

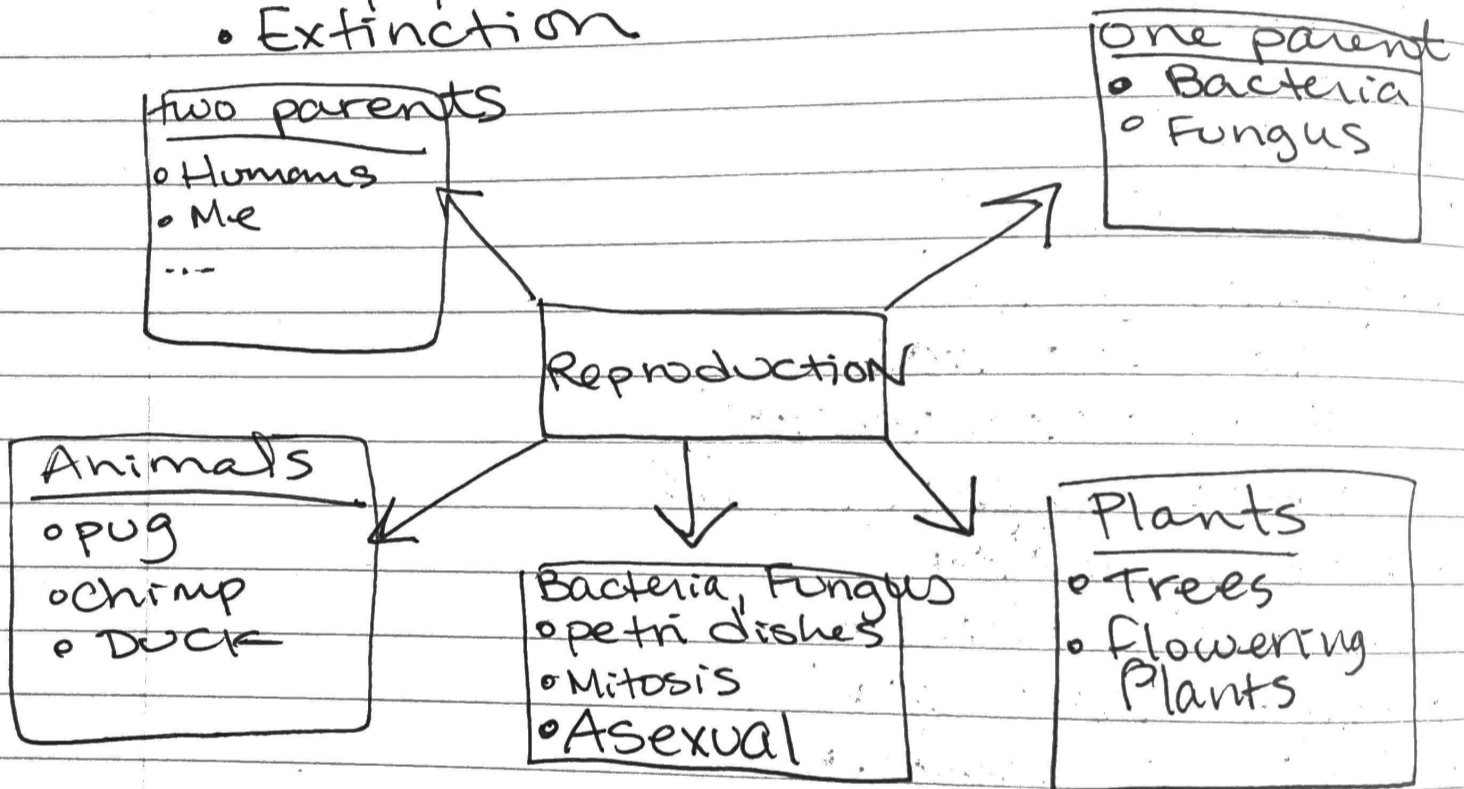
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# Asexual Reproduction

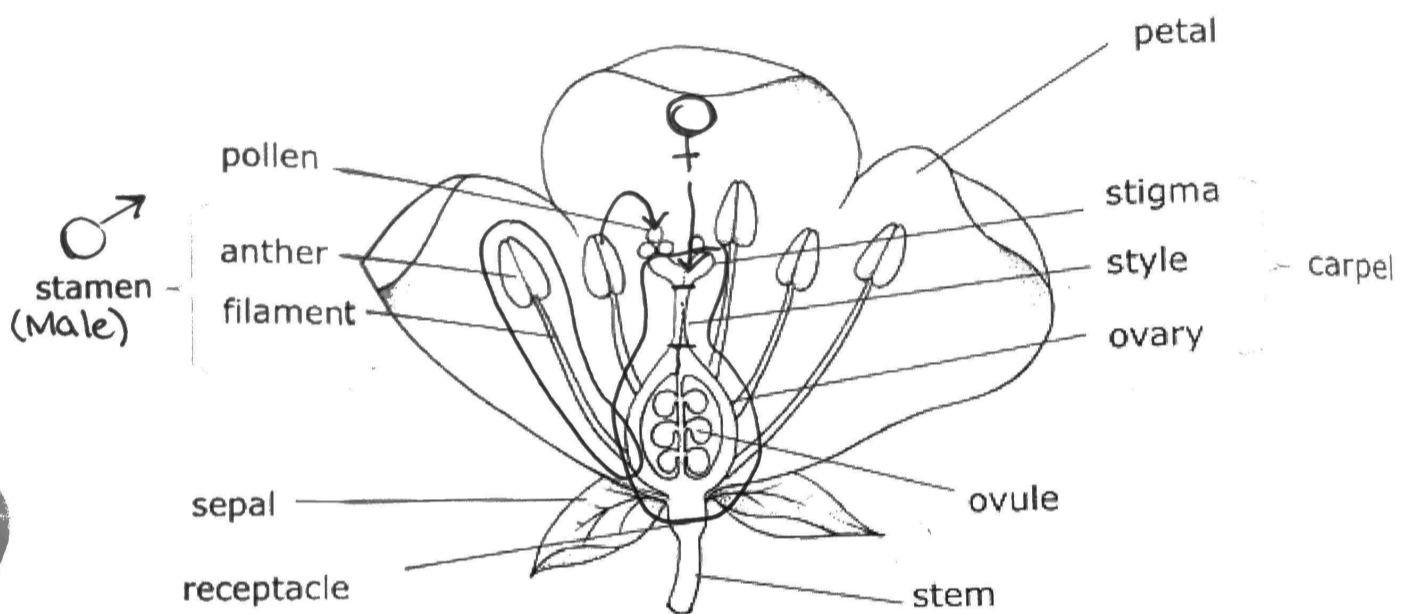
1) Why do organisms reproduce?  
 • so a species doesn't go extinct

2) What is the result of reproduction?  
 • a new generation of organisms

3) What would happen if every organism in a population couldn't reproduce?  
 • Extinction



	Asexual	Sexual
# of Parents	1	2
genetic makeup of offspring	Clones	Variety of traits
Examples	<ul style="list-style-type: none"> <li>• ♀ Colony of lizards</li> <li>• fungi</li> <li>• Bacteria</li> </ul>	<ul style="list-style-type: none"> <li>• Animals (Most)</li> <li>• Plants that produce flowers</li> </ul>



♂ { Anther = is where pollen is located,  
Filament = supports & extends the anther.

Stamen = all male parts/organs

Pollen = is the male sex cell  
of a flower.

## ♀ Female Plant Structures

Stigma = the top opening of the style.

Style = is a long tube that allows pollen to pass through.

Ovary = where eggs/seeds are stored.

Egg = the female reproductive cell.

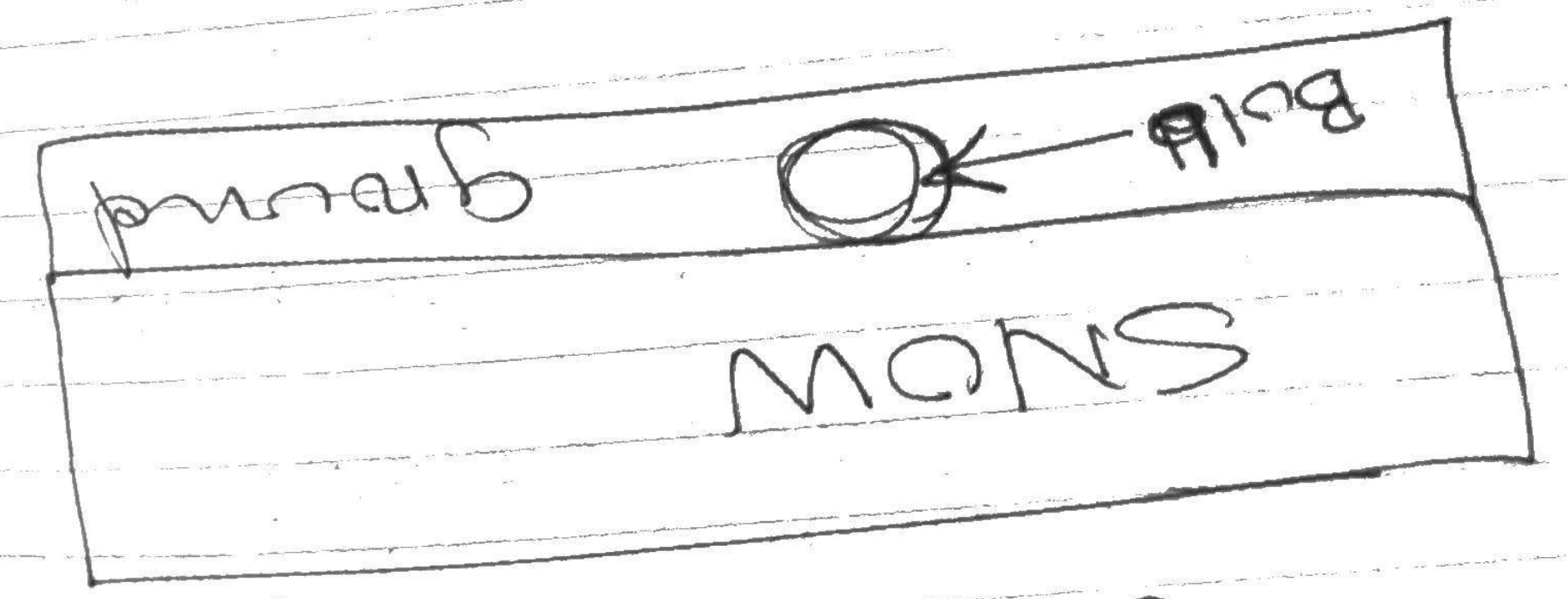
Pistil = Consists of all the female organs (egg, ovary, style, stigma)

Behavior  
Plant Behaviors help them Survive...  
 Plants have to

• Carno

- Photosynthesis/Produce food
- trap prey (some)
- Move a grow to light
- Bitter / Yucky
- Thorns
- Heat up
- Lure pollinators
- Chemicals
- Defense
- Bad odor

Plant + Behavior  
 Wild Cabbage  
 Skunk



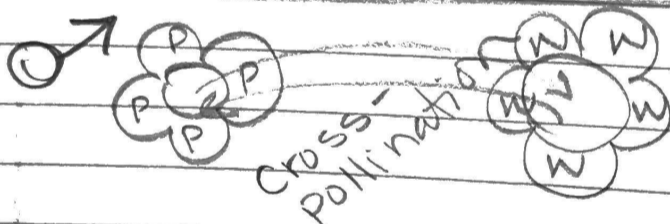
Winter

stamen (Male)

# 11/12 Gregor Mendel

- Born: July 22, 1822
- Was poor growing up, struggled to get his education (\$)
- He was really smart
  - Physics
  - Math
- Monk in Sept 7, 1843
- Spent a lot of time in the garden
  - Breeding: 1) Fuchsias
  - 2) pea plants

Flower Color
Purple = Dominant
White = Recessive



		P	P	♂
♀	P	Pp	Pp	
	p	Pp	Pp	

$Pp = \frac{4}{4} = 100\%$   
 100% chance for purple petals

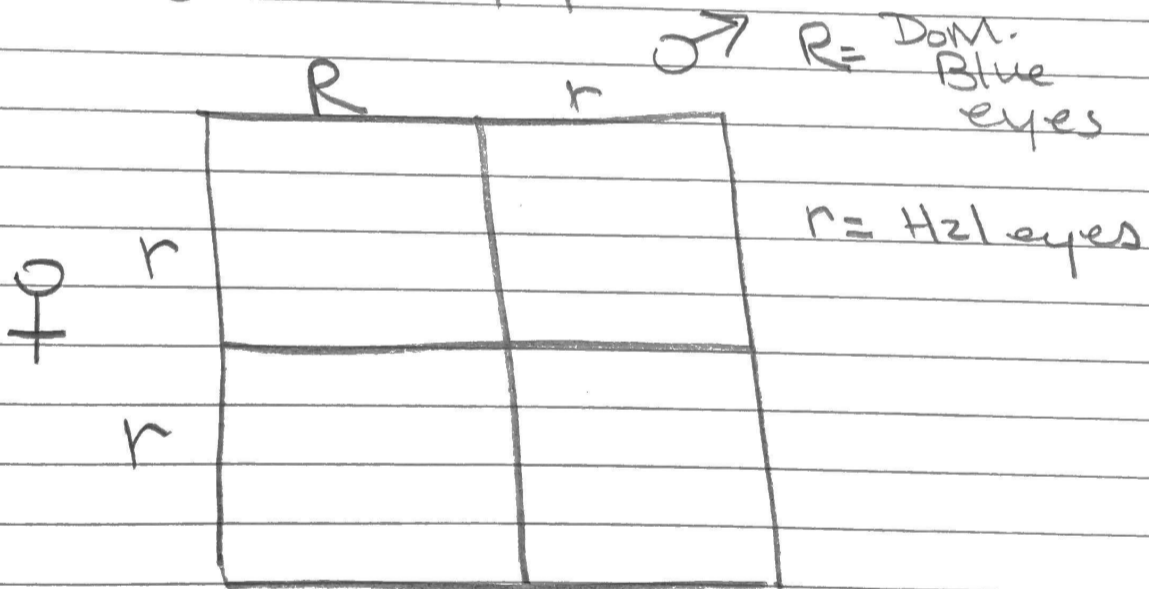
# Punnet Squares 11/12

Dominant = represented w/ @ least 1 capital letter. (Most recessive traits) Ex: Tt, TT, Rr, RR

Recessive = represented w/ 2 lowercase letters. Ex: tt, xx, mm

dif. Heterozygous = 1 capital 1 recessive (lowercase)  
Ex: Xx, Nn

same Homozygous = 2 same letter type  
Ex: tt or TT



## 1/4 Intro: Inheritance

- Inheritance: DNA/genetic Material passed down from 1 generation to the next.
- Genotype: letter combination, that represents a trait
- Phenotype: Physical characteristic (see w/ your eyes)
- Allele: letters, single  
ex: L, t

Review: Punnett Squares 12/2

Curly hair is recessive to (Rr) straight hair. A mother is heterozygous for her straight hair, her husband has curly hair.

	R	r
r	(Rr)	(rr)
r	(Rr)	(rr)

50 % curly

50 % straight



Incomplete Dominance 1/2

Incomplete Dominance = is when the phenotypes of the two parents blend together to create a new phenotype for their offspring.

MOM ♀



DAD ♂

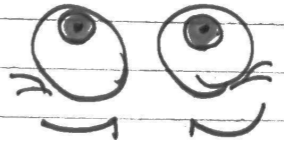


offspring (baby)

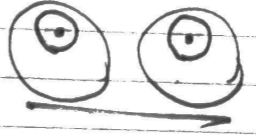
Codominance 1/2

Codominance = is when the two parent phenotypes are expressed together in the offspring.

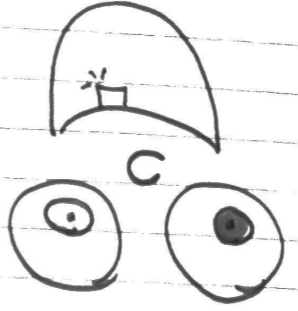
MOM ♀



DAD ♂



offspring (baby)



stamen (male)

sel  
rec

# 1/3 Genetics Review

## Tall and short pea plants

Genetics is the study of how characteristics are passed from parents to offspring. Geneticists use Punnett squares to predict the likelihood that offspring will inherit alleles forms of genes, from their parents. A Punnett square is a box divided into four parts. The alleles of one parent are written across the top of the box. The alleles of the second parent are written along the side. The combination of alleles formed within the four parts predicts the traits of offspring.

### Materials

Pencil, Paper

### Activity



1. To predict the traits of the offspring of two tall pea plants, you will use the Punnett square shown in Figure 7.4. One plant's alleles for height (T) are written across the top. The other plant's alleles (t) are written on the side of the square. One of the predicted combinations of alleles is shown inside the box. Complete the rest of the square.
  2. Draw another Punnett square. Write TT across the top and t along the side. Fill in the four parts of the square.
- Follow-Up Questions**
1. In step 1, what percentage of the offspring would you expect to inherit tt?
  2. In step 2, what percentage of the offspring would you expect to inherit tt?
  3. Why are Punnett squares useful?
- Extension:** Use a Punnett square to predict the offspring of one parent with the alleles Tt and the other parent tt.

FIGURE 7.4. Punnett Square

	T	t
T	TT	Tt
t	Tt	tt (25%)

# Genetics Review

1/3

! f TT or Tt = Tall

% of offspring will be tall?

	T	t
T	TT	Tt
t	Tt	tt

## Follow up Questions:

1) 25% for tt

2) 0% for tt

3) Make predictions for offspring.