

Lesson 5

How Do Instructions from Our Parents Get Inside Us?

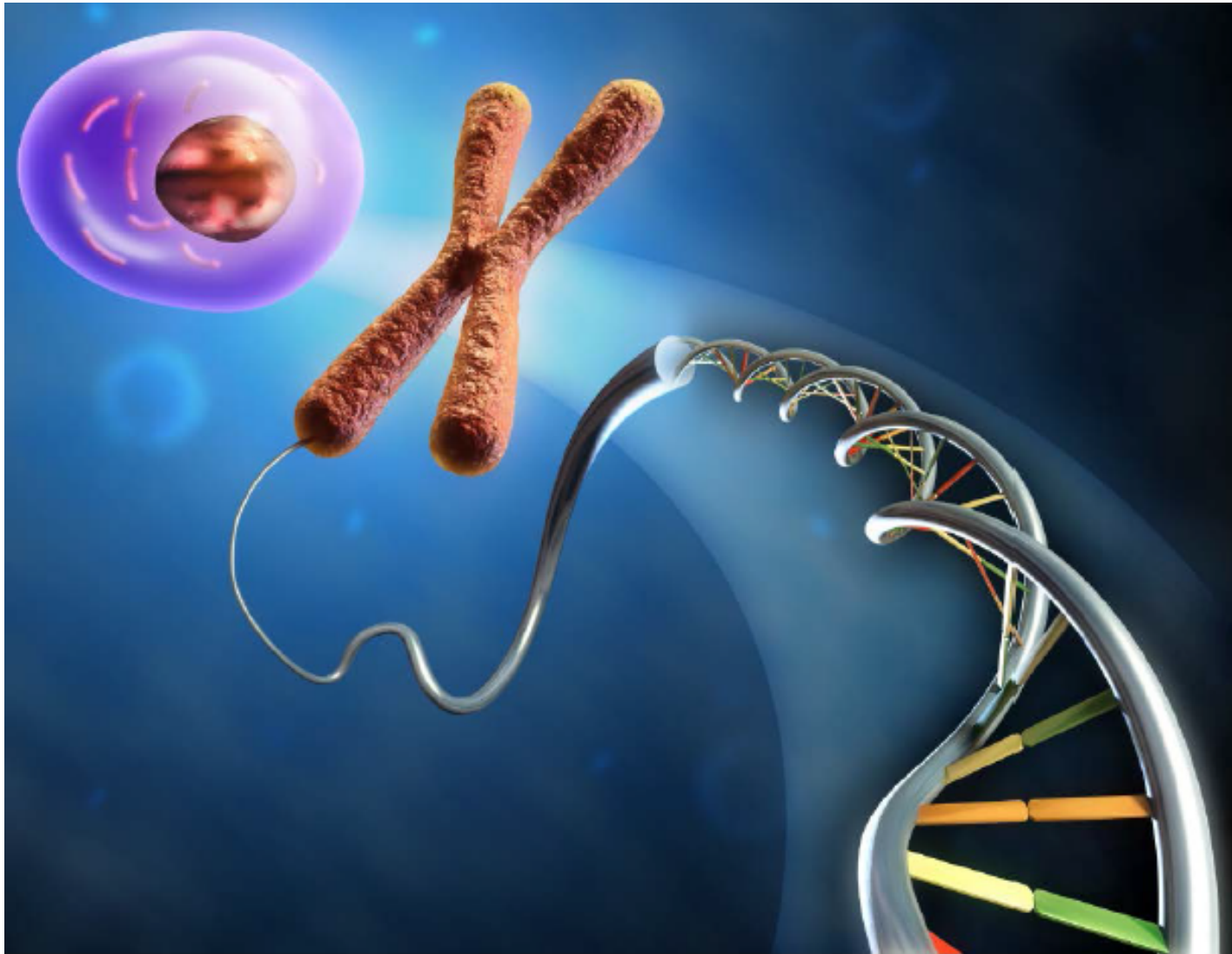
Activity 5.1: How do I get new cells?

Activity 5.2: How can parents produce offspring with different traits?

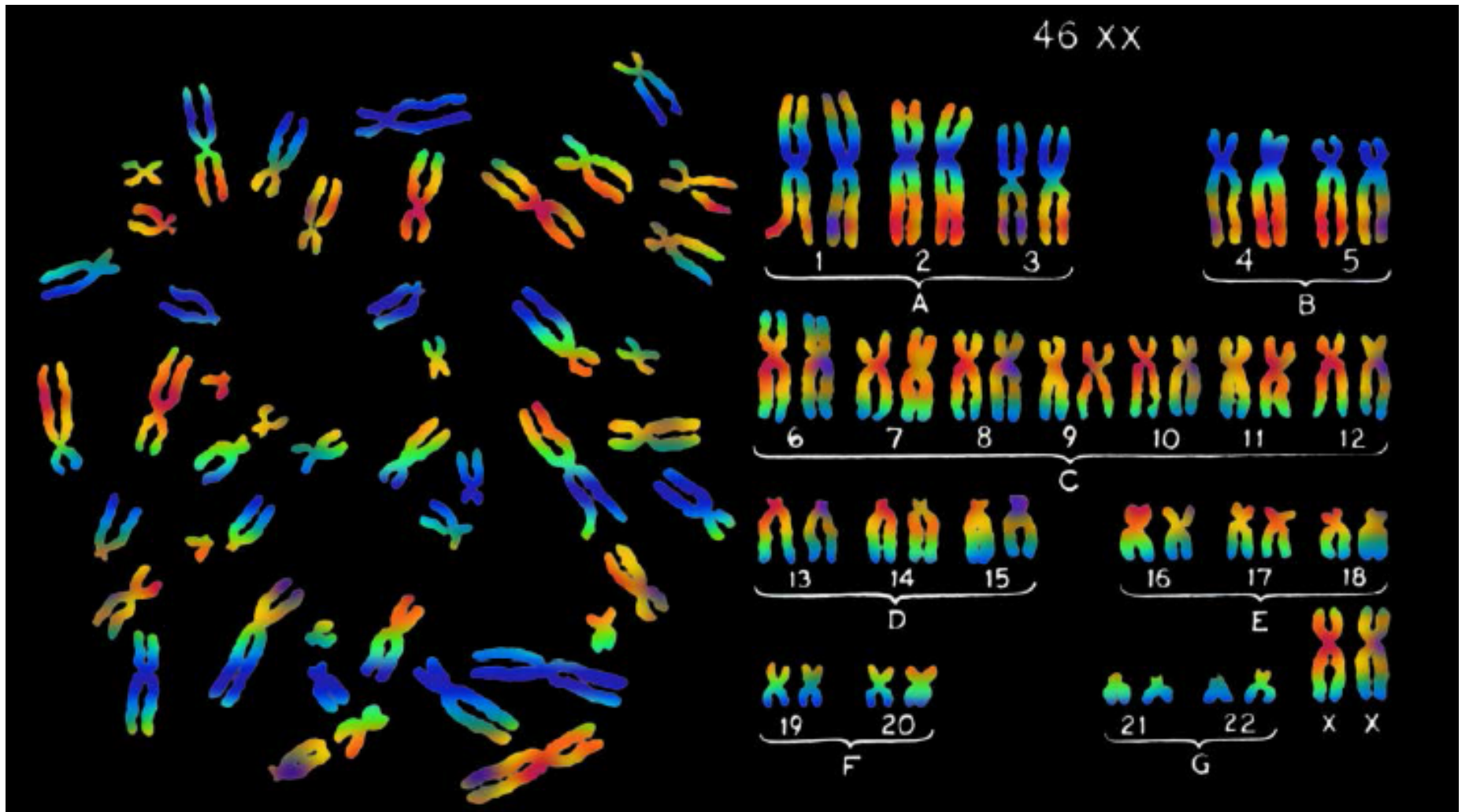
Reading 5.2: Discovering the source

IQWST Life Science

PI: From Cell to DNA



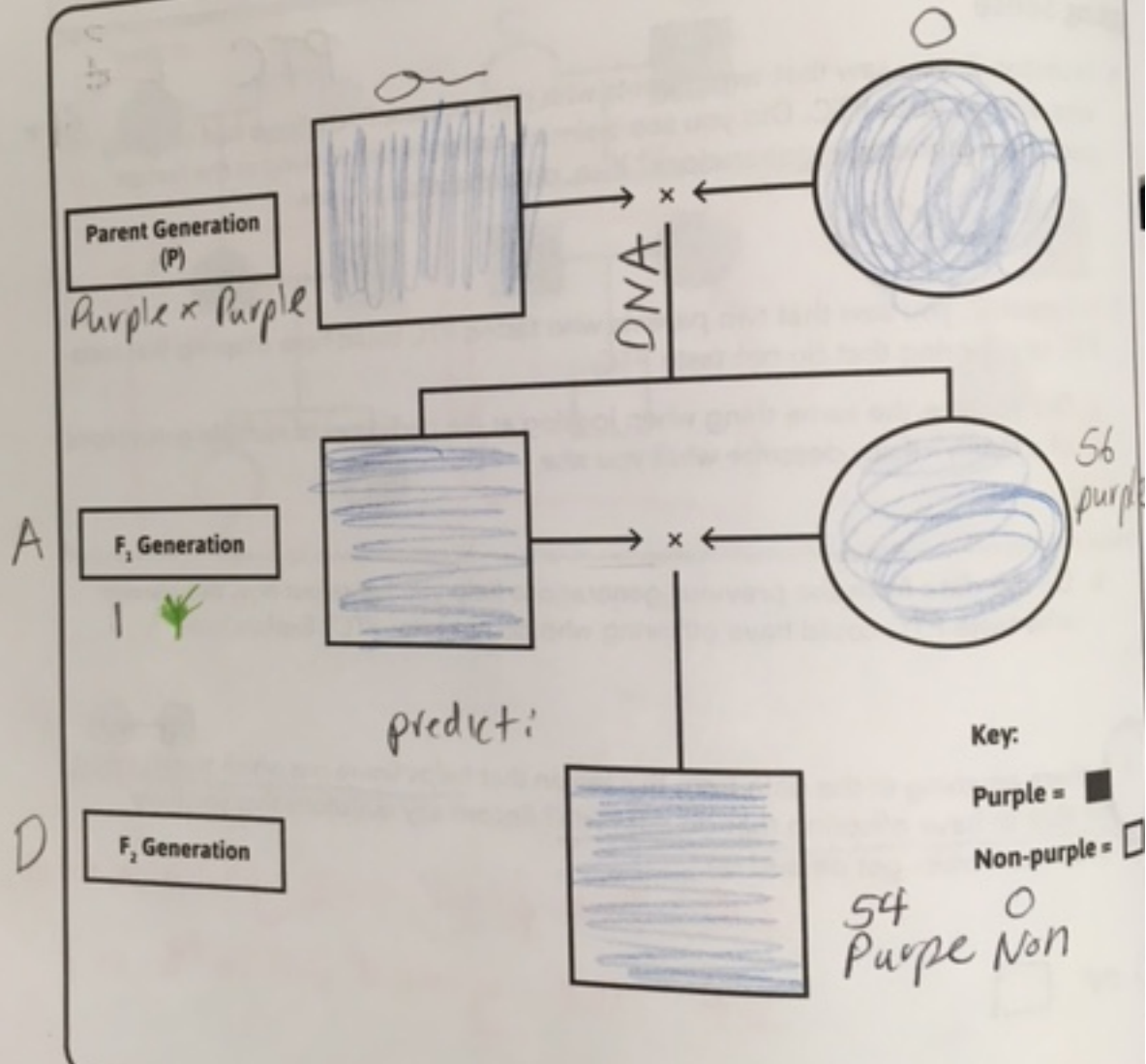
Karyotypes



Wisconsin Fast Plants Have 20 chromosomes

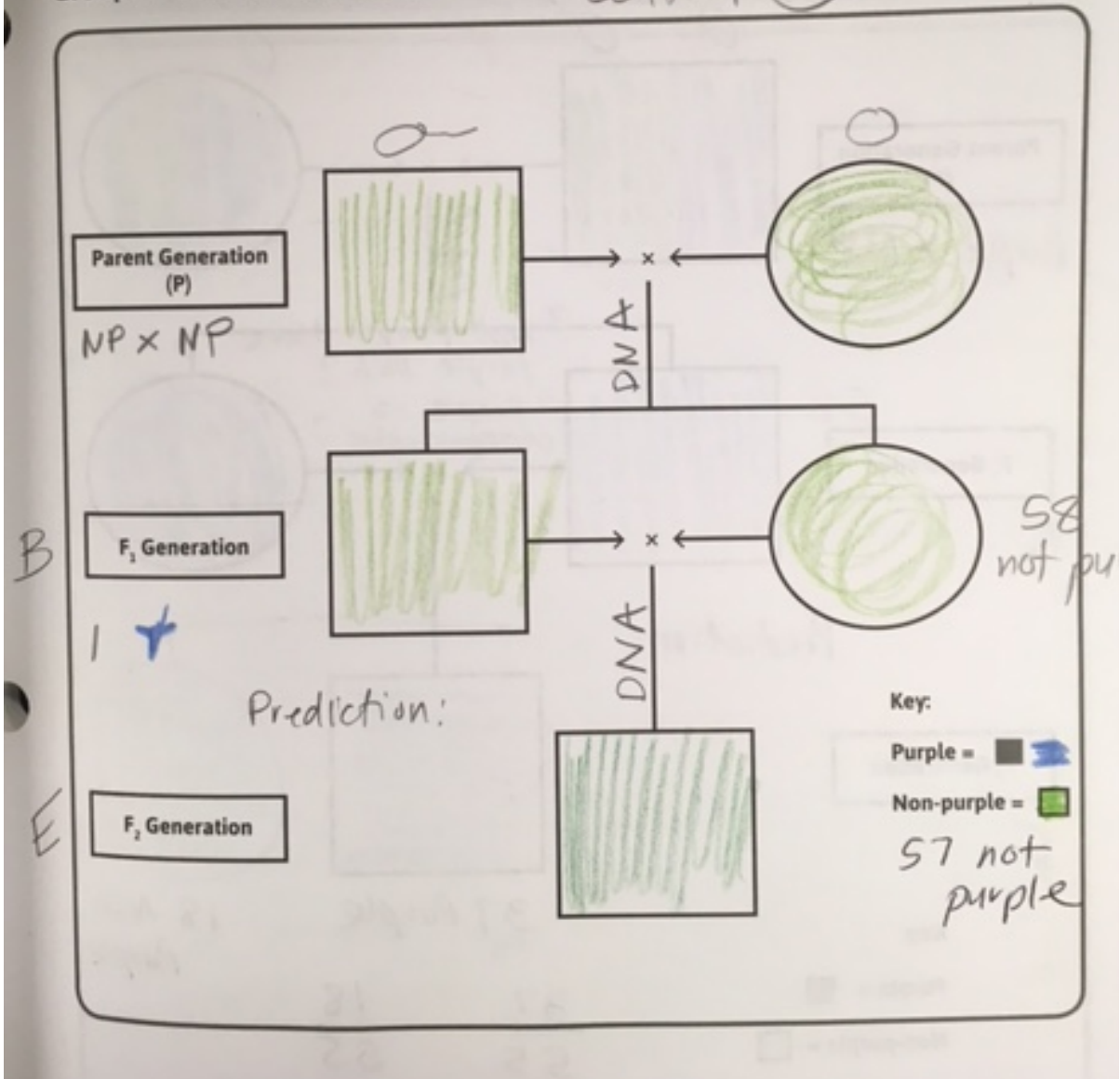
- What would the karyotype look like?

Seed Packets A and D



Group: Seed Packets B and E

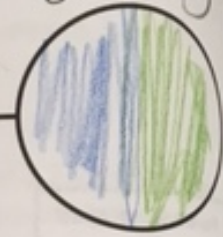
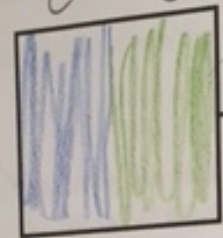
Seed Quality Control 😊



Group: Seed Packets C and F

Parent Generation (P)

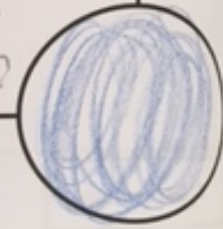
Purple x NP



DNA

F₁ Generation

58

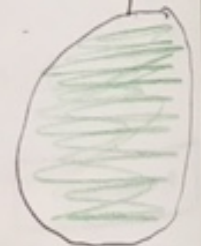
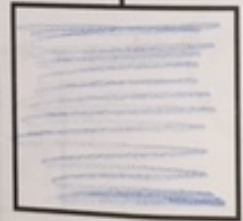


? Not purple have purple DNA?
? purple is stronger color?

Prediction:

F₂ Generation

F



37 Purple
18

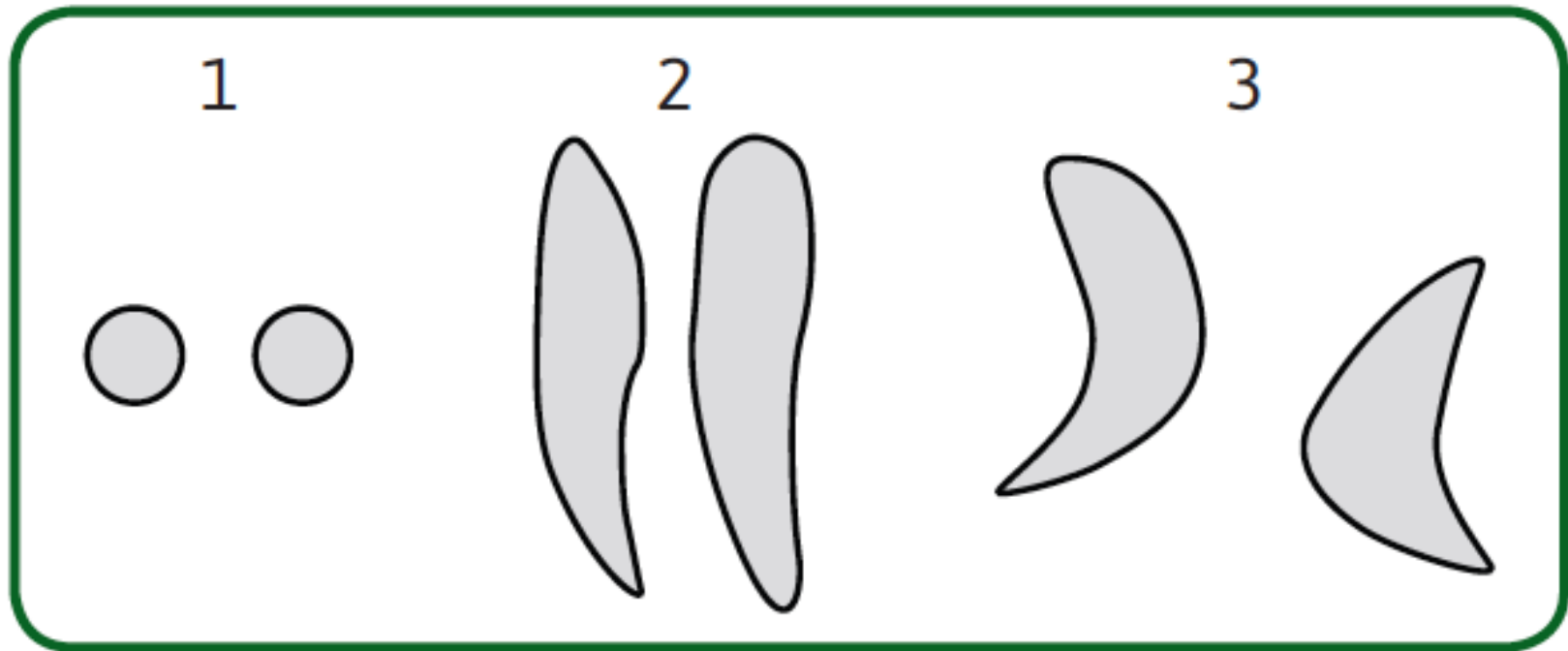
18 Non Purple

Key:
Purple = ■
Non-purple = □

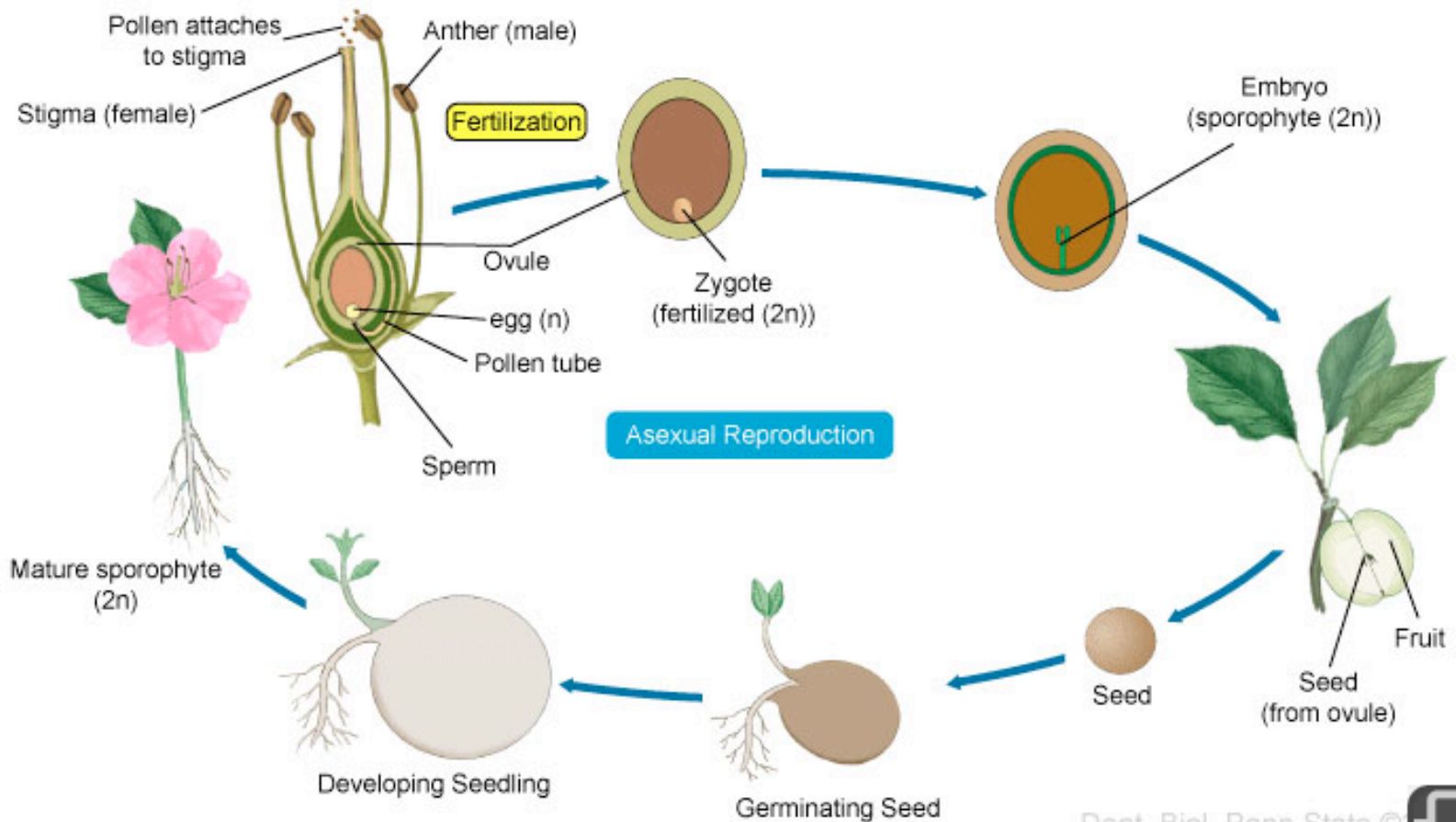
$\frac{37}{55}$ $\frac{18}{55}$

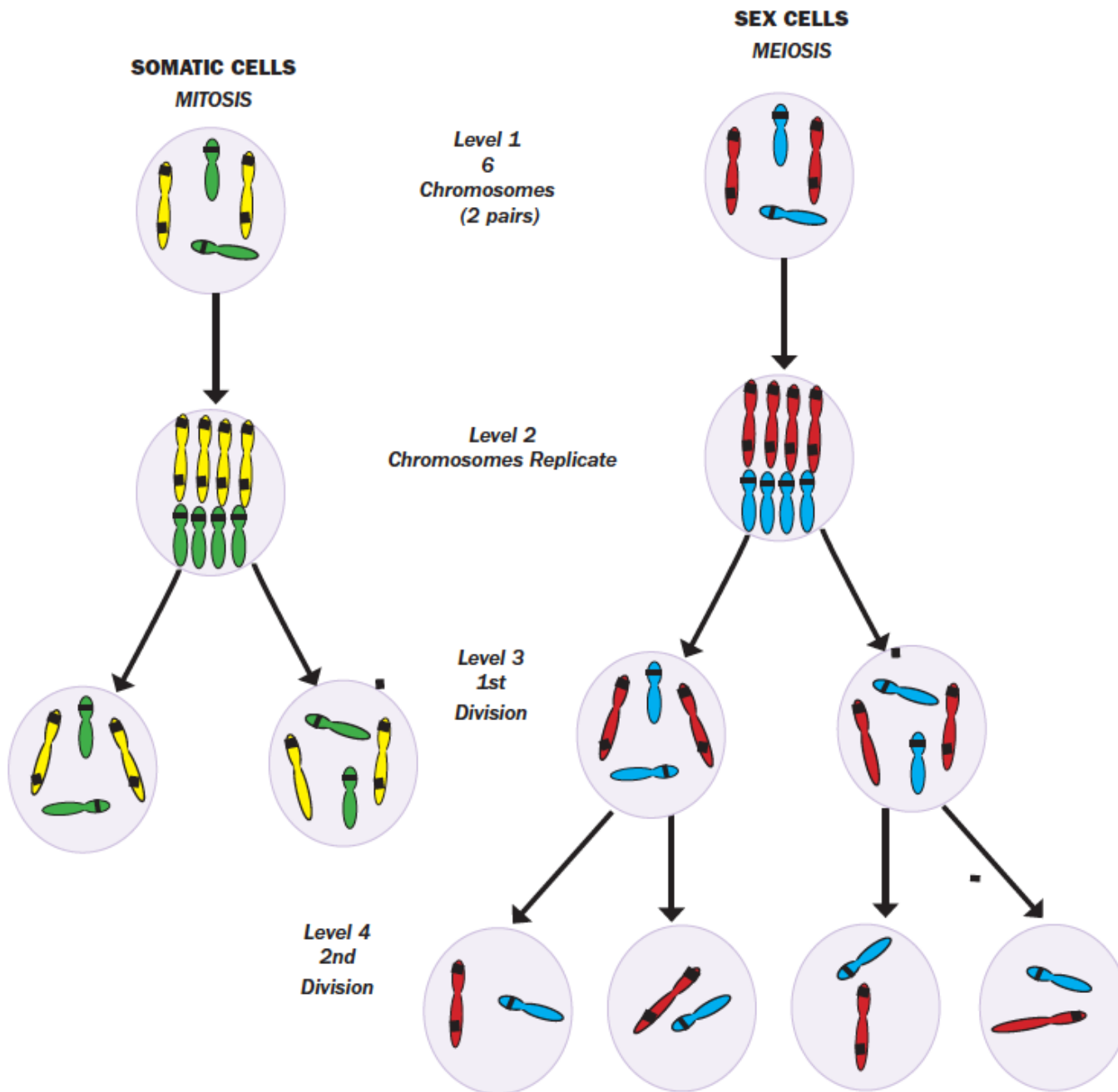
2 Purple : 1 green

Plant Chromosomes



Sperm and Egg?

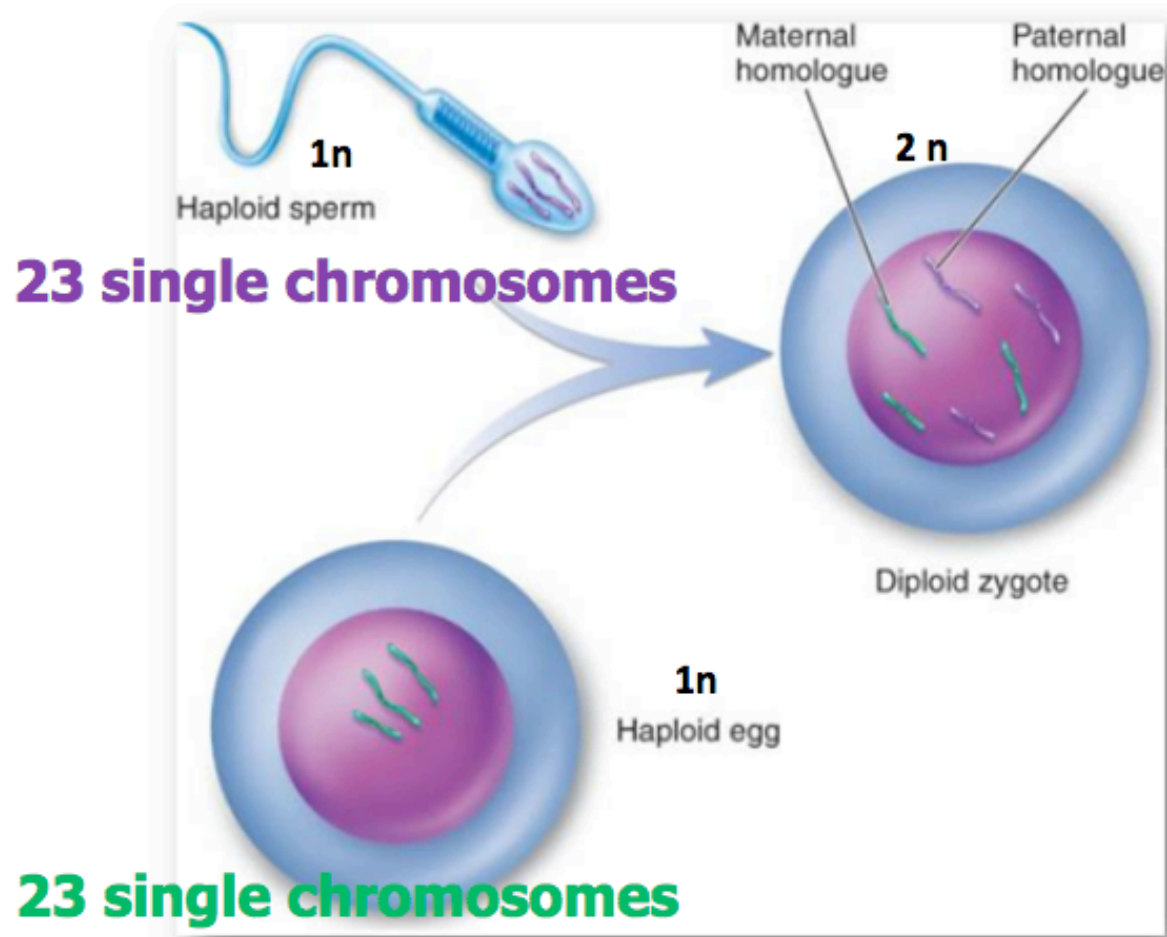




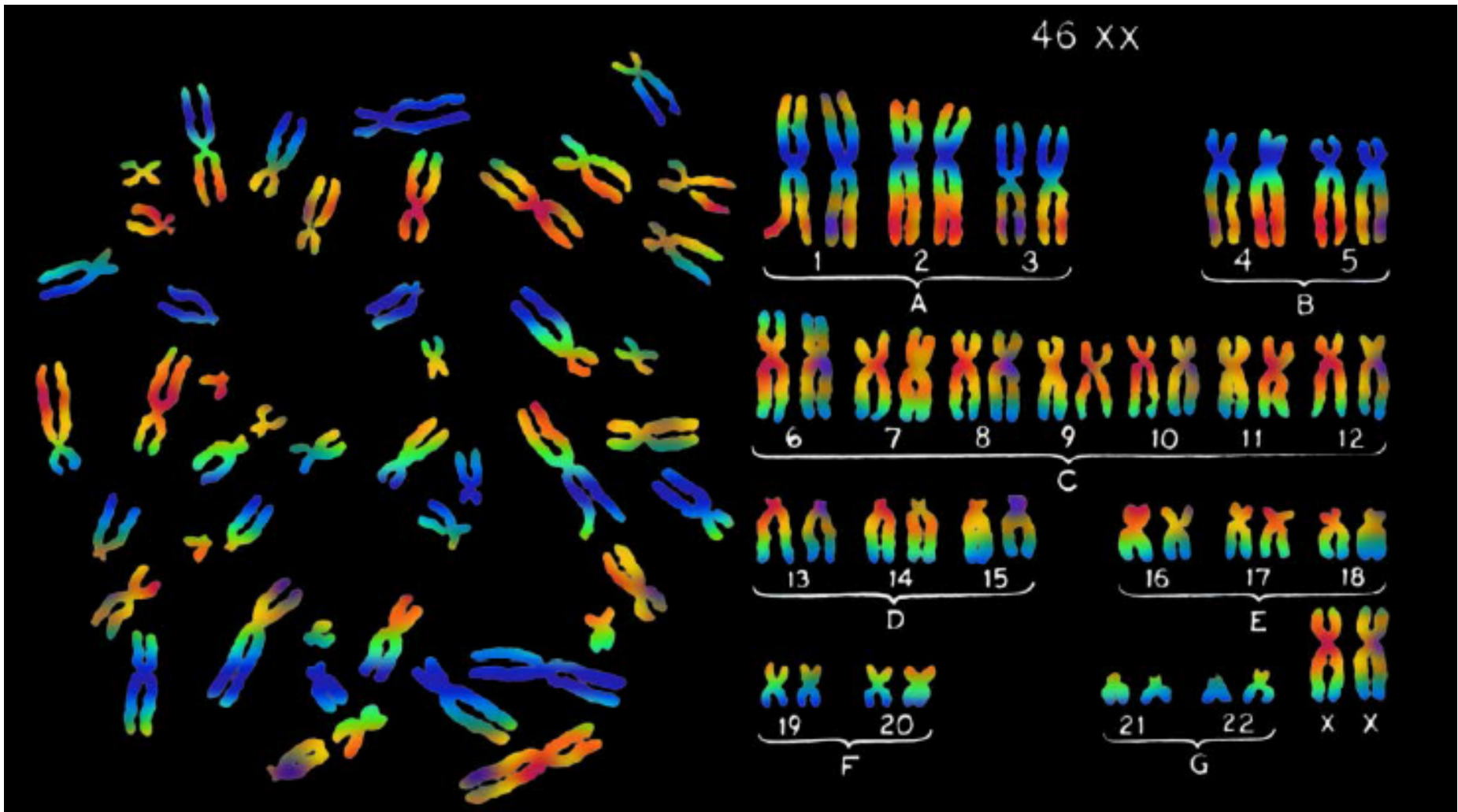
Video clips—Mitosis and Meiosis

- <https://www.youtube.com/watch?v=Ba9LXKH2ztU> watch 1 minute
- <https://www.youtube.com/watch?v=-DLGfd-Wpr4> watch first 2 minutes
- <https://www.youtube.com/watch?v=jjEcHra3484> watch first 1 minute

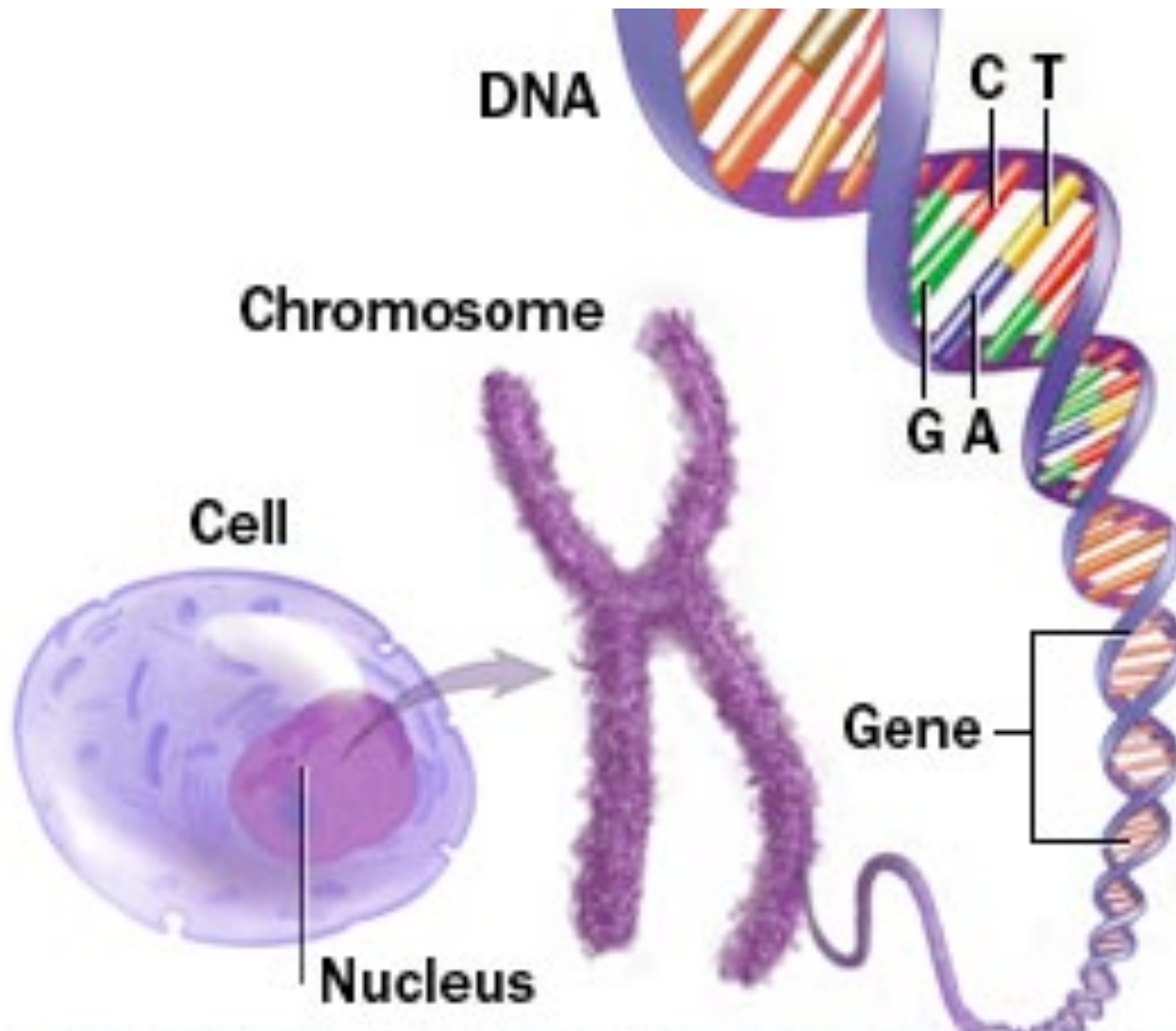
Fertilization



How many chromosomes AFTER fertilization?



Gene



Gene for Stem Color

