

ALIEN BABIES WORKSHEET

Procedure

1. Meet your partner at your station. Receive two pictures of “aliens” from the instructors. Assign one alien to be a girl and the other a boy. You will be “crossing” these two aliens to create a beaker baby!
2. Based on phenotypes (*what we see*), figure out the genotypes (*what the DNA really says*) of your alien. Do this by circling the appropriate phenotype for each trait in **Table 1**. The corresponding genotype is listed. Write this code in the genotype column. *See the example here:*

Curly Pink Hair:

What we see				Genotype (case sensitive)
B. Hair Colour	Red = BB	Pink = Bb	White = bb	Bb
C. Hair Curl	Curly = CC	Wavy = Cc	Straight = cc	CC



3. Write the corresponding alleles for each trait (one letter per box) in **Table 2**. Each letter represents an allele version of that gene. The information for the girl should go on one colour and the boy information on the other colour. *See example here:*

Trait	Genotype	
	Version 1	Version 2
B. Hair colour	B	b
C. Hair Curl	C	C

4. From **Table 2** cut out each allele and place all of the alleles for the boy and for the girl into the beaker.
5. **Shake the beaker to mix all of the versions!** Randomly draw out different colours for each trait from the beaker so that you create complete genotypes for each trait. Remember: Each trait needs a version of the gene from “mom” and a version of the gene from “dad”.
6. As you draw out versions, write them in the “what the DNA says” columns in **Table 3 (Child’s Genetic Make-Up)**.
7. Go back to the **Table 1** and determine the traits of the offspring and put the information in the “what we see” column of **Table 3**.
8. Draw a **detailed picture** of your offspring with the appropriate traits based on his or her genotype. Be certain to use arrows and clearly label all 12 traits of your offspring. 😊

Table 1 - Traits and Genotypes of your “Alien”

Circle what you see and write the genotype for your alien in the last box.

Trait What you See	 Traits (Phenotypes) 			Genotype (case sensitive)
B. Hair color	Red = BB	Pink = Bb	White = bb	
C. Hair curl	Curly = CC	Wavy = Cc	Straight = cc	
D. Antenna	2 = DD	1 = Dd	None = dd	
E. Eye color	Brown = EE	Green = Ee	Blue = ee	
N. Nose	Trunk = NN	Parrot = Nn	Button = nn	
P. Hairy arms and feet	Very hairy = PP	Some hair = Pp	No hair = pp	
R. Tongue roll	Roller = RR	(Rr = Roller)	Non-Roller = rr	

Transfer the information to **Table 2** for cutting.

Table 2 – Personal traits – Versions of the gene separated for your “alien”

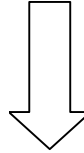
Write the corresponding alleles for each trait in (one letter per box) below. Each letter represents an allele version of that gene. The information for the girl should go on one colour and the boy information on the other colour.

Trait	What the DNA says	
	Allele 1	Allele 2
B. Hair color		
C. Hair curl		
D. Antenna		
E. Eye color		
N. Nose		
P. Hairy arms and feet		
R. Tongue roll		

**When you finish filling out the table, cut along the dashed lines*

Table 3 - The Child's Genetic Make-Up

Shake the beaker to mix all of the versions! Randomly draw out different colours for each trait from the beaker so that you create complete genotypes for each trait. Remember: Each trait needs a version of the gene from “mom” and a version of the gene from “dad”. As you draw out versions, write them in the “what the DNA says” columns.



Trait	What the DNA says (Genotype)		What we see (Phenotype)
B. Hair color			
C. Hair curl			
D. Antenna			
E. Eye color			
N. Nose			
P. Hairy arms and feet			
R. Tongue roll			

Go back to **Table 1** and determine the traits of the offspring and put the information in the “what we see” column.

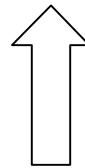
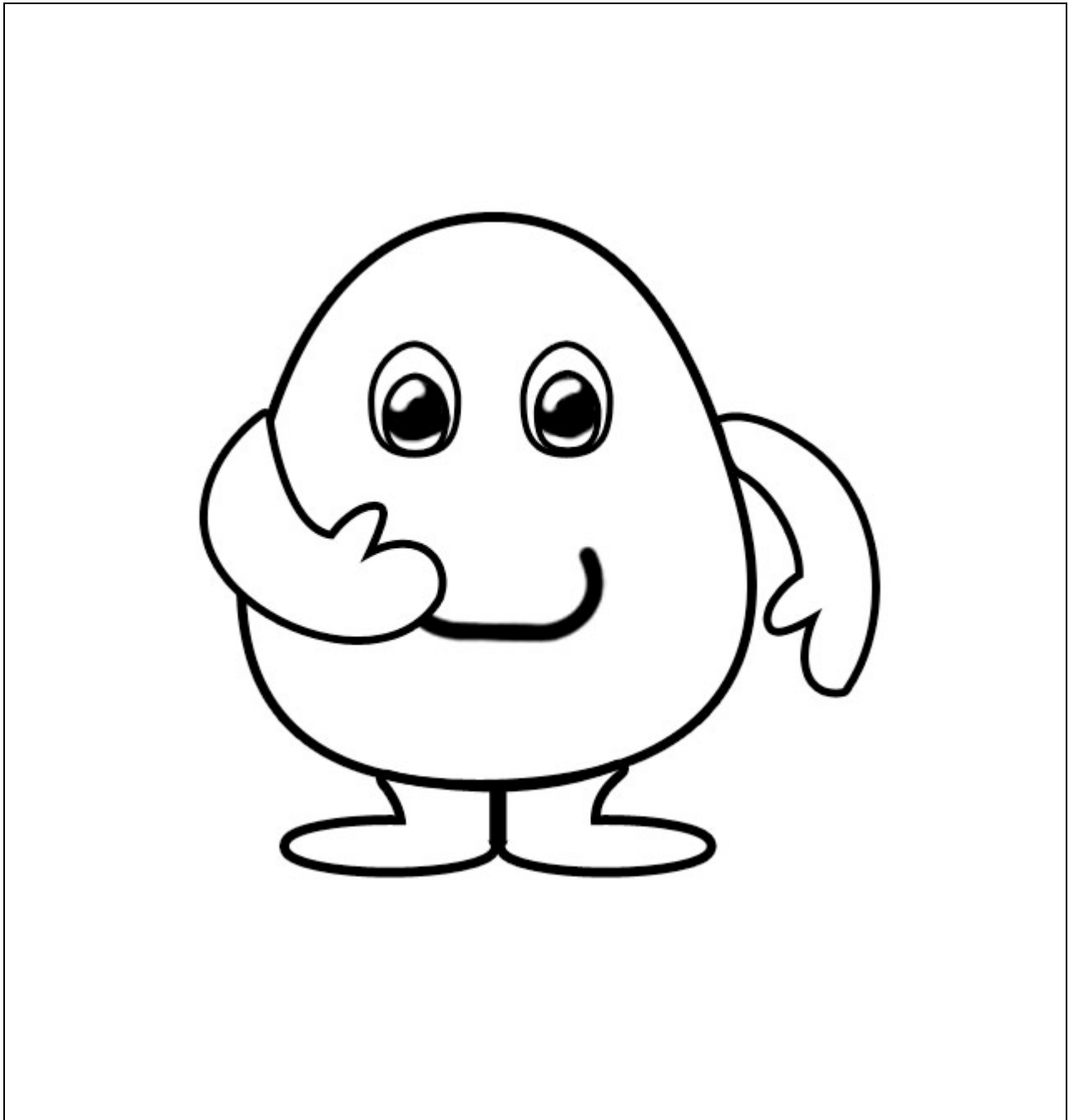


Figure 1. The Child.

Draw a **detailed picture** of your offspring with the appropriate traits based on his or her genotype. Be certain to use arrows and clearly label all 12 traits of your offspring.



The Aliens for "crossing"

