

## In your genes

### Worksheet 1

1. Do you take after your mum or your dad? What is the colour of your eyes? And your parents'? Your siblings? Can you roll your tongue? Are you short or tall ?Do you know why ?
2. Watch Part one of video and find out :  
<http://www.neok12.com/video/Genetics/zX57774078797d7564675a0a.htm>
  - Inside each cell there is a nucleus. What is it?
  - How many genes do we have?
  - What is DNA composed of?
  - What is the role of genes?
3. Now watch Part three and learn where do your genes come from.
  - How many chromosomes doo we have?
  - Where do they come from?
  - How is your sex determined?
4. What are dominant genes?
  - What are recessive genes?
  - What is a trait ?
  - What is a diploid organism?
  - What is a genotype?
  - What is a phenotype?
5. Read how the eye colour is passed from parents to children.  
[http://www.sciencekidsathome.com/science\\_topics/genetics-a.html](http://www.sciencekidsathome.com/science_topics/genetics-a.html)

Can you draw the diagram for:

BB and Bb parents?

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6. All these traits are hereditary. Check if you have it !

**1. Achoo Syndrome:** This dominant trait is also called the photo sneeze reflex. If, when suddenly exposed to light, you sneeze (usually two or three times) you have the genes for achoo syndrome. Next time you go to a movie, exit the dark theater through a door that leads directly outside. It's fun to wait outside and watch the people emerge from the movie. Some will sneeze as soon as they are exposed to light.

Dominant (have it) \_\_\_ Recessive (don't have it) \_\_\_\_.

**2. Chin Cleft:** A prominent cleft in the chin is due to the bond structure which underlies the Y-shaped fissure of the chin. Females appear to be less conspicuously affected than males.

Dominant (have it) \_\_\_ Recessive (don't have it) \_\_\_\_.

**3. Bent Little Finger:** A dominant allele causes the last joint of the little finger to dramatically bend inward toward the 4th finger. Lay both hands flat on a table relax your muscles, and note whether you have a bent or straight little finger.

Dominant (have it) \_\_\_ Recessive (don't have it) \_\_\_\_.

**4. Facial Dimples:** If you aren't sure if you have them, smile! Dimples are easiest to see when smiling. With dominant phenotype, you may have a dimple only on one side, or on both.

Dominant (have it) \_\_\_ Recessive (don't have it) \_\_\_\_.

**5. Free Earlobe:** The dominant trait is for lobes to hang free, a bit of lobe hanging down prior to the point where the bottom of the ear attaches to the head. With the recessive phenotype, the lobes are attached directly to the head.

Dominant (have it) \_\_\_ Recessive (don't have it) \_\_\_\_.

**6. Hand Clasp:** Clasp your hands together (without thinking about it!). Most people place their left thumb on top of their right and this happens to be the dominant phenotype. Now, for fun, try clasping your hands so that the opposite thumb is on top. Feels strange and unnatural, doesn't it?

Dominant (have it) \_\_\_ Recessive (don't have it) \_\_\_\_.

**7. Tongue Rolling:** If you have the ability to roll the sides of your tongue upwards to form a closed tube, you have the dominant phenotype for this motor skill. Those who are not dominant for this trait cannot roll their tongue, no matter how hard they may try.

Dominant (have it) \_\_\_ Recessive (don't have it) \_\_\_\_.

taken from:

<http://www.scienceprofonline.com/genetics/ten-human-genetic-traits-simple-inheritance.html>