

2027-05-07 · 80 minutes

Printed plaque records and eye reference

Your goal: Count markers on teacher-provided printed practice plaque images, calculate percent reduction and label the human eye reference. The images and counts are invented learning material, not a completed assay or dissection.

One product: Plaque-count data table with percent reduction calculated per antiviral condition, plus a labeled eye-structure diagram noting one structure vulnerable to viral infection.

Question: What can a supplied count comparison and a separate anatomy reference each establish?

Start the work

Use today's supplied records without assuming anything about Wednesday May 5 work. Use the supplied paper inputs; no completed experiment, transmission task or lab readiness is assumed.

1. Use the teacher-provided printed plaque diagrams prepared in advance. Read the legend; these are invented practice records, not cultured plates.
2. Count each pale plaque marker once in R, A, B and N. Record each diagram ID and compare your tally with D1; retain any counting correction.
3. Calculate percent reduction for A and B relative to R. Keep N as a background comparison, not the best treatment.
4. Label the eye reference using E1. This is reference anatomy, not a specimen you dissected.
5. Explain one limit separating a count difference from treatment effectiveness and from the unrelated eye reference. Save one table and one labeled diagram.

Paper preparation only. Do not perform, plan or optimize an assay, biological treatment, dissection or experiment. Follow the teacher's approved directions and supervision for any separately assigned laboratory work, setup or cleanup. Save the table and reference diagram with its note. Ask the teacher for anything you need. After uploading, check that Schoology shows Submitted.

Words you will use

supplied record

Written input already provided for interpretation.

fictional data

Invented teaching numbers, not observations of a real event.

plaque count

Here, a supplied tally of localized affected areas in a cell-based test.

reference

Record used as the comparison baseline.

candidate

Generic comparison label; not a real drug identity here.

background comparison

Separate reference context, not a treatment candidate.

count

Number of named events in a supplied record.

unit

What the count or measurement describes.

percent

Parts per hundred.

percent reduction

Difference from reference divided by that positive reference, times 100.

denominator

Quantity by which a numerator is divided.

numerator

Top quantity in a fraction.

undefined

No valid value under the stated arithmetic rule.

rounding

Reporting a number to a stated precision.

variation

Differences across observations; repeated counts are absent here.

cell viability

Whether cells remain alive and functional.

mechanism

How a change occurs; not identified by these counts.

clinical benefit

Improvement for people; not established by a teaching record.

titer

Concentration of infectious units under a defined measurement method; not computed here.

anterior

Toward the front; left in this drawing.

posterior

Toward the back; right in this drawing.

cross-section

View representing an imagined cut through a structure.

cornea

Clear curved front layer that helps bend light.

lens

Clear structure behind the iris that helps focus light on the retina.

vitreous humor

Clear gel occupying the large space behind the lens and in front of the retina.

retina

Light-sensitive lining along the inner back wall of the eye.

optic nerve

Bundle carrying signals from retina toward brain.

iris

Colored tissue that controls the pupil opening.

pupil

Opening in the iris through which light enters.

sclera

Outer coat of the eye, shown as a support label.

compartment

Defined space, not the same thing as its lining.

lining

Tissue along an inner surface.

susceptibility

Possibility of being affected; specific likelihood is not supplied.

ocular

Relating to the eye.

observation

What was actually seen or measured; none is claimed for a specimen here.

limitation

Evidence boundary restricting a conclusion.

approval

Genuine authorization; paper completion does not grant it.

Submission check

After uploading, check that Schoology shows Submitted; ask for help if it does not.

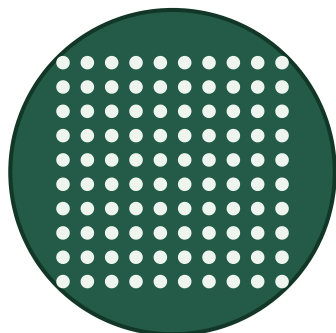
Printed practice plaque images

Printed plaque-count practice

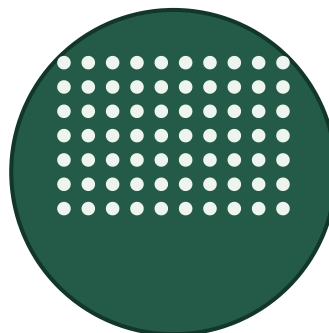
Original invented diagrams. Each pale circle represents one counted plaque.

These are not photographs, real cultures, observed results or eye-treatment evidence.

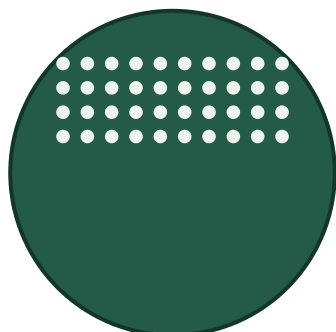
R: Reference



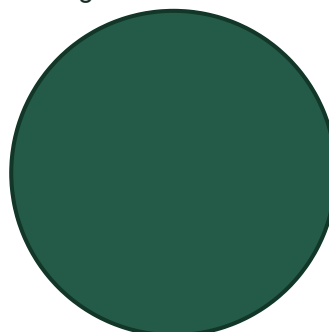
A: Candidate A



B: Candidate B



N: Background



Count each marker once. Check against D1 only after counting. Circular borders are not plaques.

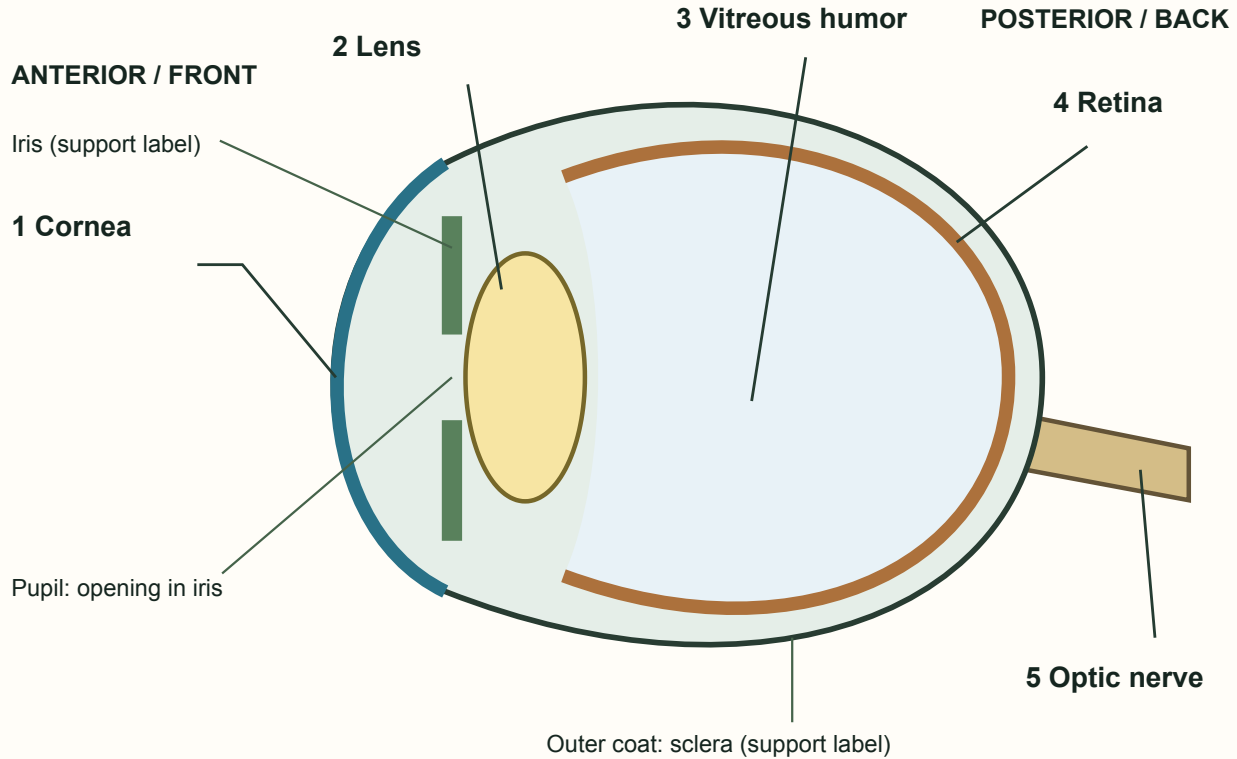
Original invented count diagrams, not photographs or observed plate results. Prepared in advance for the required paper task.

Text description: Four invented circular diagrams contain R100, A70, B40 and N0 pale markers. Each marker represents one counted plaque; text D1 supplies the same counts.

Human eye reference

Human eye: conceptual cross-section

Reference anatomy, not a specimen or dissection guide. Not to scale.



Other layers and fine details omitted. Vitreous is gel in a space; retina is a lining.

Actual assigned reference replaces practice. Complete one diagram; E1 provides full text.

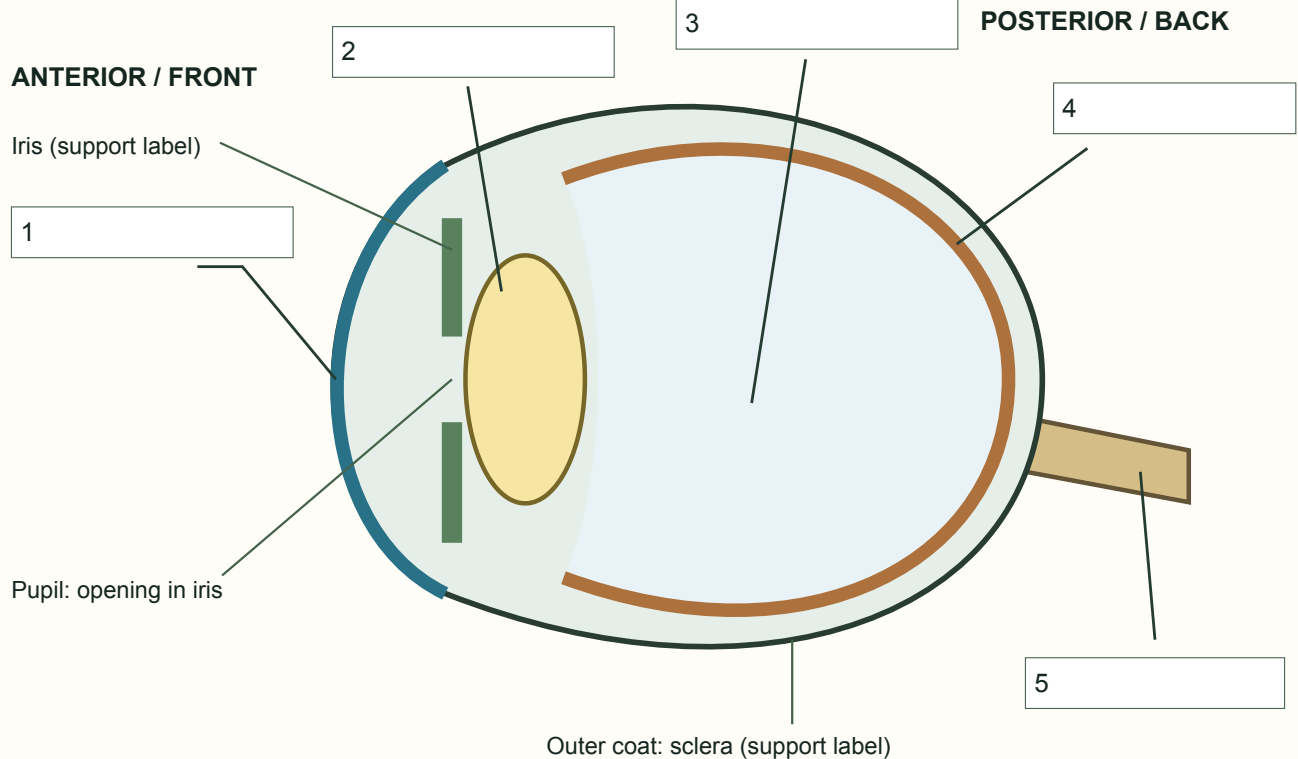
Original human conceptual reference. Reference only, not specimen observation. Use the actual assigned reference instead if provided; complete one diagram.

Text description: E1 gives a complete text equivalent: front-left cornea, iris/pupil, lens behind iris, vitreous space, inner posterior retinal lining and optic nerve leaving back-right.

Human eye response

Human eye: conceptual cross-section

Reference anatomy, not a specimen or dissection guide. Not to scale.



Other layers and fine details omitted. Vitreous is gel in a space; retina is a lining.

Actual assigned reference replaces practice. Complete one diagram; E1 provides full text.

Original human conceptual response. Reference only, not specimen observation. Use the actual assigned reference instead if provided; complete one diagram.

Text description: E1 gives a complete text equivalent: front-left cornea, iris/pupil, lens behind iris, vitreous space, inner posterior retinal lining and optic nerve leaving back-right.

H1: Two evidence sets, two limits

Required route: use teacher-provided printed practice plaque images prepared in advance, plus D1's invented check counts. No live plaque kit is approved. Do not handle cultures or apply treatments.

Plaque work uses printed images only.

At 0–10 read H1 and D1. Opening input: an invented record has fewer counted plaques than its reference, while a separate human-eye diagram names structures. Name one reason those facts alone cannot show that a treatment protects an eye. Use this rule: a count difference is not evidence of an

effect on the unrelated reference diagram. Answer once. Actual route: use the teacher's genuine records, anatomy reference and rubric in place of this practice. Complete one table and one diagram with its note. Ask the teacher for the real materials and approval before starting that work.

Today is Friday May 7. Any unfinished May 5 work stays separate and is not assumed complete. The next class is Monday May 10. This paper record uses the same invented count set supplied there; it is not an earlier lab observation or proof of prior completion. Start S1's brief checks and next actions during work and update changes only.

D1: Complete supplied teaching count record

These are the same author-invented counts used in the May 10 lesson, supplied here in full. They are not actual May 7 measurements, patient data or published results. No biological identity, preparation method, treatment amount, timing or operating condition is supplied. The labels name record roles only. The supplied figure depicts the same invented records as countable pale circles: R 100, A 70, B 40 and N 0. Count first, then use D1 as the check. These markers are schematic and do not model real plaque size, overlap or distribution.

For this exercise, plaque count means the supplied tally of localized affected areas in a cell-based test. It is not a direct count of every virus particle or a measure of a person's illness. You read the record; you do not produce it.

Complete record, columns ID | label | role | supplied count: R | Reference | comparison denominator | 100. A | Candidate A | candidate comparison | 70. B | Candidate B | candidate comparison | 40. N | Background comparison | no-virus label in this fiction | 0.

Each number is one invented count, not an average or repeated-trial set. Unit: counted plaques per supplied record. For arithmetic only, assume the count definition is the same across R, A and B. This is a classroom assumption, not a verified feature of any actual test.

At 10–25 identify the four roles and enter IDs, role and supplied count in one table. Use columns ID/role, count, percent reduction versus R, and brief evidence limit. The same table is completed at 25–42. No graph or separate CER is required today. Actual route: use the teacher's genuine records, anatomy reference and rubric in place of this practice. Complete one table and one diagram with its note. Ask the teacher for the real materials and approval before starting that work.

P1: Calculate two candidate reductions

At 25–42 calculate percent reduction for A and B only. Formula: (reference count minus candidate count) divided by reference count, multiplied by 100. Here the positive denominator is R=100. Unit: percent. Keep the arithmetic beside its row and round the final result to one decimal place.

Keep R and N as visible reference rows. In their percent cells write not a candidate. N is background context, not the best antiviral. Do not rank N or claim its zero proves absence of contamination, cell damage or counting error. The reduction requirement applies only to the two candidate rows.

A reference of zero would make this percentage undefined. Do not divide by zero or invent a zero-percent answer. A negative reduction would mean the candidate count is higher than the reference. No dilution or volume data are supplied, so do not calculate viral titer.

Add a short table limit: these single counts do not separate treatment effects from harmed cells, counting differences or other unknown causes. No repeated counts, cell-viability evidence or patient outcomes are supplied. A lower count alone cannot prove mechanism, safety or clinical benefit. Actual route: use the teacher's genuine records, anatomy reference and rubric in place of this practice. Complete one table and one diagram with its note. Ask the teacher for the real materials and approval before starting that work.

E1: Human eye reference and full text alternative

At 42–58 study the original human eye cross-section reference. Anterior means front and is on the left; posterior means back and is on the right. This is an imagined cutaway for learning, not an intact-eye view, specimen image or instruction to expose tissue. Other layers and fine details are omitted; the drawing is not to scale.

1 Cornea: clear curved front layer at the left edge. It helps bend incoming light. 2 Lens: clear structure behind the iris, shown as the oval just to its right. It helps focus light on the retina. The fixed iris label names the tissue that controls the pupil, its central opening.

3 Vitreous humor: clear gel in the large compartment behind the lens and in front of the retina. The leader ends inside the space, not on a tissue lining. 4 Retina: light-sensitive lining along the inner back wall. Its cells convert light into electrical signals. It is not the whole gel-filled space.

5 Optic nerve: bundle leaving the posterior eye toward the brain, shown on the right. It carries signals from the retina; it is not a pipe carrying light. The fixed sclera label identifies the outer coat, not the retina. Iris, pupil and sclera are support labels, not extra blank responses.

Full diagram map if an image is unavailable: front/left corneal dome, then iris with pupil opening and lens behind iris. Vitreous fills the broad space behind the lens. Retina lines the inner back wall; the optic nerve leaves the back/right. Use these relations to sketch one cross-section or use the matching five-number response diagram. Do not complete both. Actual route: use the teacher's genuine records, anatomy reference and rubric in place of this practice. Complete one table and one diagram with its note. Ask the teacher for the real materials and approval before starting that work.

N1: A narrow structure note

At 58–70 label numbers 1–5 on the matching response diagram using E1. Preserve front-left/back-right orientation. Labels identify reference anatomy, not structures you actually dissected. You may use a simple sketch with the same five labels and relations if the diagram is unavailable.

Write one short note beside that same diagram. Include the cornea's front location and light-bending role, then a narrow sourced susceptibility statement. NEI describes ocular herpes as a viral infection that can affect the cornea. This supports saying the cornea can be affected by some viral infections; it does not show that every virus infects it.

Location alone does not establish a virus's entry route, which tissue is infected first or how likely infection is. The separate teaching counts do not identify a virus, an affected eye or a protective drug. Do not connect candidate A or B to corneal protection. No diagnosis, treatment recommendation or observed tissue damage is supplied. Actual route: use the teacher's genuine records, anatomy reference and rubric in place of this practice. Complete one table and one diagram with its note. Ask the teacher for the real materials and approval before starting that work.

Q1: Check and save the same preparation

At 70–80 check all four count rows and both candidate calculations. Confirm that R is the denominator and N is not a candidate. Check that the diagram has five labels, with vitreous as a space, retina as a lining and optic nerve at the back. Check that the note keeps general reference science separate from actual observation.

Correct a real transcription or label error, or mark a verified match. Use self review unless a peer actually comments; do not invent feedback, predictions, actual observations or a lab photograph. Save the same table and diagram/note. This stage does not complete laboratory cleanup or sign-off. Actual route: use the teacher's genuine records, anatomy reference and rubric in place of this practice. Complete one table and one diagram with its note. Ask the teacher for the real materials and approval before starting that work.

S1: Check the requirements for actual laboratory work

Check the six requirements for this printed task: the complete practice image set and D1 key; the eye reference; the assigned rubric; your count table and labeled diagram; the correct section and deadline; and a genuine submission receipt after uploading. No assay, treatment, dissection or wet cleanup is required by this printed route.

The printed practice images are supplied. They are not authentic laboratory photographs or a virtual-lab result. No live plaque kit or wet demonstration is approved. Plaque work uses printed images only.

Ask your teacher whether Activity 3.2.3 or Project 3.2.4 is assigned and where to stop. Any extra credit needs teacher confirmation; no points are promised here. Assignment title: Wk16 Lab report: Plaque assay and eye dissection. Section 1292: <https://clevelandmetro.schoology.com/assignment/8544599207> . Section 6792: <https://clevelandmetro.schoology.com/assignment/8544599233> . Use only your confirmed section. Ask the teacher what preparation to submit and check the assignment deadline. After uploading, check that Schoology shows Submitted.

If access is blocked, save the preparation and tell the teacher what you need. Check Schoology after uploading. Monday May 10 is the next lesson; its count interpretation does not require you to invent completed May 7 lab work. Actual route: use the teacher's genuine records, anatomy reference and rubric in place of this practice. Complete one table and one diagram with its note. Ask the teacher for the real materials and approval before starting that work.

M1: Complete distinct printing-count model

Optional distinct arithmetic model, not a second task. A fictional printing log reports visible ink spots per sheet: reference $R2=80$, option $P=60$, option $Q=40$ and blank comparison $N2=0$. These are supplied single counts with no repeated-trial or causal evidence. $R2$ is the positive comparison denominator; P and Q are the two options.

Worked rows: $P \text{ reduction} = (80-60)/80 \times 100 = 25.0\%$; $Q \text{ reduction} = (80-40)/80 \times 100 = 50.0\%$. Keep $R2=80$ and $N2=0$ visible, with percent marked not a candidate for reference rows. If $R2$ were zero, the percent reduction would be undefined. Blank $N2$ does not prove why other sheets differ.

Worked limit: fewer printed spots are observed only in this invented log; they do not establish the cause or the quality of a printer. Self-check: each numerator subtracts the option from the same reference. The ink model teaches arithmetic form only and says nothing about viruses, eyes or drug effectiveness. Actual route: use the teacher's genuine records, anatomy reference and rubric in place of this practice. Complete one table and one diagram with its note. Ask the teacher for the real materials and approval before starting that work.

Try the decision

Original route: N has zero supplied plaques. What can it establish? Actual route: apply genuine record definitions and rubric.

- It is one fictional background count; it does not prove all other causes absent.
- Zero plaques proves there was no cell harm or contamination in the supplied record.
- A candidate protects the cornea, as proved by N 's zero supplied plaques.

Explain your choice using the reading. Discuss it or say it to yourself. This practice does not add another submission.

Your 80-minute flow

0–10 minutes	Use H1/D1 for scope and complete supplied inputs; no safety clearance is earned. Actual route: use the teacher's genuine records, anatomy reference and rubric in place of this practice. Complete one table and one diagram with its note. Ask the teacher for the real materials and approval before starting that work.
10–25 minutes	Count the markers in the teacher-provided printed practice diagrams; enter R, A, B and N in the table, then check D1. No plate handling.
25–42 minutes	Use the checked diagram counts and P1 to calculate reductions for A and B. No actual plaque assay is performed.
42–58 minutes	Use E1 to study reference anatomy; no dissection. Actual route: use the teacher's genuine records, anatomy reference and rubric in place of this practice. Complete one table and one diagram with its note. Ask the teacher for the real materials and approval before starting that work.
58–70 minutes	Use E1/N1 to label one diagram and write its bounded cornea note. Actual route: use the teacher's genuine records, anatomy reference and rubric in place of this practice. Complete one table and one diagram with its note. Ask the teacher for the real materials and approval before starting that work.
70–80 minutes	Use Q1/S1 to check/save the same preparation and checks and next actions; no cleanup certification. Actual route: use the teacher's genuine records, anatomy reference and rubric in place of this practice. Complete one table and one diagram with its note. Ask the teacher for the real materials and approval before starting that work.

Your response record

Use these labels on paper or in your document. The space below also works when this page is printed.

One boundary between evidence sets

Original route: Use H1 to explain why counts alone do not establish an eye effect.

Actual route: use the teacher’s genuine records, anatomy reference and rubric in place of this practice. Complete one table and one diagram with its note. Ask the teacher for the real materials and approval before starting that work.

Use this space or the same labeled section in your existing document. Add paper when your table, graph or drawing needs more room.

One four-row count table

Original route: Use D1 to enter all four supplied records and their roles.

Actual route: use the teacher’s genuine records, anatomy reference and rubric in place of this practice. Complete one table and one diagram with its note. Ask the teacher for the real materials and approval before starting that work.

Use this space or the same labeled section in your existing document. Add paper when your table, graph or drawing needs more room.

Supplied record	Practice count	Percent reduction / candidate status	Role and evidence limit
R			
A			
B			
N			

Two percent calculations and a limit

Original route: Use P1 for A/B reductions; keep R/N as reference rows and unknowns visible.

Actual route: use the teacher's genuine records, anatomy reference and rubric in place of this practice. Complete one table and one diagram with its note. Ask the teacher for the real materials and approval before starting that work.

Use this space or the same labeled section in your existing document. Add paper when your table, graph or drawing needs more room.

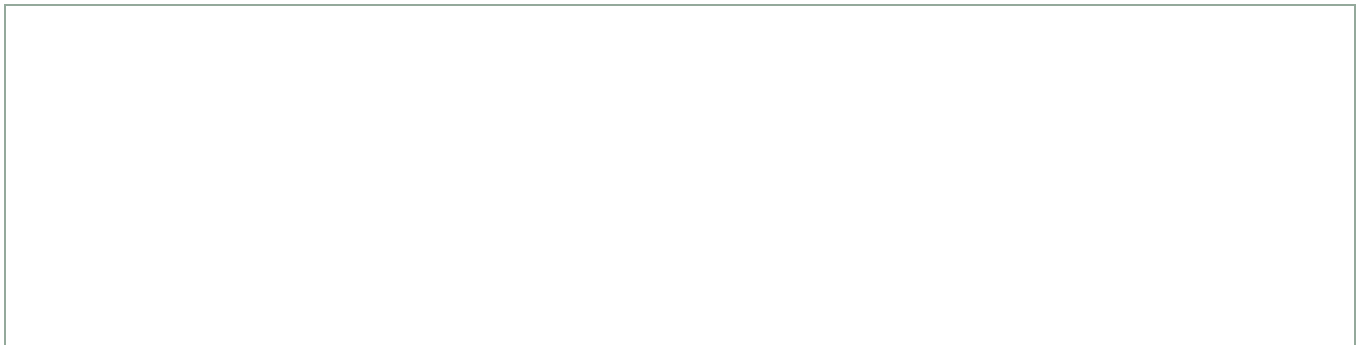


Reference anatomy study

Original route: Use E1 to trace the five structures without dissection.

Actual route: use the teacher's genuine records, anatomy reference and rubric in place of this practice. Complete one table and one diagram with its note. Ask the teacher for the real materials and approval before starting that work.

Use this space or the same labeled section in your existing document. Add paper when your table, graph or drawing needs more room.



Five labels and one bounded note

Original route: Use N1/E1 to label one response diagram or sketch, then add the sourced cornea note.

Actual route: use the teacher's genuine records, anatomy reference and rubric in place of this practice. Complete one table and one diagram with its note. Ask the teacher for the real materials and approval before starting that work.

Use this space or the same labeled section in your existing document. Add paper when your table, graph or drawing needs more room.

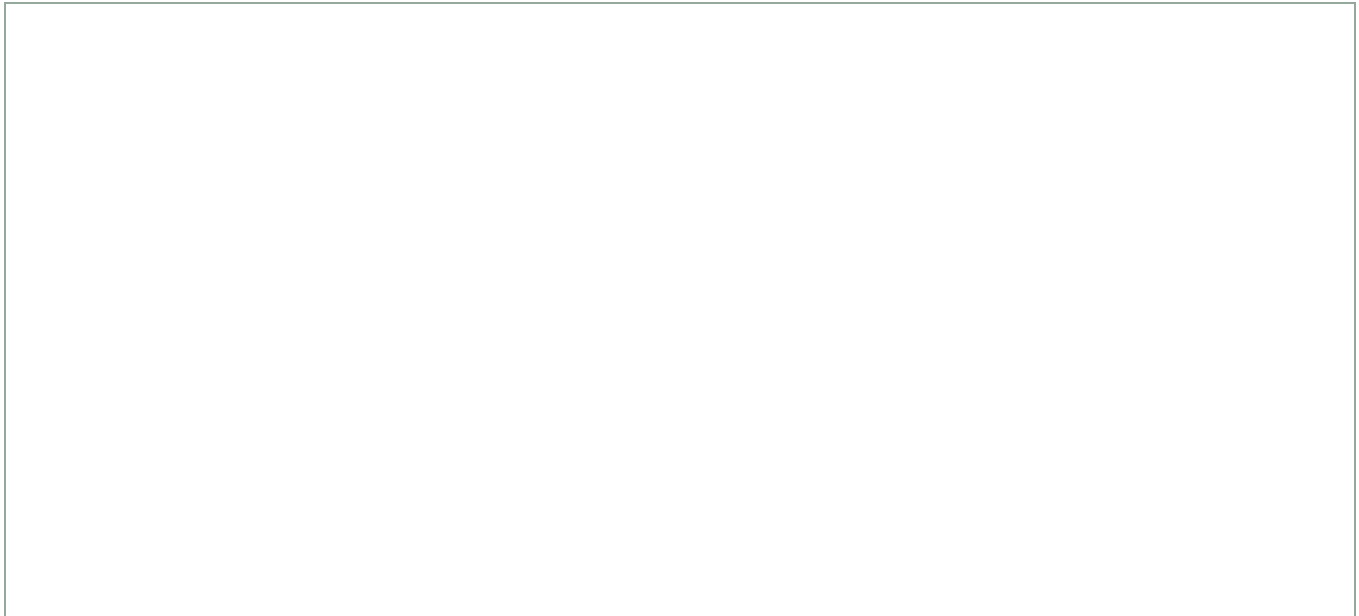
A large, empty rectangular box with a thin black border, intended for a drawing or diagram.

Check your work and next actions

Original route: Use Q1/S1 to check and save the same table plus diagram/note.

Actual route: use the teacher's genuine records, anatomy reference and rubric in place of this practice. Complete one table and one diagram with its note. Ask the teacher for the real materials and approval before starting that work.

Use this space or the same labeled section in your existing document. Add paper when your table, graph or drawing needs more room.

A large, empty rectangular box with a thin black border, intended for students to complete a table, graph, or drawing. It occupies the central portion of the page below the instructions.

Check your product

- Original route: one table preserves $R=100$, $A=70$, $B=40$ and $N=0$ with their roles and count units.
- Original route: A and B reductions use R as denominator, show arithmetic and one-decimal percentages; reference rows remain labeled not a candidate.
- Original route: one human-eye diagram labels cornea, lens, vitreous humor, retina and optic nerve with accurate front/back relations.
- Original route: a short note states corneal role and the narrow sourced possibility of viral infection, without linking the count candidates to eye protection.
- Actual route: use the teacher's genuine records, anatomy reference and rubric in place of this practice. Complete one table and one diagram with its note. Ask the teacher for the real materials and approval before starting that work.
- Both routes: use only your own observations and actual peer contributions. Follow the teacher's directions for physical work, cleanup, sign-off, official tasks and extra credit. Check Schoology after uploading.

Keep the limit: These invented counts and the human eye reference are separate evidence sets. They cannot establish treatment effect on an eye, clinical benefit or specimen observation.

Turn in your work

Use only your confirmed section's assignment link from S1. Ask the teacher whether to submit this paper preparation, then check the assignment and deadline. Confirm the real rubric and where to upload. Actual route: use the teacher's genuine records, anatomy reference and rubric in place of this practice. Complete one table and one diagram with its note. Ask the teacher for the real materials and approval before starting that work.

Paper preparation only. Do not perform, plan or optimize an assay, biological treatment, dissection or experiment. Follow the teacher's approved directions and supervision for any separately assigned laboratory work, setup or cleanup. Save the table and reference diagram with its note. Ask the teacher for anything you need. After uploading, check that Schoology shows Submitted.

[Section 1292: Wk16 Lab report: Plaque assay and eye dissection](#)

[Section 6792: Wk16 Lab report: Plaque assay and eye dissection](#)

Carry forward

Keep count arithmetic, reference anatomy and actual laboratory evidence distinct.

Monday May 10 is the next count-interpretation lesson. The same invented R/A/B/N record is supplied there; actual May 7 work is not assumed. What denominator makes the candidate count reductions comparable?

Sources and resources

[Open today's page](#)

NEI-EYE · About the Eye

NIH National Eye Institute; conceptual human structures

<https://www.nei.nih.gov/eye-health-information/healthy-vision/nei-for-kids/about-eye>

NEI-VISION · How the Eyes Work

NIH National Eye Institute; light and signal roles

<https://www.nei.nih.gov/eye-health-information/healthy-vision/how-eyes-work>

NEI-CORNEA · Other Types of Corneal Disease

NIH National Eye Institute; ocular-herpes statement only, no treatment advice

<https://www.nei.nih.gov/eye-health-information/eye-conditions-and-diseases/corneal-conditions/other-types-corneal-disease>