

2027-03-11 · 80 minutes

# Brain-region map: reference preparation

**Your goal:** Paper/reference preparation only. Do not handle, cut or clean up specimens, use chemicals or tools, or test a person or animal. Actual lab work requires the teacher's approved local protocol and supervision. Today's objective: Examine brain regions through a sheep-brain dissection or a virtual brain.

**One product:** Labeled brain-region map identifying cerebrum, cerebellum, and brainstem with one function each, plus gray and white matter boundary marked on an internal view.

**Question:** How do two views support accurate region labels without predicting a person's outcome?

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## Start the work

A brain measurement needs evidence for its proposed use; a prediction does not settle a person's future.

1. Paper/reference preparation only. Do not handle, cut or clean up specimens, use chemicals or tools, or test a person or animal. Actual lab work requires the teacher's approved local protocol and supervision. Original paper route: review H1 and the supplied reference route. Actual route: review the teacher-supplied safety or virtual-access instructions. Ask for missing instructions before starting. Step: Review the safety and handling steps for the sheep-brain or virtual model.
2. Paper/reference preparation only. Do not handle, cut or clean up specimens, use chemicals or tools, or test a person or animal. Actual lab work requires the teacher's approved local protocol and supervision. Original paper route: identify the three regions in E1, not on a specimen. Actual route: use the genuine approved reference instead. Step: Identify the cerebrum, cerebellum, and brainstem on the specimen.
3. Use E1 to add one contribution for each region on the same map. Actual route: use the assigned reference and rubric. Step: Note one function controlled by each region you identify.
4. Paper/reference preparation only. Do not handle, cut or clean up specimens, use chemicals or tools, or test a person or animal. Actual lab work requires the teacher's approved local protocol and supervision. Original paper route: compare E1 and the supplied I1 internal schematic; no cut is performed. Actual route: use the approved supplied internal view. Step: Compare the external and a cut internal view to locate gray and white matter.
5. Save one chosen-route map. Submit through your own section and check that Schoology shows Submitted after uploading. Step: Submit your labeled brain-region map with functions.

Paper/reference preparation only. Do not handle, cut or clean up specimens, use chemicals or tools, or test a person or animal. Actual lab work requires the teacher's approved local protocol and supervision. If access is blocked, save the labeled map and tell the teacher what you need. After uploading, check that Schoology shows Submitted.

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## Words you will use

### **schematic**

A simplified drawing that shows selected relationships, not every anatomical detail.

### **reference**

A supplied source used to check labels or claims.

### **region**

A named part of a larger structure.

### **function**

A contribution a structure makes to a process.

### **cerebrum**

The large brain region containing the cerebral cortex and deeper structures.

### **cerebellum**

A brain region behind the brainstem that contributes to coordination.

### **brainstem**

The region connecting higher brain structures with the spinal cord, including circuits involved in breathing.

### **voluntary movement**

Movement initiated intentionally.

### **coordination**

Adjusting different parts of a movement to work together.

### **lateral view**

A view from one side.

### **left-lateral view**

A view from the person's left side.

### **anterior**

Toward the front in the stated human view.

### **posterior**

Toward the back in the stated human view.

**superior**

Toward the top of the stated human view.

**inferior**

Toward the bottom of the stated human view.

**external view**

A view of outer surfaces.

**internal view**

A view showing structures within.

**coronal plane**

A frontal plane separating anterior and posterior portions.

**hemisphere**

One of the two sides of the cerebrum.

**cerebral cortex**

The outer layer of gray matter on the cerebrum.

**gray matter**

Nervous tissue rich in neuron cell bodies and processes, with supporting cells and small vessels.

**white matter**

Nervous tissue containing many axons, often myelinated, and supporting cells.

**neuron**

A nerve cell that receives and sends signals.

**cell body**

The neuron region containing its nucleus and much of its cellular machinery.

**axon**

A neuron process that carries signals away from the cell body.

**myelin**

An insulating covering around many axons.

**deep gray nucleus**

A group of nerve-cell bodies deeper in the brain; distinct from a nucleus within one cell.

**boundary**

The interface where the two indicated regions meet.

**interface**

The shared edge between adjacent regions in this diagram.

**protocol**

The genuine authorized instructions for a specific activity.

**virtual interaction**

Actual use of an assigned digital model; viewing this static schematic does not certify it.

**cell nucleus**

The compartment within a cell that stores genetic instructions.

**spinal cord**

Nervous tissue within the spine that connects with the brainstem.

**circuit**

A group of linked nerve cells that carry out a process.

**breathing regulation**

Adjusting the rhythm or rate of breathing.

**Submission check**

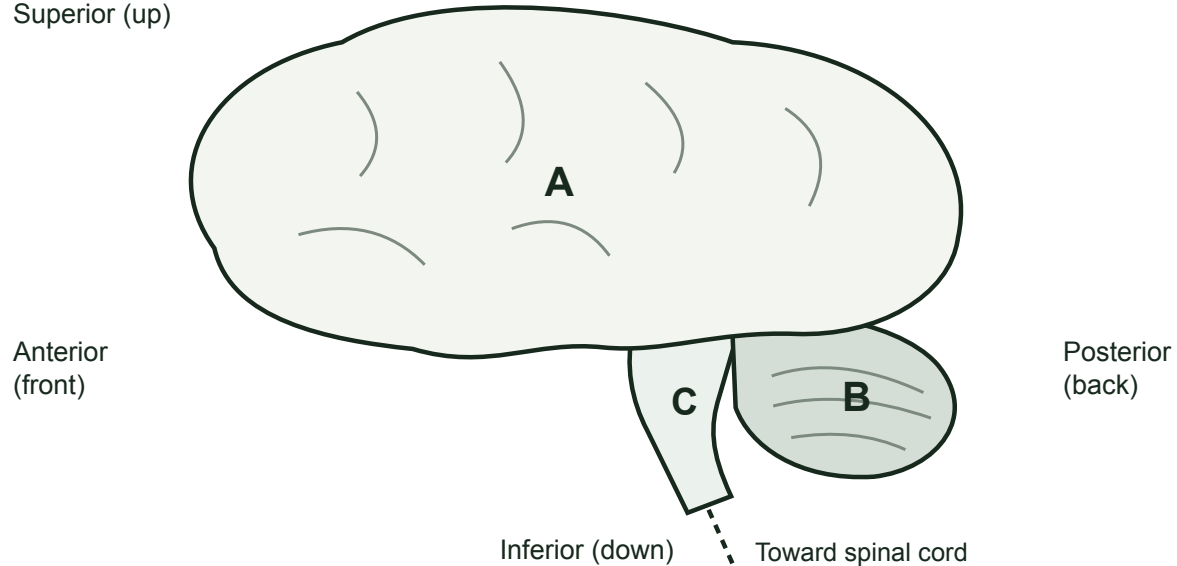
After uploading, check that Schoology shows Submitted; ask for help if it does not.

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## External reference: human left-lateral view

### E1 | External region reference

Superior (up)



Left-lateral human view. Relative positions only; not to scale.

A Cerebrum: contributes to planning voluntary movement.

B Cerebellum: helps coordinate movement.

C Brainstem: contains circuits involved in breathing regulation.

Original schematic, not a specimen or scan. E1 text supplies all region/functions. Shapes are not to scale.

Text description: A is upper cerebrum; B lower posterior cerebellum; C brainstem anterior to B. Front left, back right, superior up.

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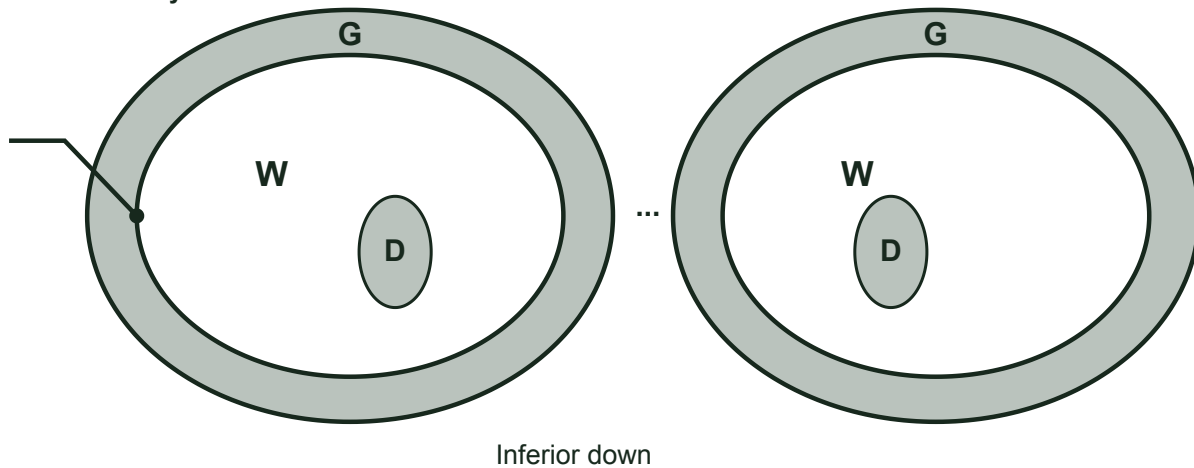
# Internal reference: coronal tissue schematic

## I1 | Internal tissue reference

Coronal view from front | Superior up

Person's RIGHT  
G/W boundary

Person's LEFT



G = cortical gray matter; W = white matter; D = deep gray reminder.

The boundary mark ends on the inner cortical edge, where G meets W.

Conceptual tissue layout only. Not an exact section level or scan.

Folds, spaces, exact deep nuclei and central connections omitted (...).

Original conceptual coronal schematic, not a clinical section. Folds, exact deep nuclei, spaces and many connections are omitted.

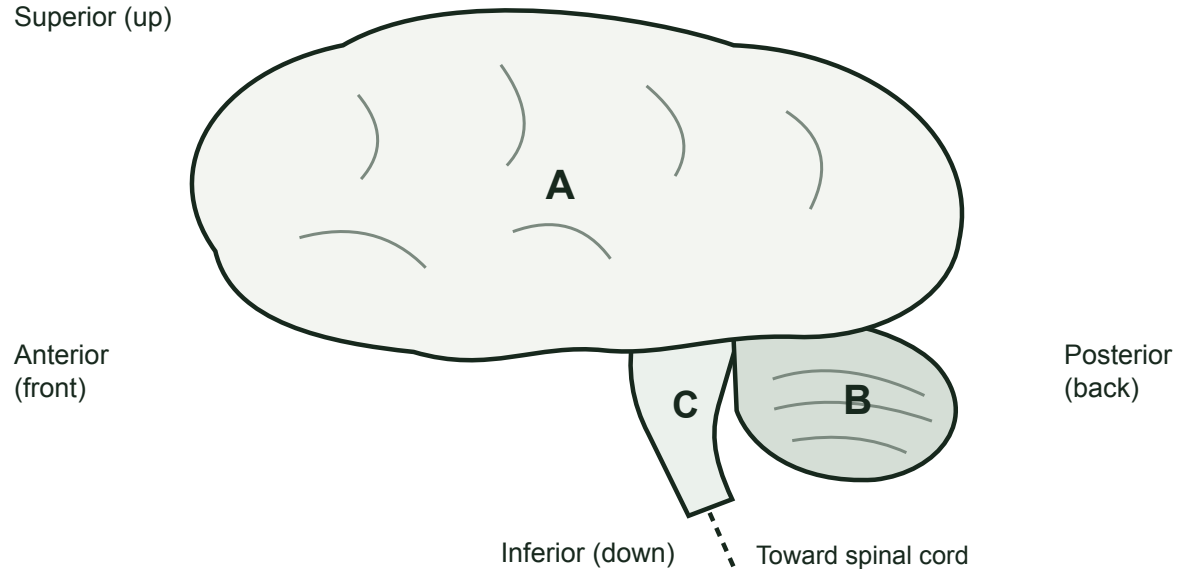
Text description: Anterior view of two cerebral hemispheres: person's right on viewer's left. Outer G cortex, inner W white matter, D deep gray reminder. Arrow meets G/W interface.

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## Response panel: external map

### W1 | Same external map

Superior (up)



Left-lateral human view. Relative positions only; not to scale.

A name: \_\_\_\_\_ function: \_\_\_\_\_

B name: \_\_\_\_\_ function: \_\_\_\_\_

C name: \_\_\_\_\_ function: \_\_\_\_\_

Original route: annotate or redraw this panel using E1. Actual assigned map replaces it; do not complete both.

Text description: Same E1 outline with A/B/C codes and name/function writing lines. Keep printed front/back/up orientation.

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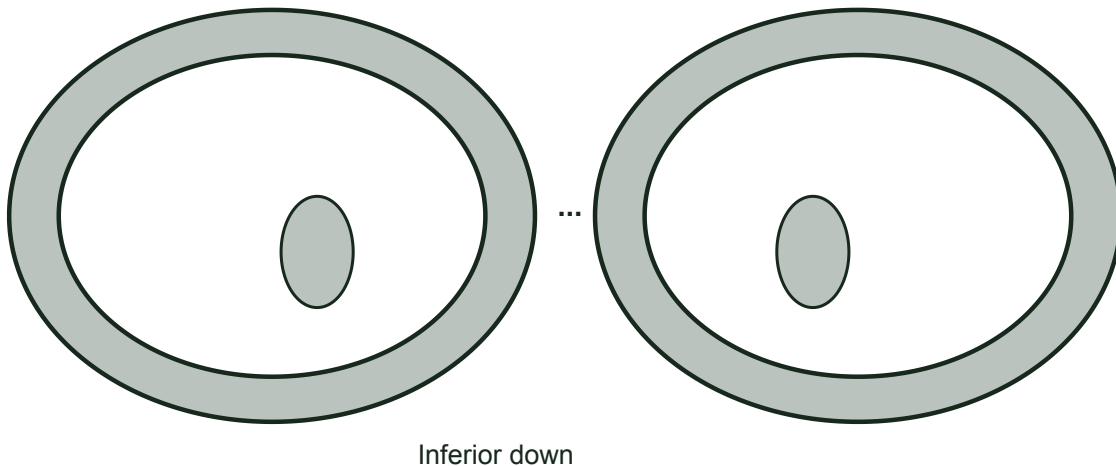
## Response panel: internal map

### W2 | Same internal map

Coronal view from front | Superior up

Person's RIGHT

Person's LEFT



Outer band label: \_\_\_\_\_ Inner field label: \_\_\_\_\_

Add one arrow to the cortical gray/white interface and label it.

Deep gray groups are already shown as gray patches inside.

Same schematic as I1. Actual assigned reference replaces this panel.

Original route: annotate or redraw using I1. Actual assigned view replaces it; this is one panel of the same map.

Text description: Same I1 bands with tissue label lines and space to add one boundary arrow. Deep gray reminder is supplied.

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## H1: Choose a truthful route

Paper/reference preparation only. Do not handle, cut or clean up specimens, use chemicals or tools, or test a person or animal. Actual lab work requires the teacher's approved local protocol and supervision.

Today is Thursday March 11. The supplied paper route prepares today's brain-region map. The teacher must confirm whether this static reference route meets the assigned virtual alternative. It does not certify an actual lab or platform interaction.

Opening: a drawing labels a region involved in movement. Does that drawing alone establish an individual's future movement ability? No patient evidence is supplied. Give one reason using the March 9 take-home, restated above. Actual route: use the genuine assigned opening instead, or record its missing input. Answer once.

Start S1's brief checks and next actions during the opening. Update only changes at the end. Use only the supplied figures and text for original preparation. No account, specimen, partner, outside image or prior finished work is needed. A blank paper or one editable document is enough.

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## E1: External human brain reference

Figure E1 is an original, simplified left-lateral human brain diagram. Left-lateral means viewing the person's left side. Front, or anterior, is toward the left of this drawing. Back, or posterior, is toward the right. Superior is up and inferior is down.

E1 key: A is the large upper cerebrum. B is the smaller cerebellum below the back of the cerebrum and behind the brainstem. C is the brainstem, below the cerebrum and in front of the cerebellum. The dashed continuation below C points toward the spinal cord; it is not another required label.

One function each: the cerebrum contributes to planning voluntary movement. The cerebellum helps coordinate movement by comparing movement-related information. The brainstem contains circuits involved in regulating breathing. These are contributions within connected systems, not exclusive jobs or guaranteed injury outcomes (OS-CNS).

Only three required regions are highlighted. This is not an exhaustive list of brain structures. The human schematic is not a sheep-brain photo or a guide for recognizing every feature of a specimen. Relative positions are schematic; shape, scale and folds are simplified.

At 10–25 minutes, locate A, B and C in E1 and match each to its name and one supplied function. Use the same external response panel W1 for brief labels now; refine it at 45–60. Actual route: the teacher-assigned specimen or virtual reference, required views and rubric replace these original schematics and paper checks. Complete one map only. Ask the teacher for missing materials or authorization before starting that work.

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## I1: Internal coronal tissue reference

Figure I1 is an original coronal schematic of the cerebrum, viewed from the front. A coronal, or frontal, plane separates front and back portions. Superior is up. The person's right hemisphere appears on the viewer's left. This describes a view, not a cutting procedure (OS-PLANE).

I1 key: G marks the outer cerebral cortex, a layer of gray matter. W marks underlying white matter. D marks simplified deep gray-matter groups. The D patches remind you that gray matter is not found only at the surface. Their exact shape and position are not being taught here.

The solid inner edge of the G band is the cortical gray/white boundary to mark. It separates outer G from underlying W. Point your boundary arrow to that interface, not to the outer surface or the central gap. You may mark either hemisphere's outer lateral G/W interface.

Gray matter contains many neuron cell bodies, branching processes, supporting cells and small blood vessels. White matter contains many axons, often covered by myelin, plus supporting cells. Neither tissue is made of only one cell part (NLM-GRAY; NLM-WHITE).

A neuron is a nerve cell. Its cell body contains its nucleus. An axon is a long process carrying signals; myelin is an insulating covering around many axons. Supporting cells help maintain nervous tissue. A deep gray nucleus means a group of nerve-cell bodies, not one cell's nucleus.

I1 omits many structures, folds, spaces and connecting pathways. It is not a particular clinical section or an exact atlas level. Gray fill is a diagram code, not a promise of specimen color. No ventricles, corpus callosum or deep-nucleus names are required.

At 25–45 minutes, compare the surface view E1 with the internal view I1. On W2, add gray matter/cerebral cortex and white matter labels and mark one G/W boundary. Use the printed D reminder to avoid claiming all gray matter is outer. Actual route: the teacher-assigned specimen or virtual reference, required views and rubric replace these original schematics and paper checks. Complete one map only. Ask the teacher for missing materials or authorization before starting that work.

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## R1: Assemble one two-view map

Original route: use W1 and W2 as two panels of one map. You may annotate a printed copy or redraw both outlines from the supplied figures. Keep the view and orientation labels. Do not submit a second set of notes or a second map.

W1 has the same A, B and C shapes as E1. Replace each code with its region name, or connect the code to a name beside the outline. Add one supplied function beside each of the three names. Use short phrases; a separate paragraph is not required.

W2 has the same outer band and inner field as I1. Label gray matter/cerebral cortex at the outer band and white matter inside it. Add one arrow to their shared interface and label it gray/white boundary. The deep-gray reminder is supplied, not an extra structure to memorize.

At 45–60, finish or refine those same panels. Three names, three function phrases, two tissue labels and one boundary arrow meet the original content target. The diagram's orientation and preparation label remain visible. Actual route: the teacher-assigned specimen or virtual reference, required views and rubric replace these original schematics and paper checks. Complete one map only. Ask the teacher for missing materials or authorization before starting that work.

If images cannot display, use this complete text layout: external upper large rounded area A; smaller lower-back area B; stem C below A and anterior to B. Internal paired hemispheres: outer cortical band G surrounds inner W, with deep gray patches D inside. Trace the interface between G and W. Label the same features; artistic realism is not assessed.

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## Q1: Compare without inventing a partner

At 60–75, compare the same map with E1, I1 and their keys. Check the three region/name matches, three function phrases, two tissue labels and boundary location. Confirm each panel's view and directions. Check that no caption promises a patient outcome.

If a partner actually comments, record a brief deidentified comment as peer review. If working alone, make the same comparison and label it self review. A self-check does not count as completed formal group participation if the teacher requires that.

Correct a real discrepancy on the same map and record what changed. If no discrepancy is found, record one verified match and keep it. Do not invent a mistake or peer contribution. Actual route: the teacher-assigned specimen or virtual reference, required views and rubric replace these original schematics and paper checks. Complete one map only. Ask the teacher for missing materials or authorization before starting that work.

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## S1: Save the map and check your next actions

Use ten separate checks: ask what paper preparation to submit; obtain the assigned specimen or virtual materials; obtain the local protocol and supervision; check required equipment or platform access; use evidence only from actual specimen or virtual work. Also check how to join required peer work; the actual rubric; the enrolled official task; your section and deadline; and that Schoology shows Submitted after uploading. Note a short evidence pointer for a check you performed or a specific next action.

Update your existing check record if available. Saved preparation does not demonstrate actual laboratory work. Check Schoology after uploading. Paper work has no specimen cleanup. Log out of a platform only if you actually used it under the assigned route.

Today's official work is Activity 2.1.2 Mapping Brain Function in Lesson 2.1 Getting Nervous. Confirm the current enrolled task and stopping point. Do not assume earlier neuron work or official work is complete.

Assignment title: Wk8 Lab report: Brain dissection or virtual. Section 1292:

<https://clevelandmetro.schoology.com/assignment/8544577073> . Section 6792:

<https://clevelandmetro.schoology.com/assignment/8544577091> . Use only your confirmed section. Ask whether the alternative is accepted and check access and the deadline. Check Schoology after uploading.

At 75–80, save one labeled map or submit through the confirmed destination if authorized. If access is blocked, keep the map locally and tell the teacher what you need. Check Schoology after uploading. Actual route: the teacher-assigned specimen or virtual reference, required views and rubric replace these original schematics and paper checks. Complete one map only. Ask the teacher for missing materials or authorization before starting that work.

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## M1: A distinct nonbiological map example

Optional model: a made-up parcel has an outside view and a cross-section. This is a map-reading example, not a second brain assignment or an experiment.

Given external key: X is a handle at the top; its stated job is carrying. Y is a latch at the front; its job is fastening. Z is a base at the bottom; its job is supporting the parcel. Given internal key: an outer packing band P surrounds an inner contents area K.

Completed model labels: X → handle, carrying; Y → latch, fastening; Z → base, supporting. Internal label P → packing band and K → contents. A boundary arrow ends on the shared P/K edge, not the parcel's outside edge. The outside view is marked front view; the section is marked diagram, not observed contents.

Worked self-check: the draft boundary arrow ended at the outer surface. I moved its endpoint to the P/K interface using the supplied key. This is a model correction, not a real peer comment. Mapping names and jobs does not prove the parcel was tested.

Use the same label-to-feature and interface logic on your one brain map. A parcel does not model brain signals or tissue composition. Brain functions depend on connected living systems; the example supplies only a mapping method. Actual route: the teacher-assigned specimen or virtual reference, required views and rubric replace these original schematics and paper checks. Complete one map only. Ask the teacher for missing materials or authorization before starting that work.

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## Try the decision

Original route: a map says all gray matter is on the brain's outside. Use I1. Actual route: use the genuine assigned reference instead of a duplicate decision.

- Revise the statement: the cortex is outer gray matter, and deeper gray regions also exist.
- Keep it because only the cortex contains neuron cell bodies.
- Use the statement to predict an individual's exact injury outcome.

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

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## Your 80-minute flow

|               |                                                                                                                                                                                                                                                                                                                                                           |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0–10 minutes  | Read H1 and answer once; choose one route. Start S1's checks and next actions now. Actual route: the teacher-assigned specimen or virtual reference, required views and rubric replace these original schematics and paper checks. Complete one map only. Ask the teacher for missing materials or authorization before starting that work.               |
| 10–25 minutes | Read E1 and add region/function notes to W1. Actual route: the teacher-assigned specimen or virtual reference, required views and rubric replace these original schematics and paper checks. Complete one map only. Ask the teacher for missing materials or authorization before starting that work.                                                     |
| 25–45 minutes | Read I1 and label tissue/boundary on W2. No specimen cut. Actual route: the teacher-assigned specimen or virtual reference, required views and rubric replace these original schematics and paper checks. Complete one map only. Ask the teacher for missing materials or authorization before starting that work.                                        |
| 45–60 minutes | Use R1 to finish the same two-view map; M1 is optional support. Actual route: the teacher-assigned specimen or virtual reference, required views and rubric replace these original schematics and paper checks. Complete one map only. Ask the teacher for missing materials or authorization before starting that work.                                  |
| 60–75 minutes | Use Q1 for honest peer or self comparison and revise the same map. Actual route: the teacher-assigned specimen or virtual reference, required views and rubric replace these original schematics and paper checks. Complete one map only. Ask the teacher for missing materials or authorization before starting that work.                               |
| 75–80 minutes | Use S1 to save or submit and update checks and next actions. Paper work has no specimen cleanup. Actual route: the teacher-assigned specimen or virtual reference, required views and rubric replace these original schematics and paper checks. Complete one map only. Ask the teacher for missing materials or authorization before starting that work. |

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## Your response record

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

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## One opening reason

Original route: use H1 and the restated March 9 take-home for one brief reason. Actual route: use the assigned opening instead.

Actual route: the teacher-assigned specimen or virtual reference, required views and rubric replace these original schematics and paper checks. Complete one map only. Ask the teacher for missing materials or authorization 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.



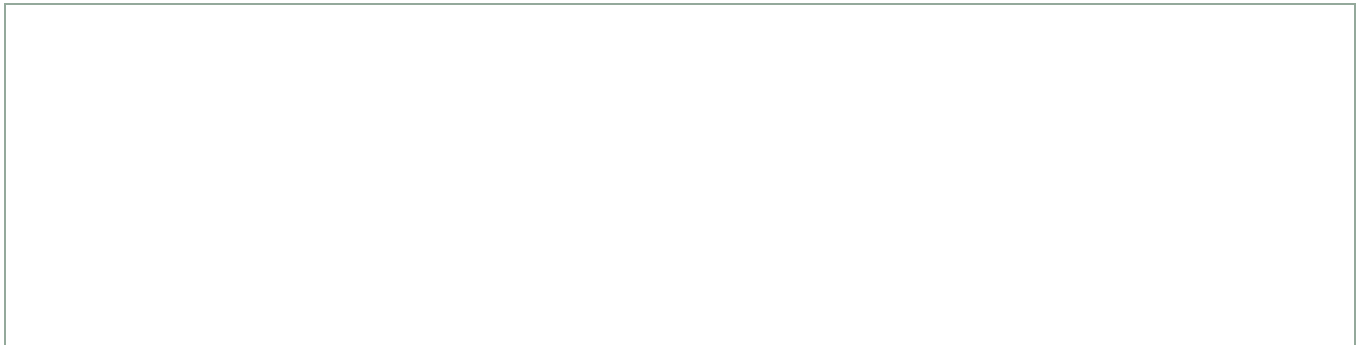
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## External panel: three region-function labels

Original route: use E1 and W1 for the three names and one supplied function each. Keep the orientation.

Actual route: the teacher-assigned specimen or virtual reference, required views and rubric replace these original schematics and paper checks. Complete one map only. Ask the teacher for missing materials or authorization 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.



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## Internal panel: tissue and boundary

Original route: use I1 and W2 for cortical gray matter, white matter and one correctly placed boundary arrow.

Actual route: the teacher-assigned specimen or virtual reference, required views and rubric replace these original schematics and paper checks. Complete one map only. Ask the teacher for missing materials or authorization 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.



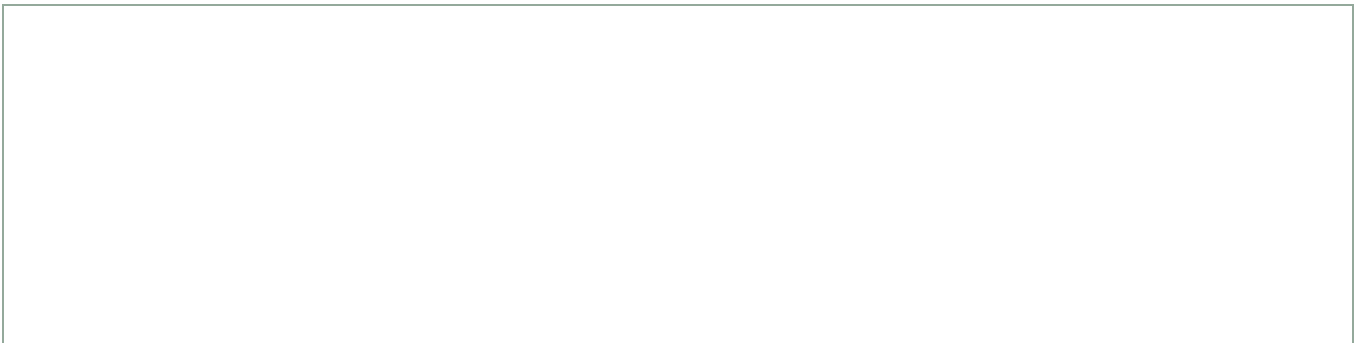
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## Finish the same two-view map

Original route: use R1 to finish the same panels; keep the schematic/preparation label. No second map is required.

Actual route: the teacher-assigned specimen or virtual reference, required views and rubric replace these original schematics and paper checks. Complete one map only. Ask the teacher for missing materials or authorization 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.



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## One honest comparison

Original route: use Q1 to check the same map and record a real correction or one verified match. Label peer or self review honestly.

Actual route: the teacher-assigned specimen or virtual reference, required views and rubric replace these original schematics and paper checks. Complete one map only. Ask the teacher for missing materials or authorization 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.



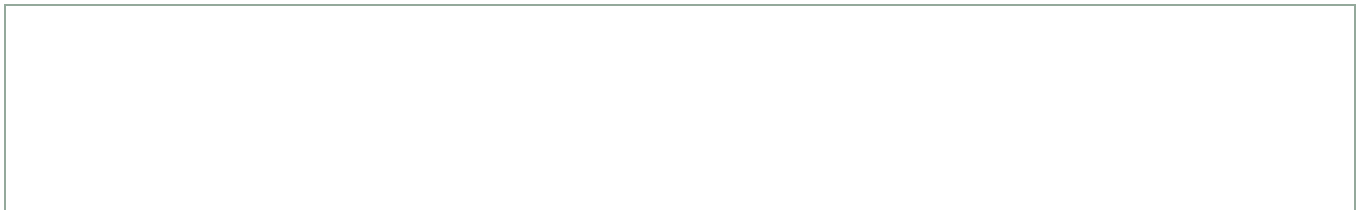
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## One map and next actions

Both routes: use S1 for short checks and next actions, then save or submit through your section's assignment.

Actual route: the teacher-assigned specimen or virtual reference, required views and rubric replace these original schematics and paper checks. Complete one map only. Ask the teacher for missing materials or authorization 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.



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## Check your product

- Original route: W1 names cerebrum, cerebellum and brainstem with one supplied function each.
- Original route: W2 labels cortical gray matter and white matter and marks their shared interface.
- Chosen route: views and directions stay clear; a reference match is not an observed specimen or patient outcome.
- Original route: record one honest map comparison and correction or verified match, using the same product.
- Actual route: the genuine assigned reference and rubric replace original labels/counts/checks; no duplicate map.
- Both routes: ask the teacher what preparation to submit, use evidence from your actual and official work, and check Schoology after uploading.

**Keep the limit:** These original human-brain schematics show broad relationships, not a specimen, scan or completed virtual interaction. A region contributes to shared functions; its location cannot predict a person's exact loss or recovery.

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## Turn in your work

Submit one chosen-route brain-region map only through your confirmed section. Section 1292:

<https://clevelandmetro.schoology.com/assignment/8544577073> . Section 6792:

<https://clevelandmetro.schoology.com/assignment/8544577091> . Confirm the accepted alternative and deadline. Paper/reference preparation only. Do not handle, cut or clean up specimens, use chemicals or tools, or test a person or animal. Actual lab work requires the teacher's approved local protocol and supervision.

Paper/reference preparation only. Do not handle, cut or clean up specimens, use chemicals or tools, or test a person or animal. Actual lab work requires the teacher's approved local protocol and supervision. If access is blocked, save the labeled map and tell the teacher what you need. After uploading, check that Schoology shows Submitted.

[Section 1292: Wk8 Lab report: Brain dissection or virtual](#)

[Section 6792: Wk8 Lab report: Brain dissection or virtual](#)

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## Carry forward

Brain regions contribute to shared functions. Injury location alone does not determine a person's exact loss or recovery.

Friday March 12 connects brain regions with the central and peripheral nervous systems. No specimen work or patient outcome is assumed. How will you distinguish a brain region from a peripheral nerve pathway?

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## Sources and resources

[Open today's page](#)

### **OS-CNS · The Central Nervous System**

OpenStax Anatomy and Physiology

<https://openstax.org/books/anatomy-and-physiology/pages/13-2-the-central-nervous-system>

### **OS-PLANE · Anatomical Terminology**

OpenStax Anatomy and Physiology

<https://openstax.org/books/anatomy-and-physiology/pages/1-6-anatomical-terminology>

### **NLM-GRAY · Gray Matter**

National Library of Medicine MeSH

<https://www.ncbi.nlm.nih.gov/mesh/68066128>

### **NLM-WHITE · White matter of the brain**

MedlinePlus Medical Encyclopedia

<https://medlineplus.gov/ency/article/002344.htm>