

Chapter 7 - Genes & Inheritance

- Family resemblance: how traits are inherited
 - 2 copies: 1 from each parent
 - random selection of genes
- Fish odor syndrome
 - bad copy of FMO3 = smell of rotten fish on humans
 - takes 2 copies
- offspring will look like parents b/c that's where the genes come from
- Selective Breeding - manipulation of breeding to change size, shape, & color.
 - ex. reduced size horses & dogs
- traits that are determined by the instructions a person carries on one gene - widows peak, cleft chin, tongue roll
- multiple genes create diff traits as well

Fig. 7.7

Mendel - teacher in math

- genetic researcher who researched peas
 - white flower / vs. purple flower

* True Breeding

- every plant or animal carries 2 genes that can be heterozygous or homozygous
 - one copy in sperm or egg
 - dom. trait masks recessive
 - each parent puts single set in sperm or egg
 - kid gets both sets
 - $dom + dom = dom$ $dom + rec = dom$ $rec + rec = rec$
- law of segregation & law of independent assortment
 - apply to chromosomes
 - when you make egg/sperm 1 copy
 - \rightarrow indep. = 50/50 chance

Chapter 7 - Mendel's Laws of Inheritance
 - Observing phenotype is not sufficient for genotype

Pun Square

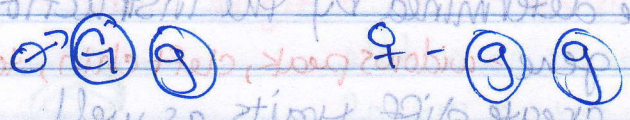
① Key - petunia or sea slug / dom or rec.

in Elephants $G = \text{gray}$ (dom)
 $g = \text{brown}$ (rec)

② Determine parents genotypes

$\text{♂} - Gg \times \text{♀} - gg$

③ Make gametes - sperm/egg



④ Draw fill in gametes

50/50 chance

	G	g
G	Gg	gG
g	Gg	gg

When you make addition / copy
 apply to chromosomes

50/50 chance