



## Inter Bell – a DIET and SSK Palakkad Initiative Student support Material

**BIOLOGY**

**STD 10**

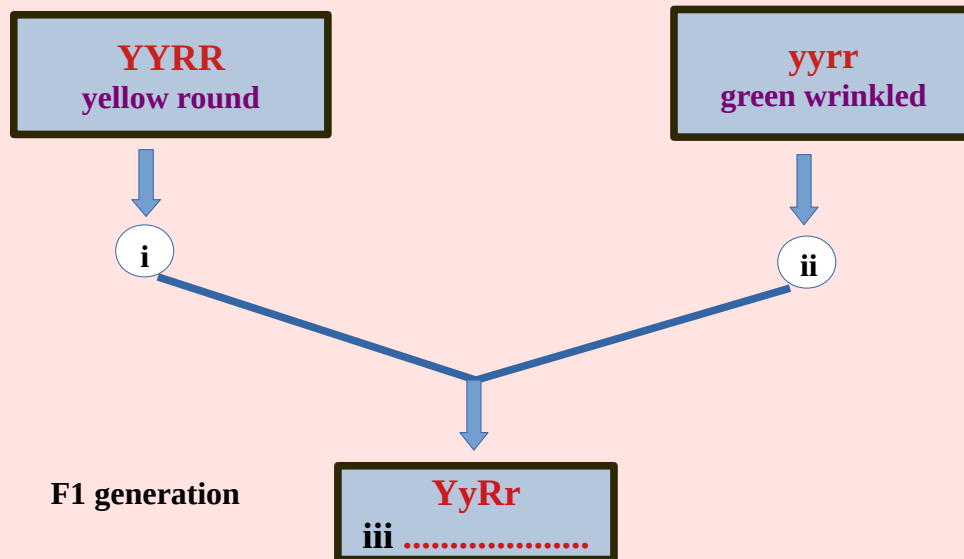
Victors Digital Class

Part No. 38

**6**

**Unravelling Genetic  
Mysteries**

1. An illustration showing the hybridization experiment of round and yellow seed plants with wrinkled and green seed plants is given below.



a). Fill the blanks i, ii & iii.

b). If F1 generation is self pollinated to produce F2 generation, what will be the possible gametes?

2. Differentiate between Gene and Allele.

Gene	Allele

3. Complete the illustration of the second generation obtained by the hybridization between two pairs of contrasting characters of plants. Find answer to the following questions.

Indicators: Dominant characters Green and Round Seed  
 Recessive characters Yellow and Wrinkled seed

	GR	Gr	gR	gr
....	GRRR Green Round			
....				
....				
....				ggrr yellow wrinkled

- Write the characters different from parents that appeared in the second generation.
- What is the ratio obtained in the F2 generation?

4. The genetic constitution of some plants obtained by self pollination of the tall plant with yellow fruit (TtYy) in a hybridisation experiment are given below.

Identify the tall plants with yellow fruit.

TTYy	Ttyy	TtYy	ttYY	Ttyy	TtYY
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5. Observe the statements given below and select appropriate statements to make a definition for gene.

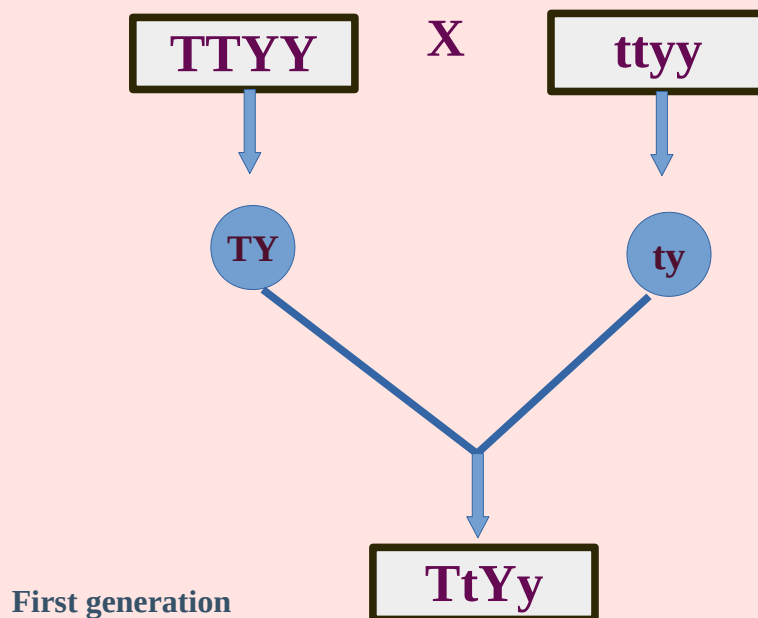
Carriers of hereditary characters

Components of sex chromosomes

Specific parts of DNA

6. An illustration of hybridisation by considering the height of the plant and colour of the cotyledon is given below.

(Dominant characters- Tall and Yellow, Recessive characters- Dwarf and green)



- Write the characters expressed in “TTYy”?
- What do **TY** and **ty** indicate?
- Which character is expressed in ‘ TtYy ’?. Identify its recessive character.

Click the link for watching the Victors Digital Biology Class No. 38:

<https://www.youtube.com/watch?v=mcyx5JZMFEE>