Investigate!
Characteristics Guide

Characteristic	Options	Gene responsible	The science behind it
Ear wax	Dry or wet/ sticky	*ABCC11* gene	Some people can have wet sticky earwax, others have dry flaky ear wax. This difference in earwax consistency is due to a change in a single DNA letter in a gene called *ABCC11*. People with wet earwax have a G at a specific site on the *ABCC11* gene. People with dry earwax have an A.
Freckles	Present/absent	*MC1R* gene	The presence and number of freckles is linked to a gene known as *MC1R* which is involved in regulating skin and hair colour. Parents who have freckles tend to have children with freckles. The size, colour, and pattern of freckles can be influenced by your genes and exposure to the sun.
PTC taste	No taste/bitter taste	*TAS2R38* gene	To about 75% of us, the chemical PTC (phenylthiocarbamide) tastes very bitter. For the other 25%, it is tasteless. The ability to taste PTC is controlled mainly by a single gene called *TASR38* that codes for a bitter-taste receptor on the tongue. Changes to the DNA letters in this gene can control whether PTC tastes bitter to us or not.
Coriander taste	Herby taste/ soapy taste	*OR6A2* gene	Scientists were able to identify most coriander haters as people with a gene called *OR6A2* which is linked to smell receptors in the nose. These receptors pickup on the smells of chemicals called aldehydes. These chemicals are found in both coriander and soap, hence that soapy taste sensation.

YOUR GENOME

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Characteristic	Options	Gene responsible	The science behind it
Freesia smell	Smell/no smell	No gene(s) identified yet	Anosmia is the inability to smell a scent. Some people cannot smell specific smells like freesias. A study of 1600 participants showed that 10% of people with Eastern European and British Celtic ancestry are unable to smell these flowers
Hand clasping	Right thumb on top/left thumb on top	Multiple genes	A scientific study found that 55% of people place their left thumb on top, 45% place their right thumb on top, and 1% have no preference. A study of identical twins concluded that hand clasping has a strong genetic basis (most twins share the trait), but it is likely that several genes may play a role in this trait.
Tongue rolling	Roll/can't roll	No gene(s) identified yet	Some people can curl up the sides of their tongue to form a tube shape. In 1940, scientist Alfred Sturtevant observed that about 70% of people of European ancestry could roll their tongues and the remaining 30% could not. This suggests that a single gene is involved, however, people can learn to roll their tongue as they get older, so it is likely that environmental factors - not just genes - influence this trait.
Dimples	Present/absent	No gene(s) identified yet	Dimples are small, natural indentations on the cheeks. Some people are born with dimples that disappear when they are adults; others develop dimples later in childhood. Parents who have dimples tend to have children with dimples - but not always. This suggests that other genes may influence this trait too.