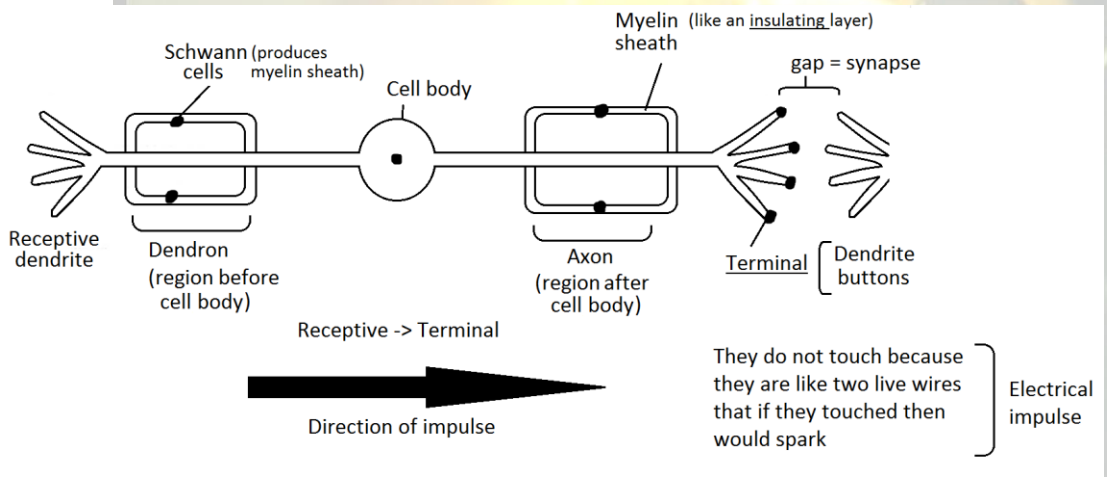


**iNotes.ie:Sample**

Node of Ranvier – gap between Schwann cells

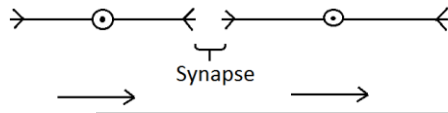
Schwann cell makes the myelin sheath which acts as an insulating layer

**SENSORY NEURON** bring messages in from outside, e.g. Touch  
 Brings message from sense organs to spinal cord and then to the brain (CNS)



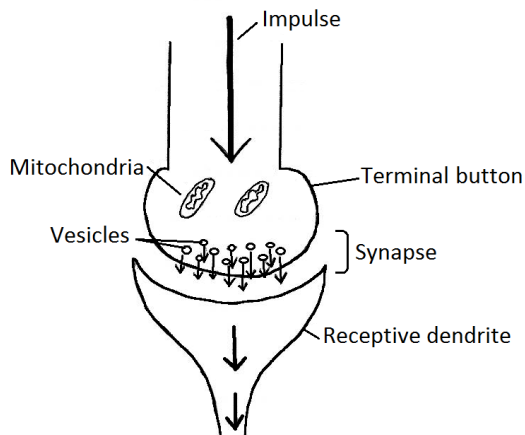
Differences between a Motor Neuron and Sensory Neuron

- | <b>MOTOR</b>  | <b>SENSORY</b>                                |
|---|---|
| 1) Cell body located at end                         | 1) Cell body in the middle                    |
| 2) Axon   | 2) Dendron and axon                           |
| 3) Brings messages away from CNS to muscle or gland | 3) Brings messages from sense organ in to CNS |



\* The gap between the terminal buttons of one neuron and the receptive dendrites of another neuron

Synapse



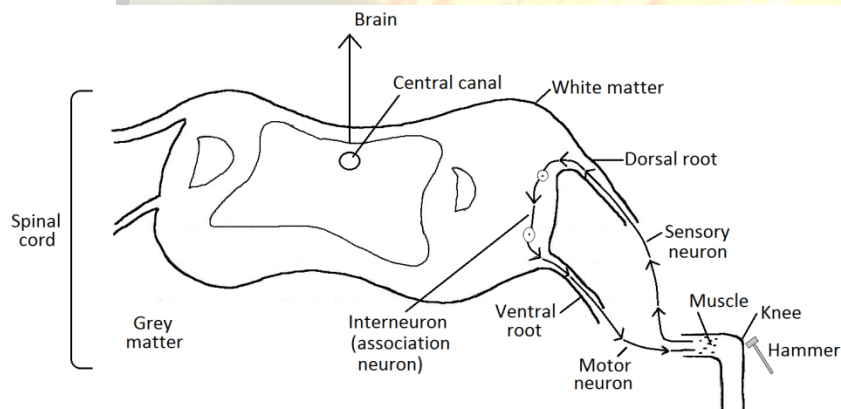
**iNotes.ie:Sample**

The vesicles produce a neuron transmitter called acetylcholine which brings the electrical impulse from the terminal button of one neuron to the receptive dendrite of the next neuron. The neurotransmitter bridges the gap.

\* Same on both neuro and sensory

**Reflex Action**

Knee jerk reaction



Another example: putting your hand on a hot surface, the body will immediately withdraw itself

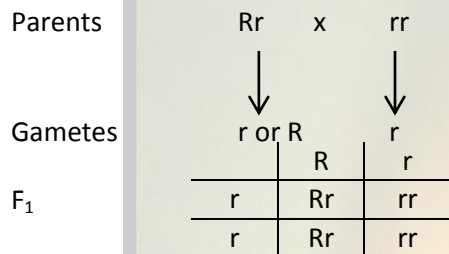
A reflex action = the message only gets as far as the spinal cord and comes back to the motor to react. The message later goes to the brain and you eventually feel it.

XX

**Crosses**

In peas the allele for round seed is (R) is dominant over the allele for wrinkled seed (r).

Outline the cross between a heterozygous round plant and a wrinkled seeded plant (NB – if it is wrinkled it is rr!)



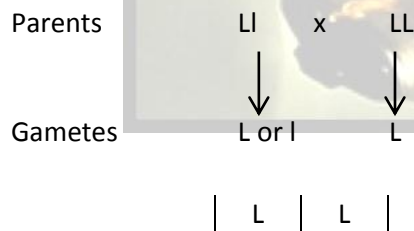
**iNotes.ie:Sample**

Genotype	Phenotype
Rr	Round seed
Rr	Round seed
rr	Wrinkled seed
rr	Wrinkled seed

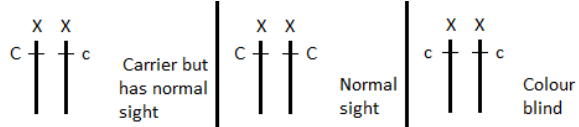
In fruit flies the allele for long wing (L) is dominant over the allele for short wing (l).

Outline the cross between a heterozygous winged fly and a homozygous dominant winged fly.

\* (NB) Always go in order mentioned

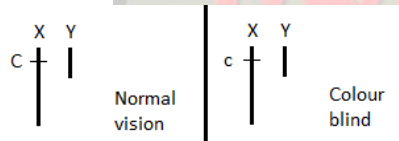


Female



N/B – NEVER PUT ANYTHING ON Y CHROMOSOME!!

Male



**iNotes.ie:Sample**

Ex. 2

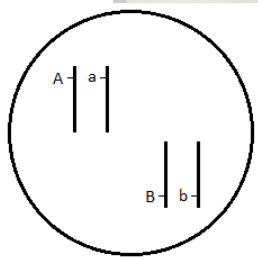
Haemophilia (inability of blood to clot) = (n)

{3-P11 – blank – 3-P12}

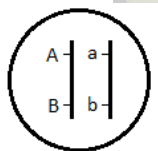
Linkage

A    a        B    b

Four separate genes, not linked



2. Big **A** is linked to big **B** and small **a** is linked to small **b**.

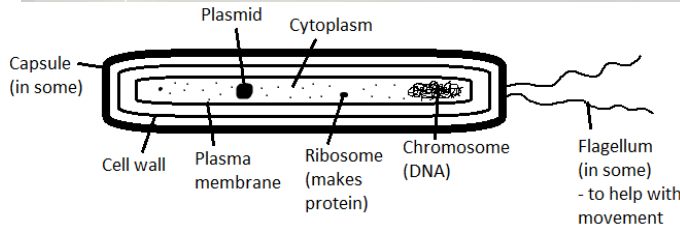


{3-P13 – blank – 3-P14 – blank – 3-P15}

**Monera**

**BACTERIA**

1) **STRUCTURE OF A BACTERIAL CELL** (Prokaryote, no nucleus)



**iNotes.ie:Sample**

**Plasmid** – a loop of extra DNA / extrachromosomal DNA <define plasmid>  
(All bacteria have plasmids we don't)

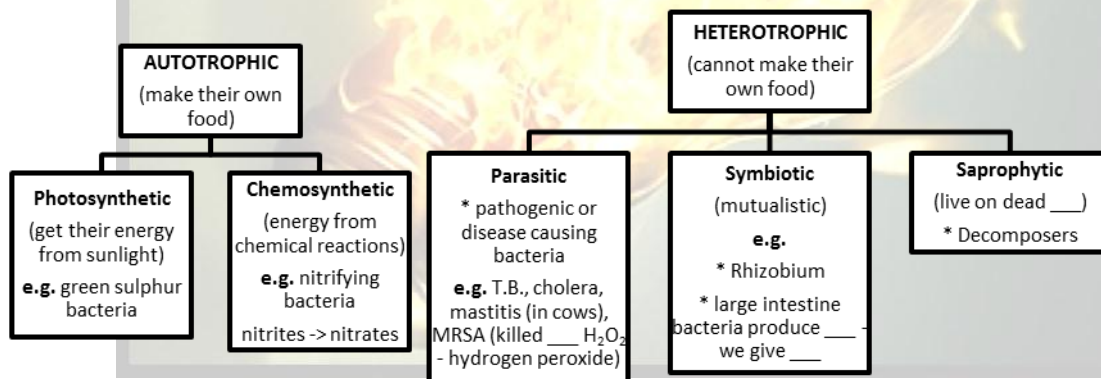
2) **Rods**                      **Cocci**                      **Spiral**

**Salmonella typhi**  
(typhoid fever)

**Streptococcus**  
(sore throat)

**Vibrio** – parasite  
(cholera)  
can be seen  
earthquake - in disaster region  
bacteria mixes with drinking water

3) **Nutrition**



4)