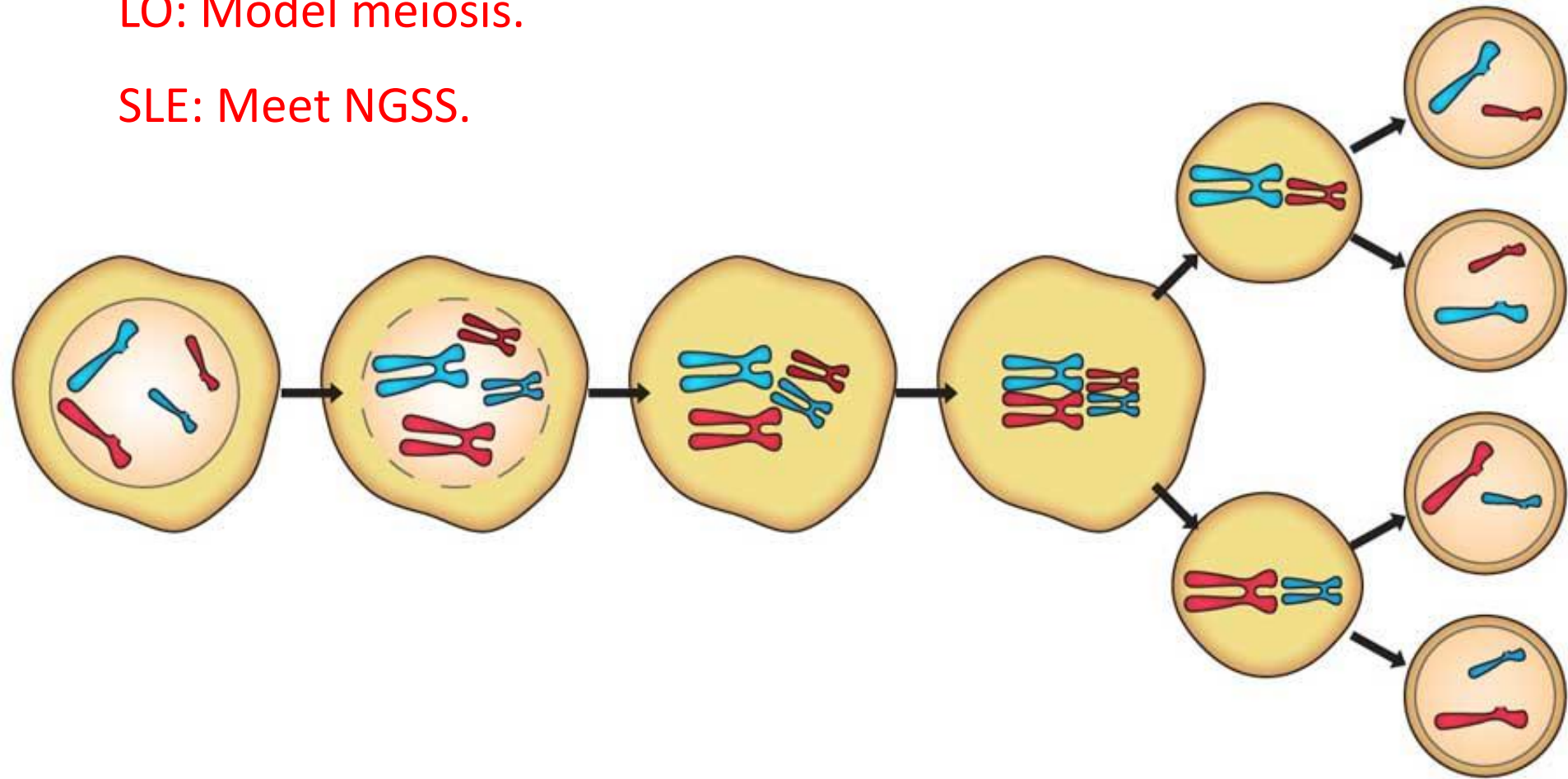


Heredity and Meiosis

October 19, 2017

LO: Model meiosis.

SLE: Meet NGSS.



Zac's question:

Won't a dominant allele gradually take over?

If P = purple allele (dominant) & w = white allele (recessive)...

Generation 1:

- Start with **all Pw (50% P alleles, 50% w alleles)**

**No
change!**



Generation 2:

- Pw X Pw = **25% PP, 50% Pw, 25% ww (50% P alleles, 50% w alleles)**

Generation 3:

- Imagine 4 offspring from Generation 2: 1 Pw mates with the PP, the other mates with the ww
 - Pw X PP = 1 PP + 1 Pw
 - Pw X ww = 1 Pw + 1 ww
- Overall: **25% PP, 50% Pw, 25% ww (50% P alleles, 50% w alleles)**

Semi-Review: “Genetics 101” videos (Khan Academy, 23andMe)

- Part 1: What are genes?
- Part 3: Where do your genes come from?
- Part 4: What are phenotypes?

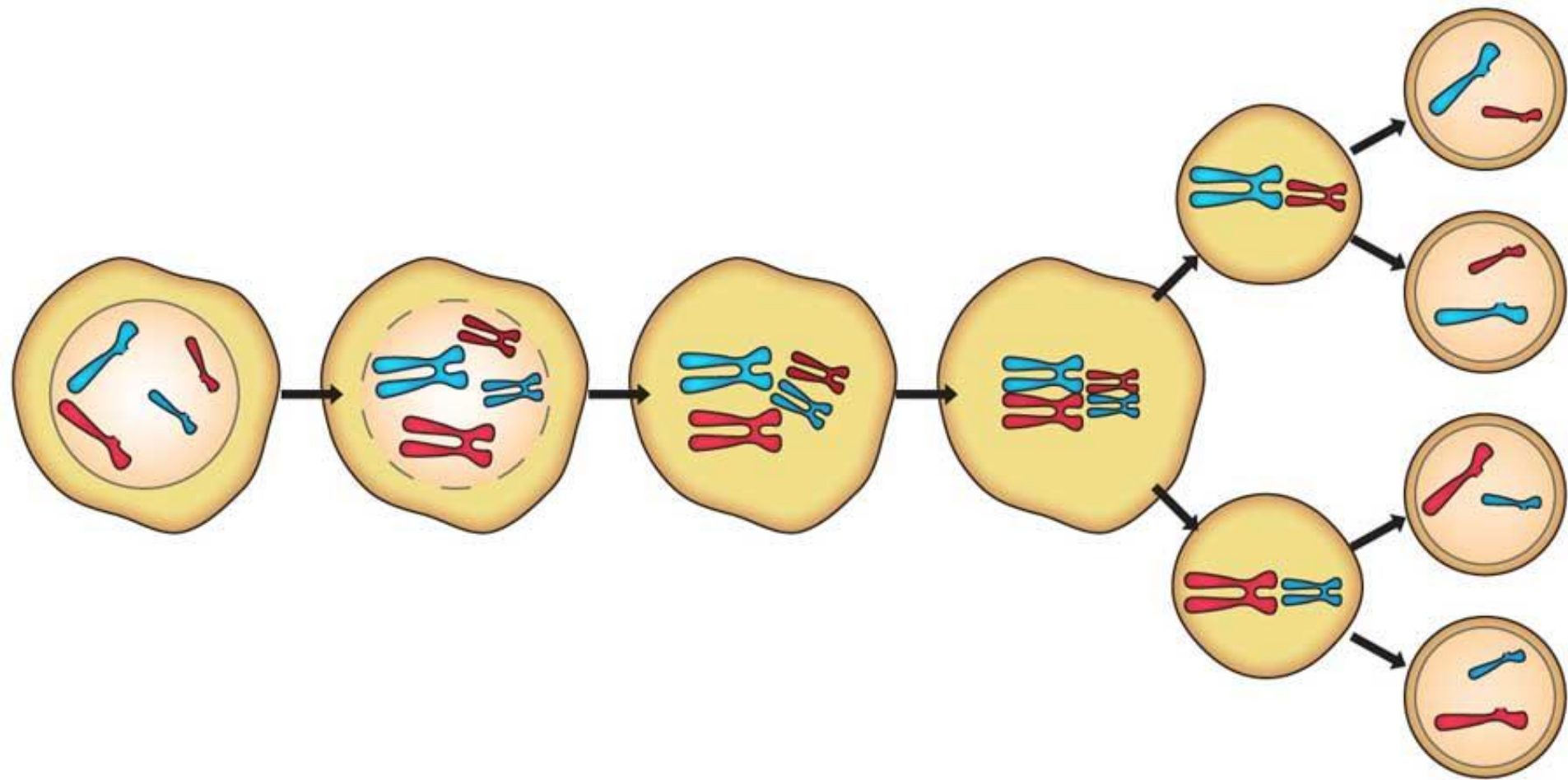


Meiosis (vs. Mitosis): overview

- What if egg and sperm had the same number of chromosomes as all other cells?
- The alternative?

Meiosis (vs. Mitosis): the steps

Here is a simpler version of the diagram on pages 70-71 of your textbook.



Meiosis (vs. Mitosis): the steps

- In mitosis, _____ separate during anaphase.
- In meiosis I, _____ separate during anaphase.
- In meiosis II, _____ separate during anaphase.

“Bye-bye, homolog, then bye-bye, sis”

4

6

Bye - bye, ho-mo-log; _ then bye - bye, _ sis! _ D N A gets sor-ted on the way to ma - king kids. Chro - mo - somes have ho - mo - logs _ and sis - ter chro-ma-tids sing-ing, "Bye - bye, ho-mo-log; _ then bye - bye, _ sis!" _

The image shows a musical score for a song. It consists of three staves of music in 4/4 time, with a key signature of one flat (Bb). The lyrics are written below the notes. The first staff starts with a treble clef and a 4/4 time signature. The lyrics are: "Bye - bye, ho-mo-log; _ then bye - bye, _ sis! _ D N A gets sor-ted on the". The second staff continues the lyrics: "way to ma - king kids. Chro - mo - somes have ho - mo - logs _ and". The third staff concludes the lyrics: "sis - ter chro-ma-tids sing-ing, "Bye - bye, ho-mo-log; _ then bye - bye, _ sis!" _". The music features various note values including quarter, eighth, and sixteenth notes, with some notes beamed together. There are also rests and a final double bar line at the end of the third staff.

Homework for Oct. 20

- Review today's notes
- Study for the quiz!
 - will cover Mendel & heredity
 - won't cover meiosis

Activity for today (Oct. 20): “mitosis & meiosis on the table”

HOMEWORK:

read p. 73-74, try #8 on p. 75
(don't need to hand in)

