

# Cornell Guided Notes

Principles of Biomedical Technology (Principles of Biomedical Science) | 2026-10-22

Name

Period

Date

Lesson

## Lesson focus

Karyotype and inheritance notes

## Key words and questions

## Prepared details and student notes

**Essential question**  
**What is today's target?**

Students take structured notes on chromosomal structure, karyotyping, and patterns of inheritance, then complete the PLTW online task. Big idea: The structure of chromosomes and patterns of inheritance determine how genetic variation and disease risk pass from parent to child.

**My notes, examples, and questions**

**Key words**  
**What vocabulary unlocks the lesson?**

- karyotype
- inheritance
- genotype
- phenotype
- carrier
- pedigree
- genetic risk

**My notes, examples, and questions**

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## Cornell Notes - Continued

### Key words and questions

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**Must-know ideas**  
**What should I understand by the end?**

- A karyotype organizes chromosomes by size and centromere position to reveal numerical abnormalities.
- Dominant and recessive alleles follow predictable inheritance patterns visible in pedigrees.
- Aneuploidy, such as trisomy 21, arises from nondisjunction during meiosis.

**My notes, examples, and questions**

**Process notes**  
**What happens during class?**

- 0-5 min: Warm-up: sketch what you think a stained chromosome spread looks like.
- 5-30 min: Teacher-led notes: chromosome number, autosomes, sex chromosomes, karyotype construction.
- 30-50 min: Notes continued: aneuploidy examples, dominant/recessive/carrier definitions, pedigree reading.
- 50-72 min: PLTW online activity on chromosomal abnormalities (individual, self-paced).
- 72-80 min: Exit check: label a blank karyotype diagram with three correct annotations.

**My notes, examples, and questions**

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#### Steps and evidence What do I do and turn in?

- Annotate teacher notes on chromosome number, autosomes, and sex chromosomes.
- Diagram how a karyotype is built from a stained metaphase spread.
- Distinguish aneuploidy (such as trisomy 21) from normal diploid karyotypes.
- Define dominant, recessive, and carrier as used in a pedigree.
- Complete the assigned PLTW online activity on chromosomal abnormalities.

Evidence: Notebook check - Annotated notes on karyotype structure, aneuploidy, and inheritance patterns with a labeled karyotype diagram.

#### My notes, examples, and questions

#### Checks for understanding How do I know I got it?

- Correctly label autosomes, sex chromosomes, and one trisomy on a karyotype.
- Submit the PLTW online task with all responses complete.

#### My notes, examples, and questions

#### Lab or safety notes What must I handle carefully?

No special lab safety notes today. Follow normal classroom and digital-work expectations.

#### My notes, examples, and questions

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## Cornell Notes - Continued

### Summary

Today's lesson focused on Karyotype and inheritance notes. The main target was: Students take structured notes on chromosomal structure, karyotyping, and patterns of inheritance, then complete the PLTW online task. The evidence of learning is Notebook check: Annotated notes on karyotype structure, aneuploidy, and inheritance patterns with a labeled karyotype diagram.. In my own words, the most important idea from today is:

**My summary**

**My final question or connection**