

Predicting Genotype and Phenotype

- _____ - a chart used to predict possible outcomes of genetic crosses
 - Shows all possible outcomes of a genetic cross and the likelihood of each outcome
- Parents genotype are on _____
- Possible offspring genotypes go _____

	B	B
b	↓	↓
b	↓	↓

- Each parent passes on _____ so one letter goes in each parent spot
- Carry each allele down or across the grid
- Example- A hamster homozygous for brown eyes mates with a hamster homozygous for blue eyes. Brown eyes are recessive to blue eyes
 - $BB \times bb$

	B	B
b	Bb	Bb
b	Bb	Bb

- Genotypic of offspring: _____
- Phenotype of offspring: _____
- One trait punnett squares- Monohybrid Cross

- Can be done with several traits
- Example-Two pea plant heterozygous for seed color (Yy) and flower color (Cc) are mated. Describe the offspring.
 - $YyCc \times YyCc$
- _____ - traits are transmitted to offspring independently of one another.
 - Foil genotype to get possible gamete combinations
 $YyCc$
Possible gametes _____

	B	b
B	BB	Bb
b	Bb	bb

- Genotypic Ratio: Number of different possible genotypes
- Example- Eye color: B-Brown, b- blue; Blue is recessive to brown
- Phenotypic Ratios: $BB:Bb:bb$ _____
- Genotypic Ration: Brown eyes: Blue eyes

Predicting Genotype and Phenotype

Predicting genetics and traits

Each parent passes on _____ of their genes to their offspring

_____ - the combination of genes an organism has

Which 1/2 each parent gives to their offspring is random; known as _____

Homozygous- _____

Heterzygous- _____

	b	B
B	Bb	BB
b	Bb	bb