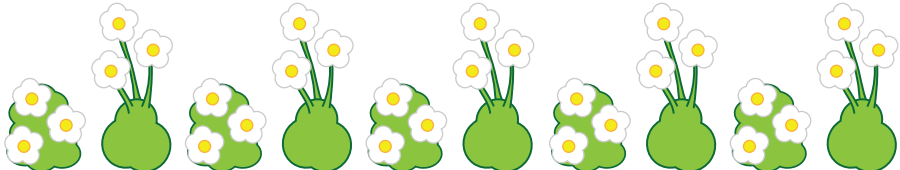


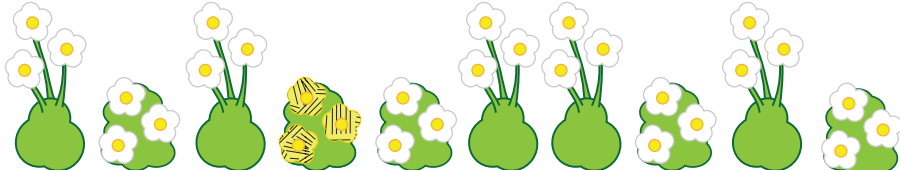
Heredity Assessment

Generation 1 (grandparents)



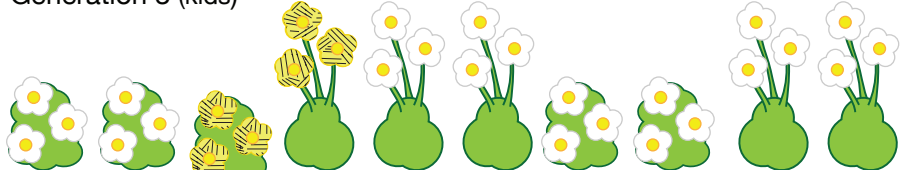
All of the plants in the population make white flowers.
Some individuals grow flowers on long stalks, and some on short stalks.
The plants reproduce sexually: gametes from two parents combine to make offspring.

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.

- 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.

- 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.