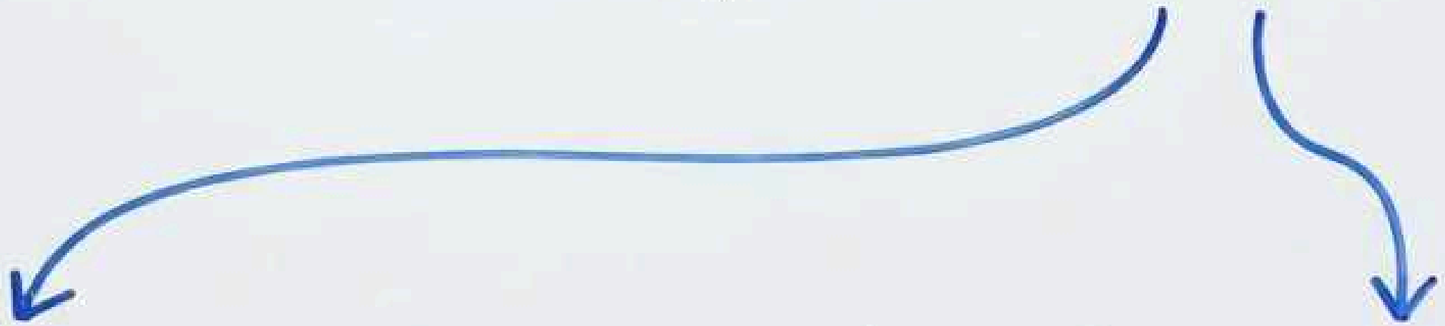
¶ 0.1

The Tuition Equation

Free Course = Service to Humanity + Knowledge Shared



Email → garyanderson@mail.grokbot.com

X (Twitter) → @garyanderson

That is full compensation.

Anderson Academy: Biology 210 B

¶ 0.2

B = Brief



~1 Hour Total

1. Explain how traits are inherited.
2. Understand what DNA does.
3. See how genetic tools are changing medicine.

Why Invest an Hour in Genetics?

¶ 0.3

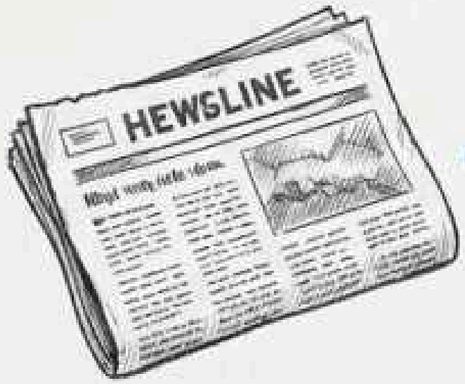


Family: Why children resemble parents & diseases run in families.



Identity: Why no two people are exactly alike.

Genetics

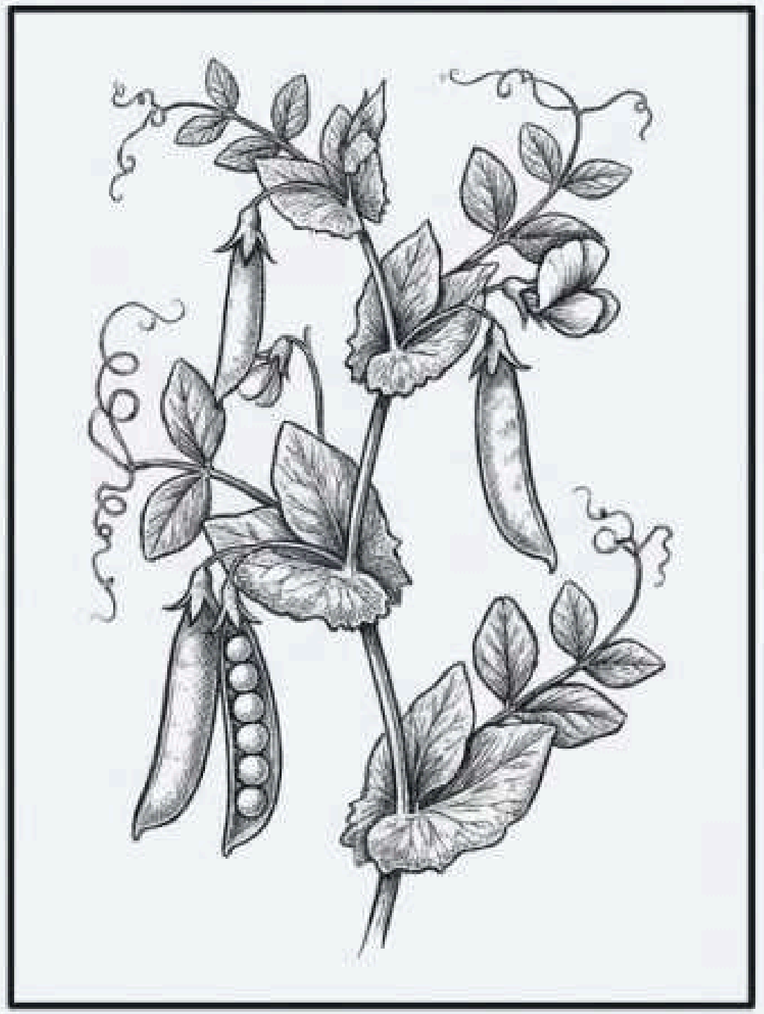


Headlines: Judging the news with a clearer head.

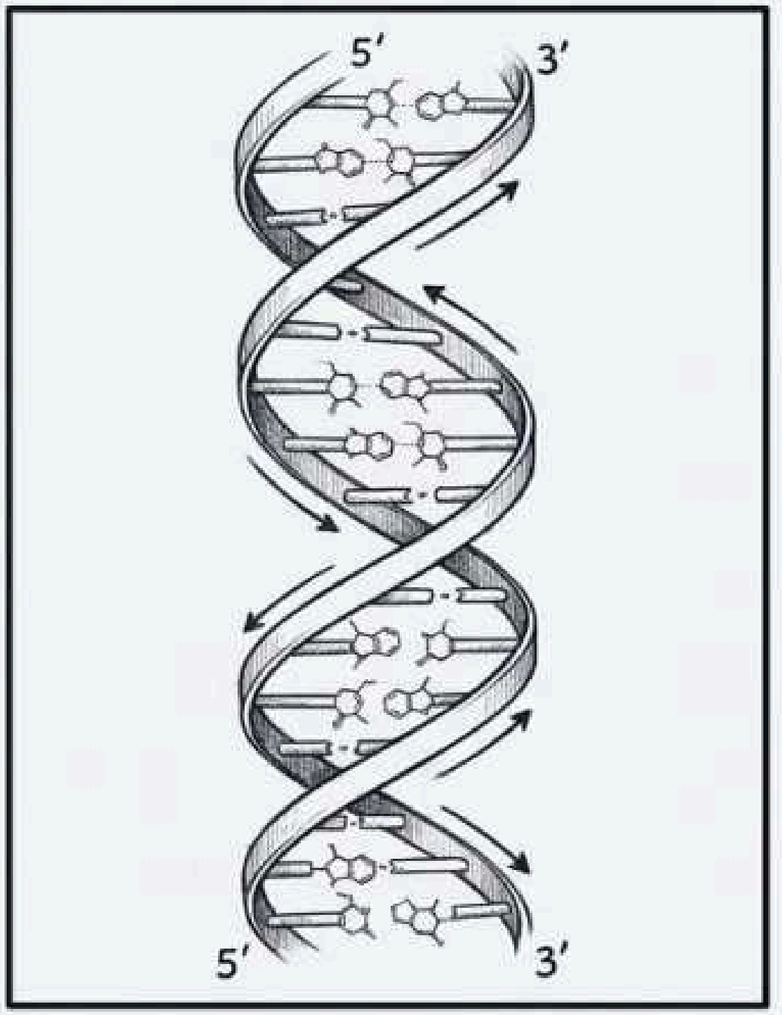


Applications: DNA tests, crime, medicines, gene editing.

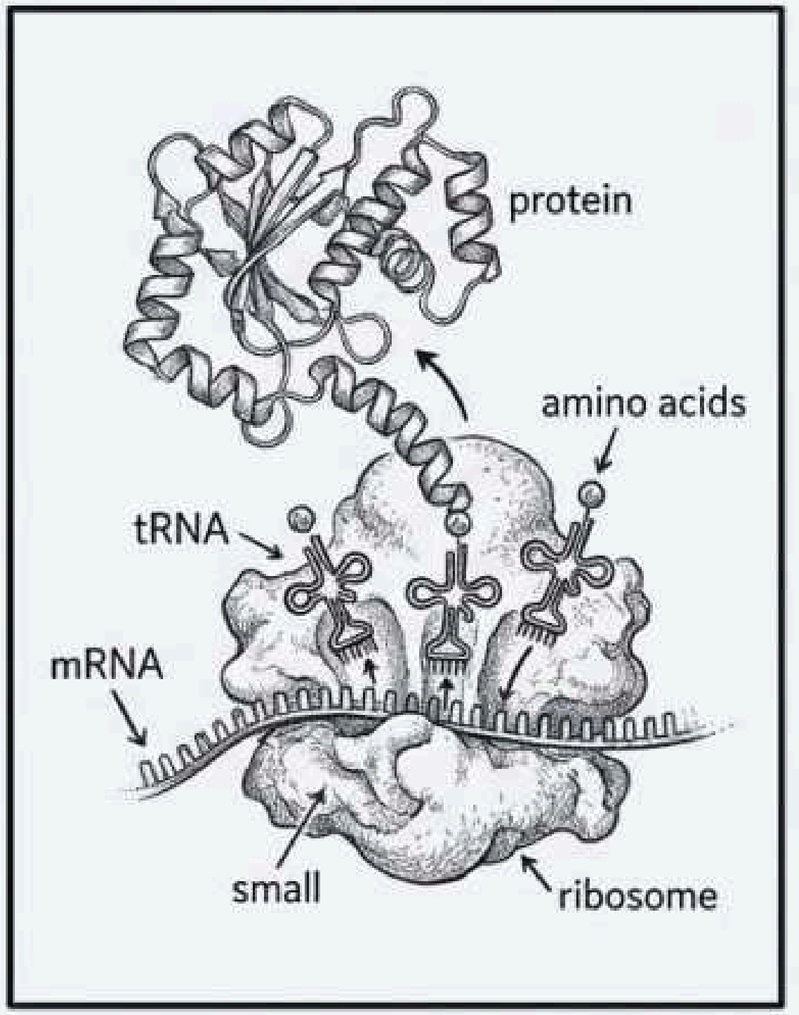
The Map: Lectures 1 through 3



Lecture 1: Gregor Mendel & the rules of heredity.



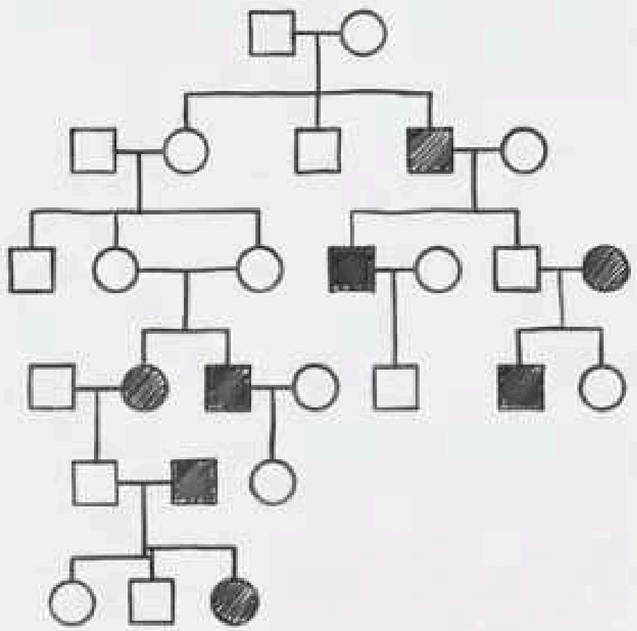
Lecture 2: What DNA is, finding the helix, and how it copies.



Lecture 3: Reading genes to build proteins & when letters change.

The Map: Lectures 4 through 6

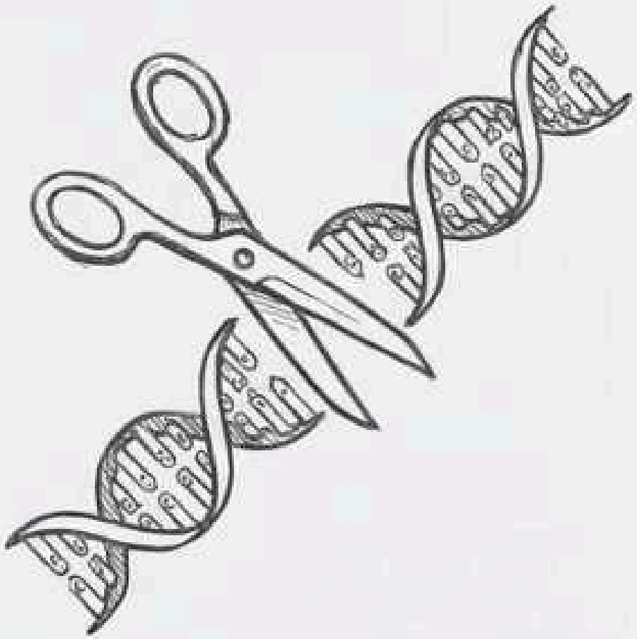
¶ 0.5



Lecture 4: Human heredity: family trees, diseases, genes vs. environment.



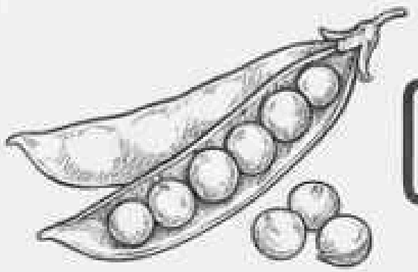
Lecture 5: Reading genomes: Human Genome Project to everyday tests.



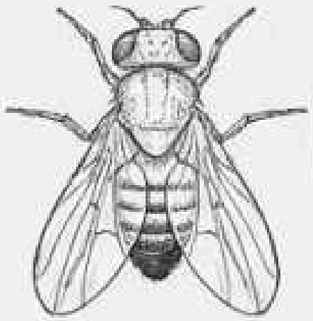
Lecture 6: Gene editing (CRISPR) & population changes over time.

¶ 0.6

Genetics is an Experimental Science



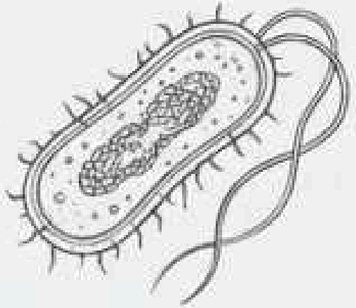
key 1



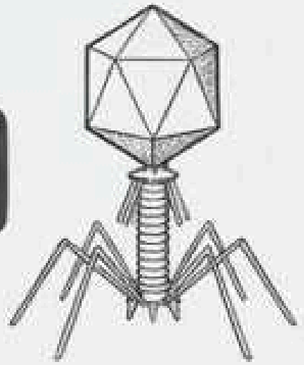
key 2

Big Ideas
&
Biological
Questions

key 3



key 4



The evidence is what makes the ideas believable. We will highlight who did the experiment and what they saw.

¶ 0.7

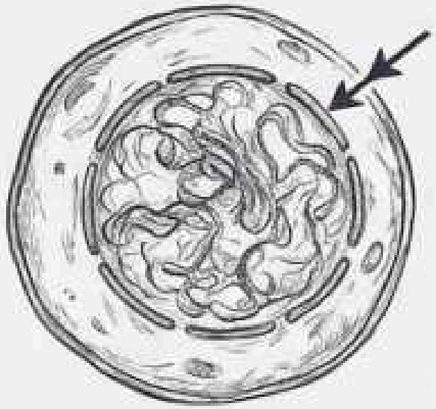
What You Need to Bring

Required	Not Required
Curiosity.	Prior biology background.
$\frac{1}{4}$ 3:1	~~Memorizing every name and date.~~

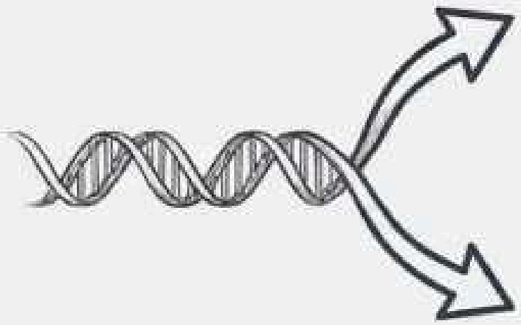
A one-hour course is a map and not the territory...
Aim to understand the main ideas and how they fit together.

The Four Core Questions

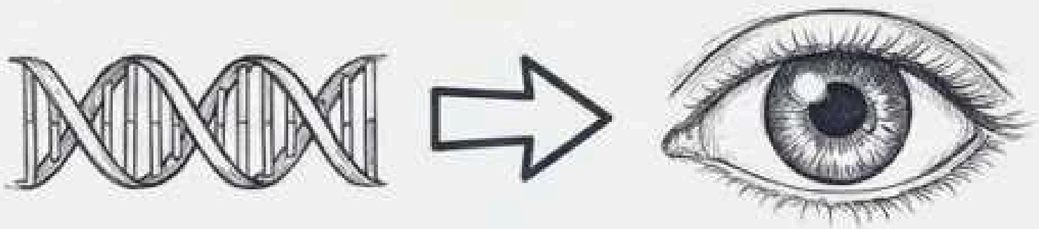
Every lecture returns to these in a new setting.



What is a gene, and where is it kept?



How is genetic information copied and passed on?



How does information in DNA become a living trait?



What can we now do with that knowledge, and what should we do?

Boundaries of the Course

¶ 0.9

What This Teaches

- ✓ The science of genetics.
- ✓ Historical arguments.
- ✓ Leaving the judgment to you.

What This Is Not

- ✗ Medical advice.
- ✗ Your own risk of any disease.

For personal health or family history questions, consult a doctor or genetic counselor.

¶ 0.10

Study Mechanics & Assessments

Station 1



Every paragraph is numbered.

Station 2

5-Question Quiz per lecture.

(Answers point back to paragraph numbers)

Station 3

50-Question Final Exam

Station 4



Tripos Paper:
6 Essay Questions
with Model Answers

Course Development & Iteration

¶ 0.11

Developed with the help of artificial intelligence, under human direction.

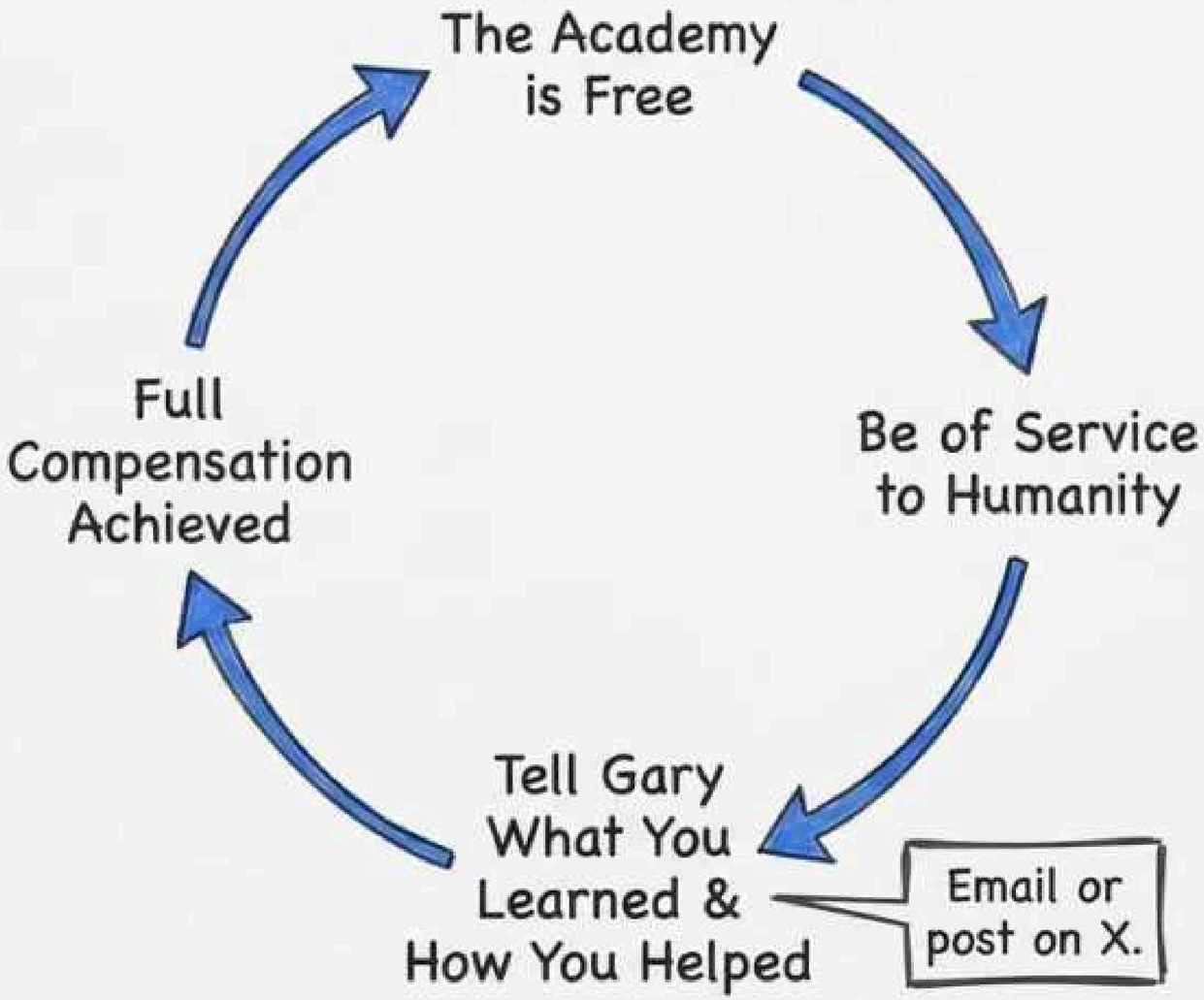
Dates, figures, and events checked against reference works.

~~~100,000~~ → ~20,000

Numbers in genetics have been revised over the years.

If you find an error, tell us using the paragraph numbers.
~~~

Reprise: The Payment Loop



Transition to Lecture One

Questions/Feedback:

Email:
garyanderson
@mail.grokbot.com

X:
@garyanderson



We begin where genetics began: a 19th-century monastery garden, with a friar and some pea plants.

Proceed to Lecture 1