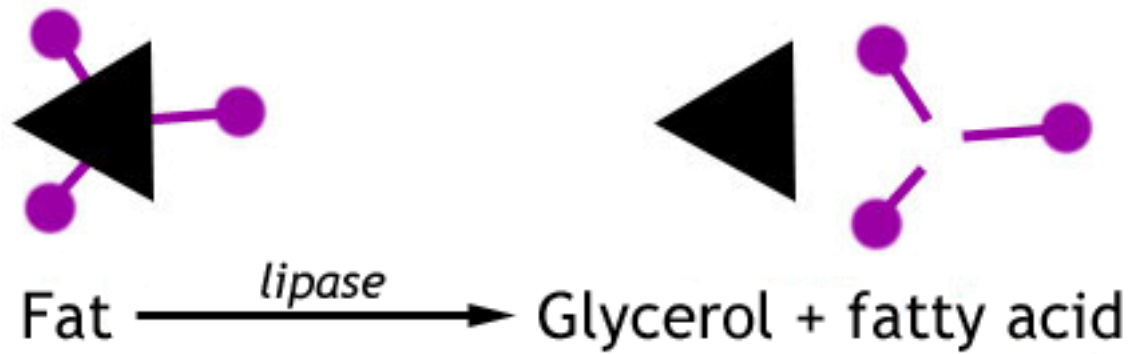


Figure 6.6 Human alimentary canal



Y GEG

ensym

CARBOHYDRAS

dechra treulio

STARTS ⇒

GLWCOS

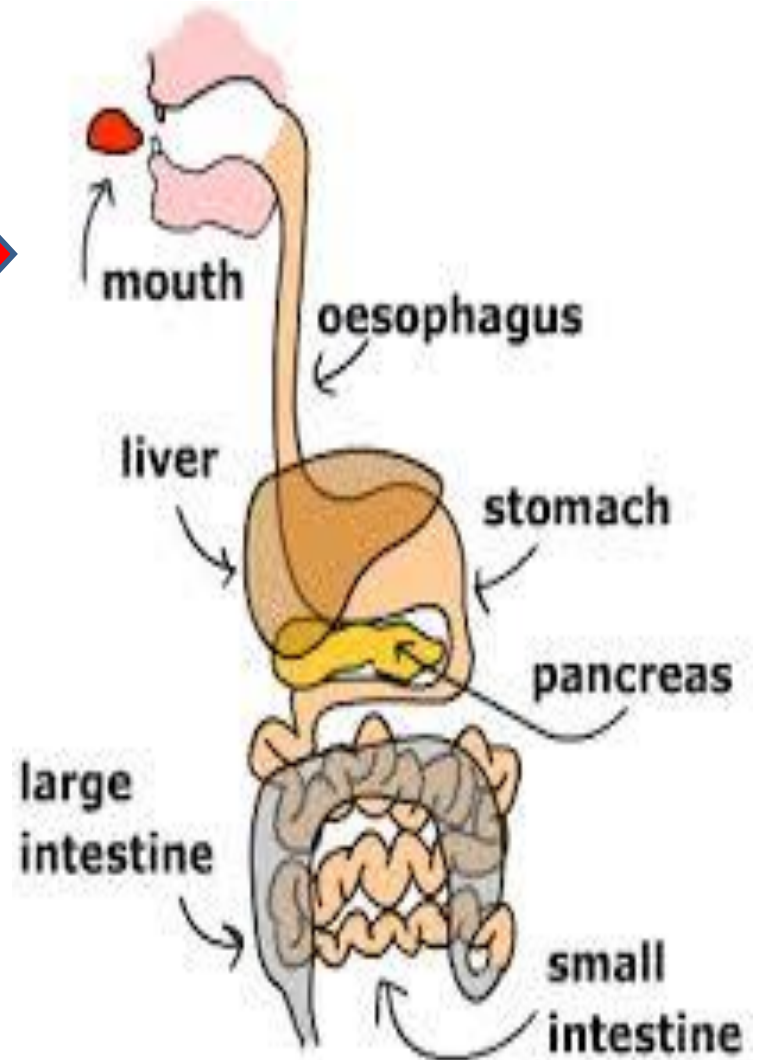
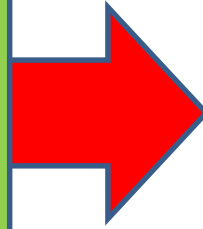
**The MOUTH
CARBOHYDRASE**

enzyme

starts to digest

STARCH ⇒

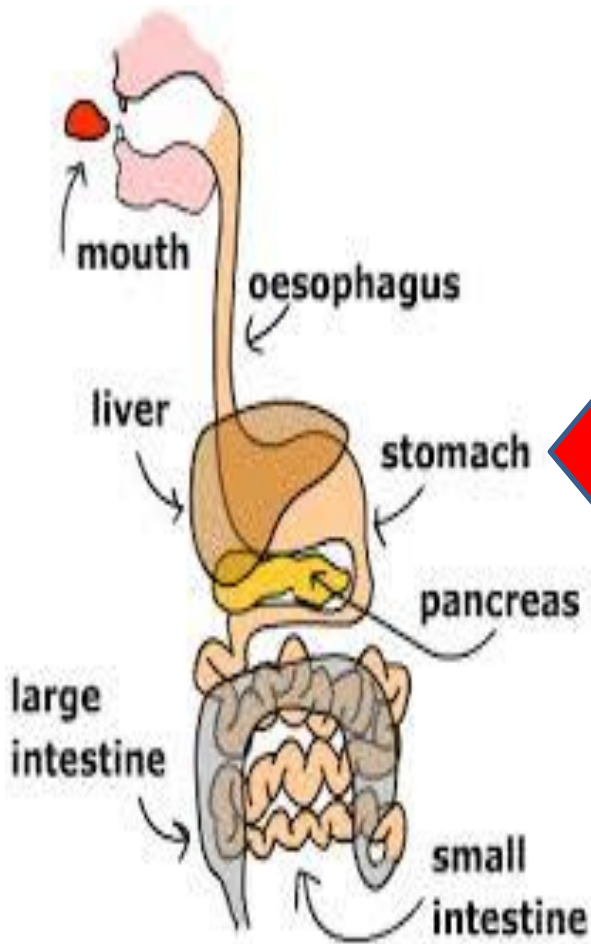
GLUCOSE



THE STOMACH

Ensym **PROTEAS** yn
dechra treulio
PROTEIN ⇒ **ASIDAU AMINO**

Asid hydrochloric yn lladd
germau a sicrhau pH
acidic i'r proteas !



The STOMACH
PROTEASE enzyme starts
to digest
PROTEIN ⇒ **ASIDAU**
AMINO

Hydrochloric acid kills
germs and ensures an
acidic pH for the
protease !

Yr IAU

Cynhyrchu BUSTL sy'n cael ei storio yn CODEN y BUSTL.

EMWLSEIDDIO BRASTER (torri diferion mawr i ddiferion bach)

Niwtralu asid y stumog.

The LIVER

Produces BILE which is stored in the GALL BLADDER.

EMULSIFY FAT (breaks large drops into small drops)

Neutralizes stomach acid !

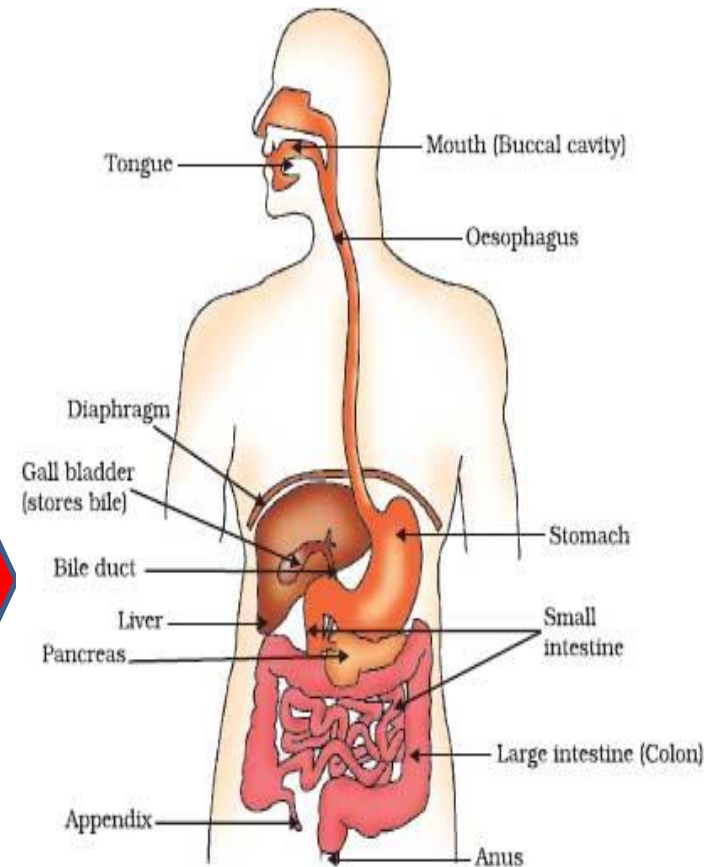


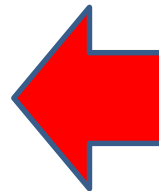
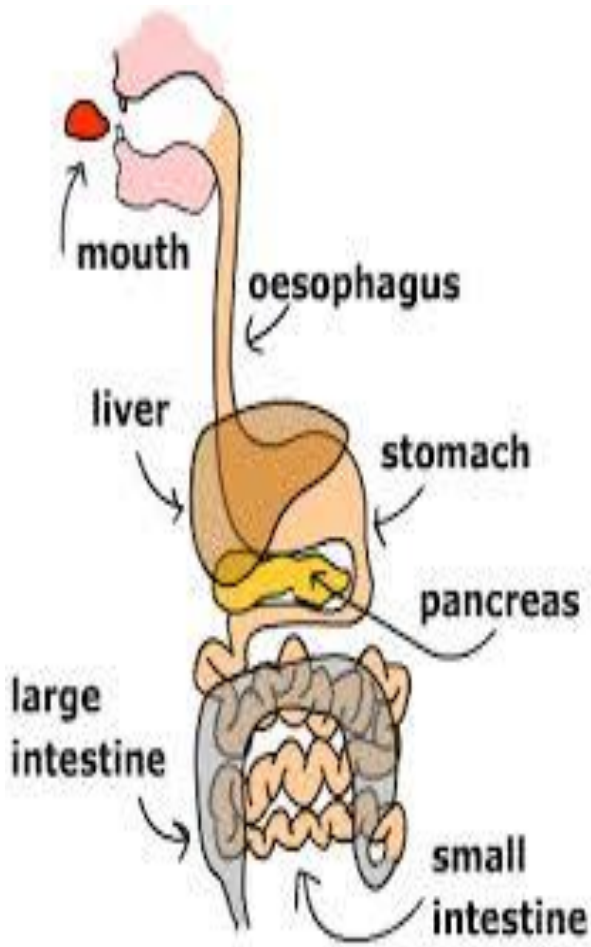
Figure 6.6 Human alimentary canal

Y PANCREAS

Cynhyrchu SUDD

PANCREATIC sydd yn
cynnwys y 3 ensym :

lipas, carbohydras,
proteas.

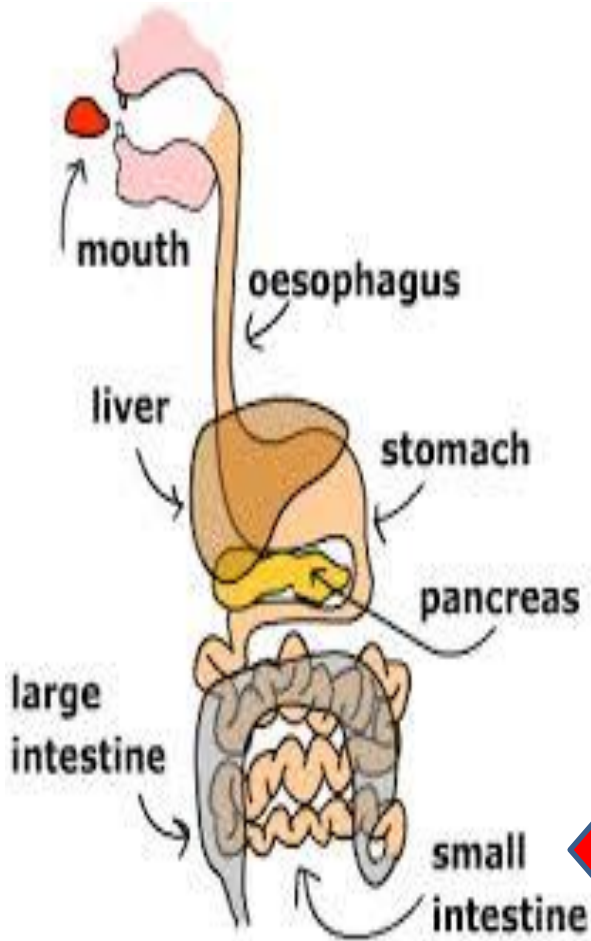


The PANCREAS

Produces PANCREATIC
JUICE which contains all

3 enzymes : lipase,
carbohydrase, protease.

BACH



pH

Acaliaidd

Alkaline

pH

TREULIAD :-

Lipas (braster ⇒ asidau brasterog + glyserol)

Proteas (protin ⇒ asidau amino)

Carbohydras (Carbohydrad ⇒ glwcos)

AMSUGNIAD :-

cynnyrch treuliad yn tryledu i'r gwaed

SMALL INTESTINE

DIGESTION :-

Lipase (fats ⇒ fatty acids + glycerol)

Protease (proteins ⇒ amino acids)

Carbohydrase (carbohydradau ⇒ glwcos)

ABSORPTION :-

LIFE FLOW

Proteinau sy'n cyflymu cyfradd adweithiau cemegol e.e. treuliad.

Pa FACTORAU sy'n effeithio ensymau ?



Tymheredd a pH

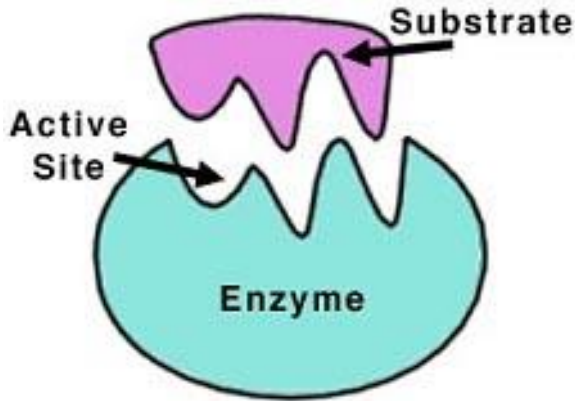
ENZYMES

Proteins that speed up chemical reactions e.g. digestion.

Which FACTORS affects enzymes ?



Temperature and pH



LIPAS

CARBOHYD

RAS

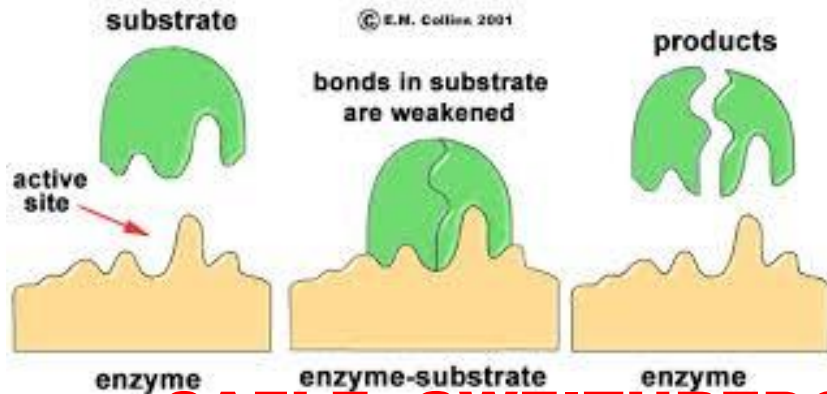
PROTEAS

LIPASE

CARBOHYD

RASE

PROTEASE



CYSYNIAD GORIAD a CHLO



LOCK and

SAFLE GWEITHREDOL – rhan o'r ensym e.e.

carbhydras sy'n uno â'r swbstrad e.e. starts.

Ffurfir **CYMHLYGYN ENSYM-SUBSTRAD !**

ACTIVE SITE – part of the enzyme e.g. carbohydrase that joins the substrate e.g. starch. An ENZYME SUBSTRATE is formed !

Mae pob ensym yn benodol i swbstrad arbennig (fel goriad i glo) !

Each enzyme is specific to a substrate (like a lock and key) !

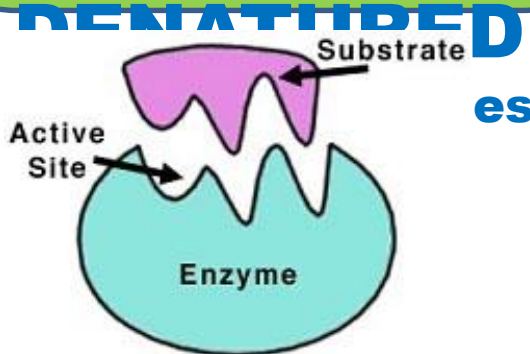


Berwi Ensymau



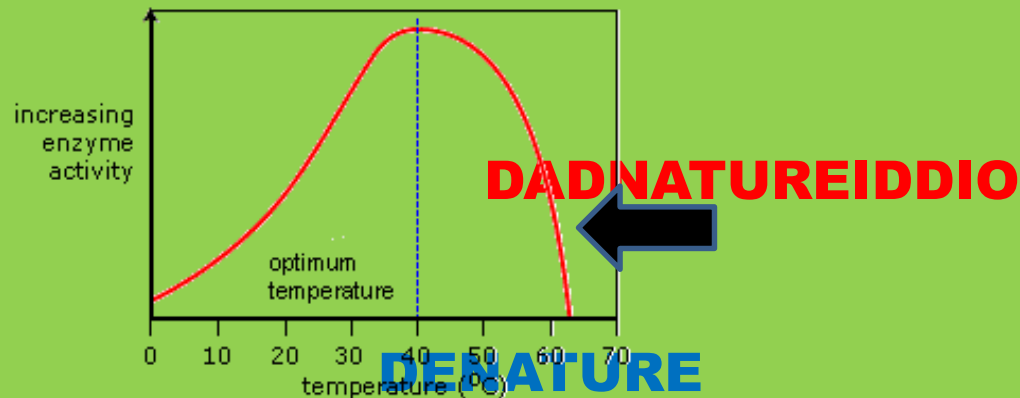
**DADNATUREID
DIO** (safe gweithredol
yn newid siap !)

**Boiling
Enzymes**



ENSYMAU

Acitfedd yn cynyddu wrth i'r
tymheredd gynyddu (gan fod mwy o
WRTHDRAWIADAU rhwng y molecylau
ensym a'r swbstrad.



**ENZYME
ACTIVITY**

Enzyme activity increases as
temperature increases because there

Cynllwys ensymau .



**Ensymau yn
treulio y
staeniau
bwyd !**

**Enzymes
digest the
food stains !!**

Lipasau / Proteasau /

Carbohydrasau

**Pam ? Galluogi golchi dillad
ar dymheredd is → arbed
egni !**

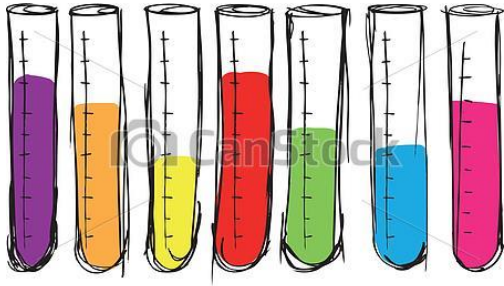
**BIOLOGICAL
WASHING POWDER**

Contain enzymes :

Lipases / Proteases /

Carbohydrases

Why ? Ability to wash



PROFION

BWYD

STARTS +

FOOD

IODIN

brown →

glas/ddu

STARCH +

IODINE

brown

GLWCOS +

BENEDICT

glas → coch-bricsen

GLUCOSE +

BENEDICT

blue → brick-red

PROTIN +

BIURET

brown → lelog

GLUCOSE +

BENEDICT

light blue lilac