

Pedagogical Considerations for Assessment Design in the Age of AI

Our New Reality

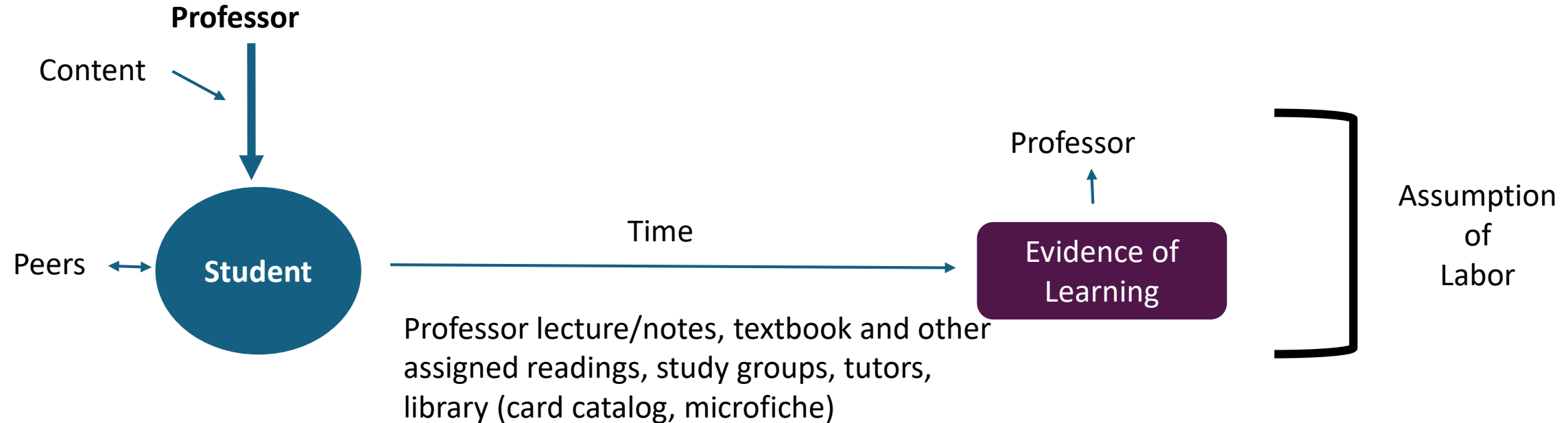
Can faculty use AI for good?

*No part of this presentation or its materials were generated by AI,
except where explicitly stated.*

Context

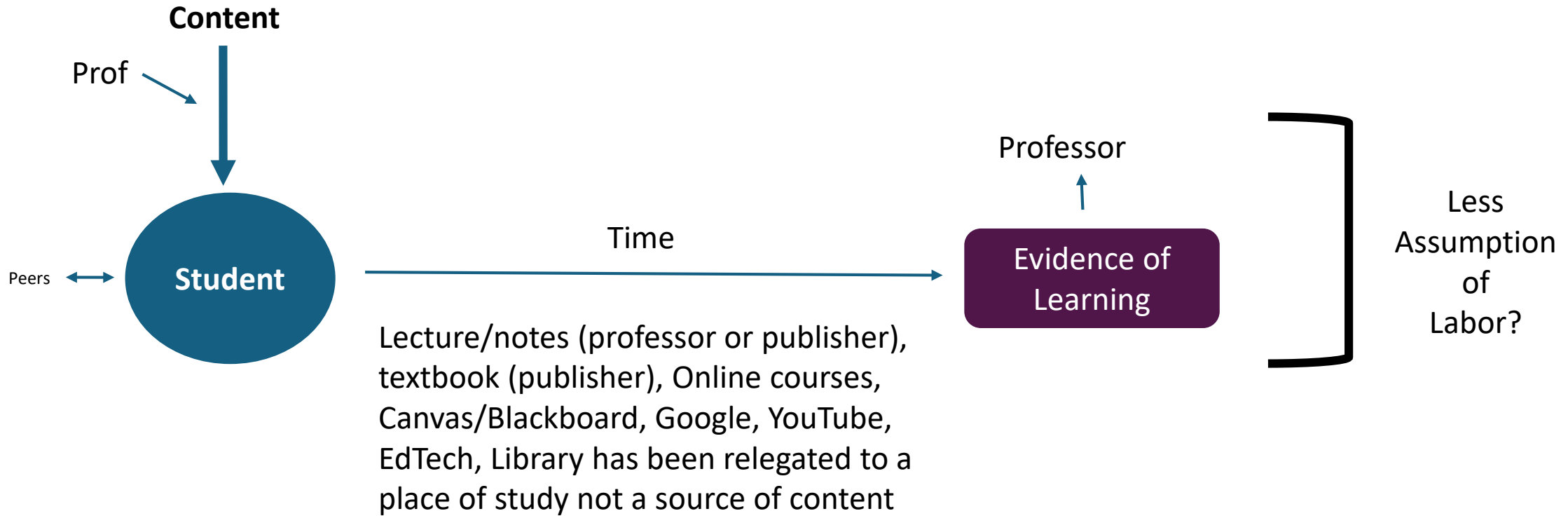
- Sarah Hawkins
- Contract Biology Faculty
 - 8th year @ City and 17th year of full time teaching
- "Grew up" as a professor in the era of Ed Tech
- STEM discipline
 - Thoughts/projections are geared towards courses like mine

The "Golden Days"



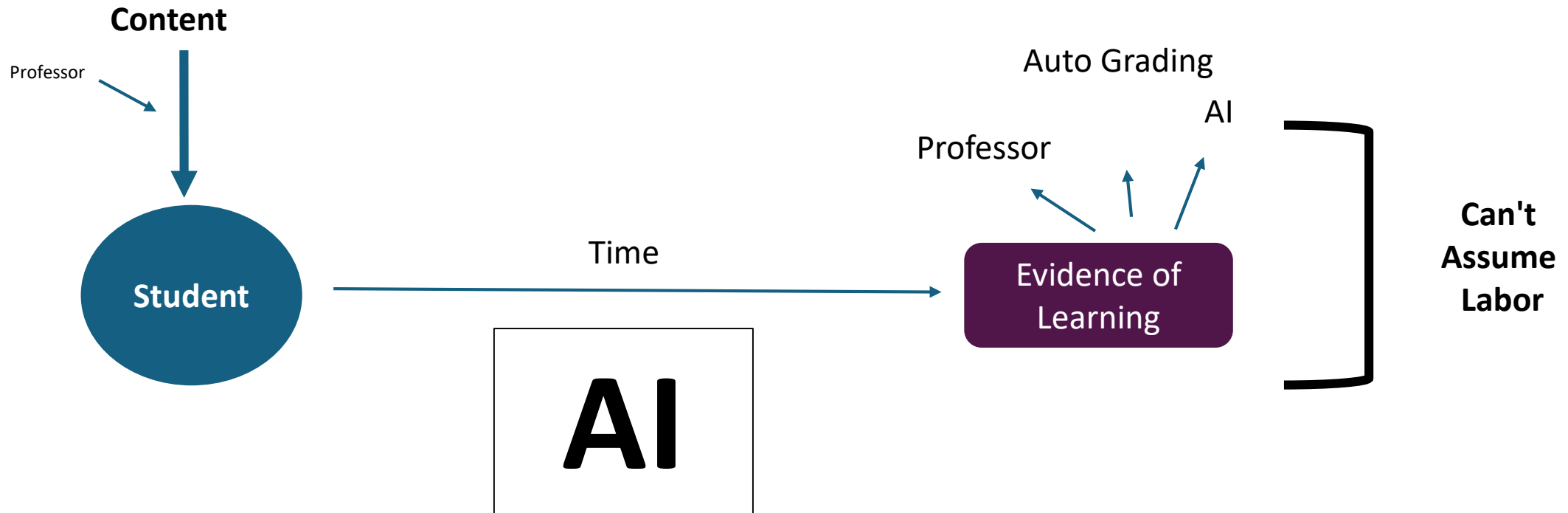
Experience: Homogeneous **Friction:** high **Relationships:** Very Important

The "Golden Era"



Experience: heterogeneous **Friction:** jagged **Relationships:** less important

The "Golden Calf"

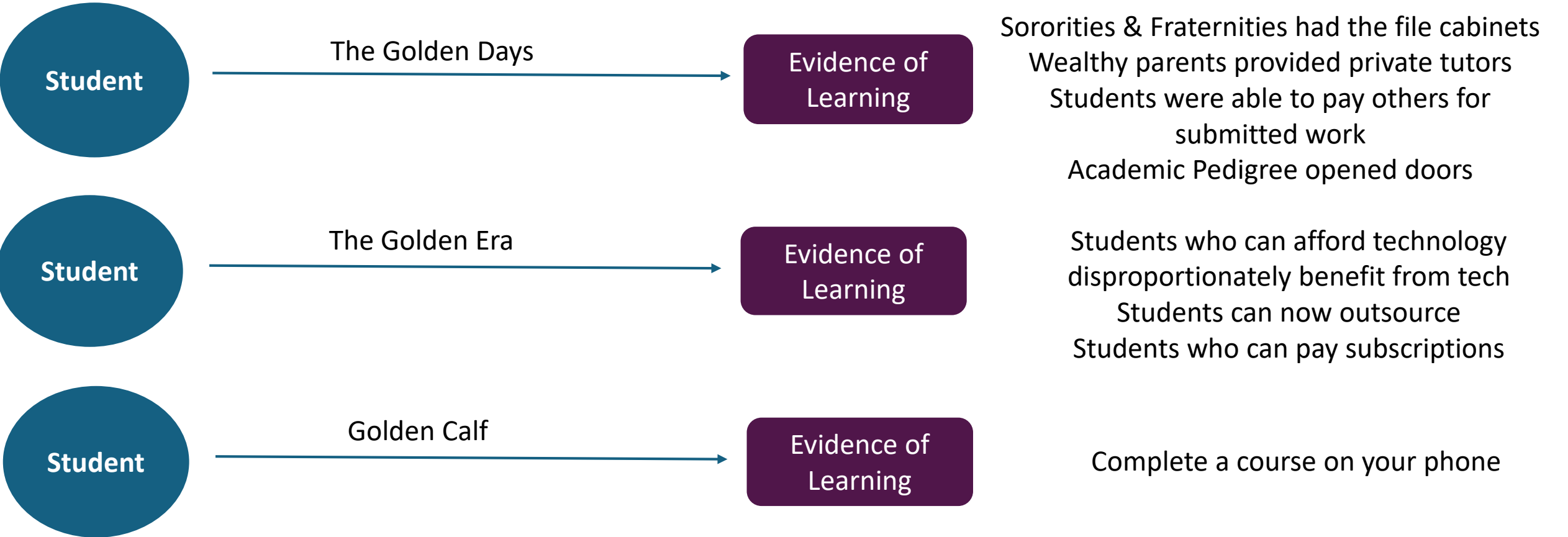


Experience: chaotic **Friction:** optional **Relationships:** non-existent

Fire and water are good servants but bad masters

Technology is a good servant but a bad master

Assumption of Labor



How do we demonstrate value?

- "Value" is a loaded term
- How do we make good citizens?
- Are our AD students succeeding in the job market?
- Are our transfer students succeeding at 4Y institutions?

Same Questions

New Challenges

We cannot assume labor

- Assessment mechanisms have become very thin
 - Professors lose here
 - Differentiated assessments are difficult
 - Can't do as many fun assignments, limits creativity, rethink of course/assessment practices
 - I'm not giving custom feedback except in person or from a proctored submission
 - Will not spend more time evaluating than the student spent on the actual submission
 - Students REALLY lose here
 - Being accused of cheating
 - Until alternatives come along; students will have to perform
 - Proctored exams, proctored/timed writing demonstrations, oral exams, presentations
- New paradigm: Proctored vs Un-proctored

How do we rethink Labor?

- All assessment done outside of class is formative
 - If it is for points, students will use AI
 - Must support student learning toward a goal-summative assessment
 - Scaffolded
 - Make students accountable to one another-norms for group work
- Summative assessment *must* have integrity
 - Proctored
 - Agreed upon work description
- Flipped model
 - Classroom is now a proctored environment

55% of City courses are
online

What professors *must* do

- Acknowledge the new reality
 - Students are using AI
 - AI/plagiarism checkers don't work
 - Professors have bias in who they suspect is using AI
- Clearly set standards for the course
 - Reflect reality
 - Forbidding AI use outside of class harms students: proctored/un-proctored
- Model ethical AI use
 - Demonstrate standards
 - Always state when and how AI is being used in the course
 - If you don't use it, explicitly explain why

Full Disclosure

- I use AI a lot
 - Subscription to Anthropic
- A decent creative partner
- Products are...mid
- Excellent at analysis

- *Avoid contrast framing*
- *Avoid engagement bait, contrarian hooks, words of affirmation, therapy language, and false suspense*
- *Use em dashes and ellipses sparingly*
- *Use American English spelling and conventions*
- *Don't offer to create resources or documents*
- *Don't ask multiple questions at the same time. If clarity is needed, ask questions one at a time in logical order*

Some ways I'm using AI: Search Engine

- AI summary in Google is quite horrifying
- Top hits are selling me something
- Spend time searching for my answer
- *this is most helpful when referencing something I already have a solid understanding of

Example:

I am consistently getting oxidase positive for e. coli. assuming my sample is not contaminated, would could be happening here

Some ways I'm using AI: Organizing Question Banks

- Project-very specific prompts
- Dump a set of questions into a quiz
- Export qti
- Upload qti to project
- Have Claude revise as directed
- Automatically formats every question correctly: centered images, revised alt text, images flagged for contrast, corrects spelling, adds LO to question title, re-points
- Adds correct and incorrect feedback to every distractor-good!

Some ways I'm using AI: Prompt Generation

- For test/test prep give students examples of answers to a really broad/open-ended question
- Revise and critique as a group
 - what is incorrect?
 - What could be more specific?
 - What is missing
- Claude gives the passage and provides a prioritized checklist
 - Incorrect
 - Overly vague
 - Missing

- **How does the genome of a population of bacteria change over time?**

So basically, bacterial genomes change over time through mutations, which are like random mistakes that happen when the bacteria replicate their DNA. These mutations can be helpful, harmful, or neutral. The ones that help the bacteria survive are the ones that get passed down, and over time those traits become more common in the population.

Bacteria can also pick up new DNA from their environment or from other bacteria around them — I think this is called horizontal gene transfer or something like that. There are a few ways this happens, like transformation where they just absorb DNA, and there's also one that involves a virus. These can introduce whole new genes into the population really fast.

When you introduce something like an antibiotic, it kind of causes the bacteria to mutate so they can resist it. The resistant ones survive and reproduce, so eventually the whole population becomes resistant. This is why antibiotic resistance is such a big problem.

Also, in small populations, sometimes certain traits just become more common by chance, even if they're not really helpful or harmful. I think that's called genetic drift or something.

So overall, bacterial genomes change through a combination of mutations, picking up outside DNA, natural selection, and random chance.

Some ways I'm using AI: Title II compliance

- Project: revising uploaded ppts to create alt text and image descriptions to meet accessibility standards

