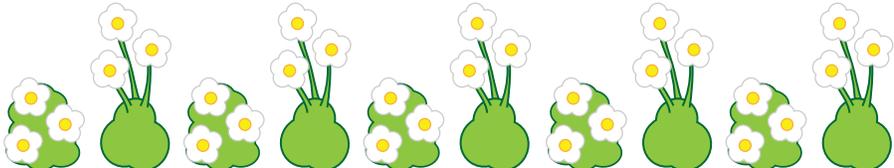


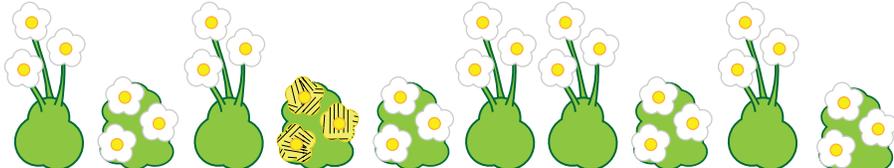
Heredity Assessment

Generation 1 (grandparents)



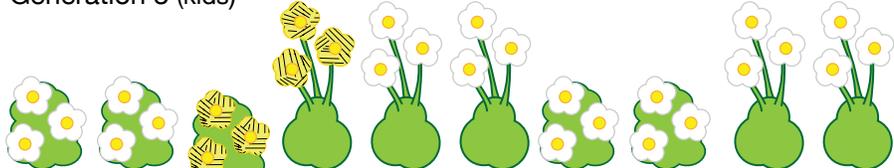
All of the plants in the population make white flowers.
Some individuals grow flowers on long stalks, and some on short stalks.
The plants reproduce sexually: gametes from two parents combine to make offspring.

Generation 2 (parents)



A new genetic variation arises.
One individual in the population grows yellow flowers on short stalks.

Generation 3 (kids)



Some of the plants in the population make white flowers, and some make yellow.
Both white and yellow flowers can be found on individuals with short or long stalks.

1. What happened between generations 1 and 2? Choose the most likely explanation.
 - A mutation in an existing gene gave rise to a new allele.
 - A mutation gave rise to a new gene.

2. How is it that, in Generation 3, yellow flowers can be found on individuals with both short and long stalks? Choose the most likely explanation.
 - A mutation happened in a long-stalked plant that made it grow yellow flowers.
 - Shuffling of existing alleles during sexual reproduction made new allele combinations.
 - A mutation happened in a yellow-flowered plant that made it grow long stalks.