Niamh Barry JC Science 2017 Specification

Learning Outcomes:

Nature of Science	Students should be able to organise and communicate their research and investigative findings in a variety of ways fit for purpose and audience, using relevant scientific terminology and representations
Biological World	Students should be able to describe asexual and sexual reproduction; explore patterns in the inheritance and variation of genetically controlled characteristics

Select one of the options to work on with your partner.

When you have finished, present your results to the class.

1. Do the following activity to reproduce Gregor Mendel's second-generation pea-plant experiments.

a. Take all the hearts and clubs from two decks of card so only spades and diamonds are left. The spades will represent the dominant alleles for purple flowers, and the diamonds will represent the recessive alleles for white flowers.

b. Place the cards face down in groups of four, with each group containing two spades and two diamonds in random order.

c. Have your partner flip two cards in each group. Record the represented phenotype. Two spades = purple flowers; a spade and a diamond = purple flowers; and two diamonds = white flowers.

d. Repeat until you have revealed 100 phenotypes. Find the percentage of purple flowers and white flowers.

OR

2. Choose one of the pioneers in the study of DNA and learn what his or her contribution was. Possible scientists to choose from include James

Watson, Francis Crick, Rosalind Franklin, and Maurice Wilkins. Write a short report on your findings.