1. Thank you all for coming this morning.

My name is Dr Philip Leftwich and I will be giving a short presentation delivered as though I am introducing the concept of non-mendelian inheritance to level 5 students.

1. All my lectures are recorded for you to playback at any time, I have made these slides publically available on my GitHub page, along with a full transcript. And all diagrams and images are accompanied with alt-text to improve accessibility.
2. Before we start on today’s topic let’s have a quick warm up and show you the two main ways we can communicate.

First: we have the Teams Chat – which is a text box on the right hand side of this screen – using it now, why don’t you let me know how you are feeling today? Or if you prefer you could express yourself with a GIF!

For example – I’m a little nervous this morning – so I’m expressing myself with spongebob square pants!

You can ask questions at any time today – and then I can review these at the end!

The other way I’d like to interact with you is with some questions and polls so if you would be so kind could you open slido.com on your computer or phone and when prompted enter the code 733 633

Just to check we are all happy with how slido works – could you let me know, in one word, how you would describe your past week?

Brilliant – we will use slido again at certain points during this session, so keep that tab open

1. We have three main learning outcomes today – by the end of this presentation you …1,2,3.
2. Now before we introduce the concept of NON-mendelian inheritance, I want to briefly recap the three laws of STANDARD mendelian inheritance that we covered previously.

1. When an individual has two different alleles for a gene, one will be dominant over the other. In a heterozygote only the dominant phenotype is expressed, and recessive phenotypes are expressed only if the organism is homozygous for the recessive allele.

1. 2. The law of segregation – in a diploid organism when gametes are produced they each acquire only one of the two alleles. So offspring receive one allele from each parent.
2. 3. Law of independent assortment – alleles of different genes are sorted into gametes independently. That is the allele a gamete receives for one gene doesn’t influence the allele it will receive for another gene.
3. We can illustrate all three of these laws in a classic dihybrid cross.