Bio 3
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3/6/13

Phenotypes & Genotypes

"In turnips, flat leaves are dominant over 'crinkled' leaves. → A farmer crosses a turnip with 'crinkled' leaves with one that has flat leaves, but had a parent with crinkled leaves. He gets 200 seeds from that cross. How many seeds are expected to produce crinkled leaves? 100 seeds

① AA = dom
Aa = dom (flat)
aa = rec (crink)

♂ = Aa
♀ = aa

♀ \ flat ♂	A	a
a	Aa	aa
a	Aa	aa

← 50/50

Phenotype	
AA	11 - Flat
a a	11 - crink. 50/50
aa	
Aa	

- 3 ideas Mendel used for explaining this pattern of Inheritance

1. Each parent puts into every sperm or egg it makes a single set of instructions for building the trait

2. Offspring thus find themselves w/ 2 copies

3. Actual trait produced by an indiv depends on the 2 copies of gene inherited.
   - homozygous - heterozygous

- Observing phenotype not sufficient for determining genotype.

Phenotype - Albino
Genotype - recessive gene for Albinism

Pos. Genotypes
- Homozygous Dom. = AA
- Heterozygous = Aa
- Homozygous Rec = aa

- Recessive allele's effects may be masked by traits

What is the chance that 2 brn eyed Humans (both heterozyous) will have a blue eyed kid.

Aa

♂ = Aa

♀ = Aa

♀ \ ♂	A	a
A	AA	Aa
a	Aa	aa

25% chance

Both blue eyed w/ brn eyed kid -

aa

♀ = aa

♂ = aa

♀ \ ♂	a	a
a	aa	aa
a	aa	aa

0%