



BROWN VIRTUAL LAB

COMPLETE
CURRICULUM
GUIDEBOOK

Laboratory Crew Curriculum

This six-module pathway prepares a laboratory or institutional crew to become a clear local scholarly home, align authority and membership, launch a bounded first project, govern methods and information, publish collaboratively, and return knowledge across the network.

Prepared for Brown Virtual Lab professionals and laboratory collaborators | 2026 edition

A complete learning pathway

Laboratory leads, institutional hub stewards, faculty, research staff, trainees, methods collaborators, community partners, and members of Brown Virtual Lab crew spaces.

Each module combines teaching, applied practice, concrete deliverables, reflection, and a five-question knowledge check. A score of 80 percent completes the knowledge-check requirement. Learners may revisit any module and preserve the highest score in the signed-in Site record.

Information stewardship

Use the Site and this guidebook for education, professional reflection, high-level research planning, and approved collaboration records. Keep protected health information, identifiable participant information, credentials, restricted datasets, confidential manuscript text, and unauthorized third-party material within separately approved secure pathways.

Pathway outcomes

- A hub identity statement and authority map
- A member-role matrix and working agreement
- A first-project charter and readiness gates
- A data, ethics, methods, AI, and reproducibility pathway
- A contribution, authorship, version, and release record
- A knowledge-return, closeout, review, and continuity plan

Hub Identity, Purpose, and Authority

Define the laboratory crew as a clear local scholarly home connected to the wider Brown Virtual Lab.

Suggested learning time: 55-75 minutes

Learning objectives

- Define the hub purpose and distinctive contribution
- Map local and shared decision authority
- Identify responsible leads and stewards
- Prepare a complete lab-lead proposal

A local home within a wider network

Each laboratory crew retains its institutional identity, scientific context, relationships, supervision, and responsibilities. Connection with Brown Virtual Lab creates a shared pathway for questions, methods, mentorship, writing, innovation, publication, and knowledge return.

A strong hub description names the laboratory or group, institution, disciplines, people served, distinctive capabilities, priority questions, and the value the hub can return to the wider network.

Authority before activity

The authority map identifies who can approve participation, data access, methods, analysis, authorship, communications, institutional identification, logo use, public release, and conflict resolution. Authority may sit with several people or offices.

Brown Virtual Lab stewardship coordinates shared work while local institutions retain their applicable policies, supervision, ethics processes, data responsibilities, and employment relationships.

The lab-lead proposal

The proposal gathers identity, lead contact, participant estimate, disciplines, goals, questions, expertise, mentorship capacity, desired templates, partner spaces, start window, working rhythm, institutional authority, data stewardship, ethics pathway, accessibility, and public identity permission.

Approval creates a basis for forming the space. It also leaves room for a readiness conversation before activation.

Applied practice

Draft a hub identity statement and complete an authority map for participation, data, methods, authorship, institutional identity, and release.

Module deliverables

- Hub identity statement
- Authority map
- Lead and steward roster
- Lab-lead proposal draft

Reflection prompts

1. What can this crew contribute that would be difficult to create alone?
2. Where does decision authority reside for each part of the work?
3. Which local responsibilities must remain visible throughout collaboration?

Knowledge check

1. What does each laboratory crew retain?

- A. Its local identity, context, supervision, and responsibilities
- B. Only its name
- C. Automatic release authority
- D. A single universal workflow

2. What should an authority map cover?

- A. Decisions about participation, data, methods, authorship, identity, and release
- B. Only meeting times
- C. Only equipment
- D. Only public profiles

3. What does an approved proposal establish?

- A. Automatic publication
- B. A basis for forming the space and beginning readiness review
- C. Unlimited data access
- D. Authorship

4. Who retains applicable institutional responsibilities?

- A. The local institution and authorized participants

- B. The public audience
- C. The website
- D. No one

5. Which item belongs in the lab-lead proposal?

- A. Priority questions and mentorship capacity
- B. Private credentials
- C. Identifiable clinical records
- D. Unapproved manuscripts

People, Roles, and Working Agreement

Create a humane operating rhythm where every member knows their role, boundaries, and path for support.

Suggested learning time: 55-70 minutes

Learning objectives

- Map members, roles, supervision, and participation basis
- Create a working agreement
- Establish asynchronous and live rhythms
- Prepare concern, withdrawal, and accessibility pathways

One profile, several memberships

Each participant maintains one living profile that can support membership in a home laboratory crew, the professional circle, and project-specific teams. Every membership records role, status, start, notes, and local context.

Profiles and biographies follow explicit visibility choices and owner review. Group placement and public display are separate decisions.

The working agreement

A working agreement defines purpose, roles, response expectations, meeting rhythm, documentation, decision process, confidentiality, respectful disagreement, accessibility, conflicts, authorship discussion, file pathways, correction, withdrawal, and completion.

The agreement should be brief enough to use and specific enough to guide difficult moments.

Rhythm that supports the work

Weekly pulse records can gather progress, decisions needed, blockers, contribution evidence, and support requests. Live sessions can then carry teaching, methods discussion, interpretation, relationship building, and decisions that benefit from shared presence.

Members need a clear route to raise concerns, request accommodation, pause, withdraw, or repair a strained collaboration.

Applied practice

Build a member-role matrix and draft a one-page working agreement that the first crew meeting can review and affirm.

Module deliverables

- Member-role matrix
- Working agreement
- Communication rhythm
- Support, pause, and withdrawal pathway

Reflection prompts

1. Which role distinctions will prevent confusion?
2. What rhythm can the crew sustain during demanding weeks?
3. How will a member safely raise a concern?

Knowledge check

1. How many living profiles does one participant need?

- A. One profile that supports several memberships
- B. One per project
- C. One per meeting
- D. One public and one private

2. What is separate from public profile display?

- A. Group placement
- B. A display name
- C. A professional title
- D. A time zone

3. What belongs in a working agreement?

- A. Roles, decisions, confidentiality, accessibility, correction, and completion
- B. Only meeting dates
- C. Only publication targets
- D. Private credentials

4. What can weekly pulse records gather?

- A. Progress, blockers, decisions, contributions, and support needs

- B. Protected health information
- C. Passwords
- D. Only praise

5. What should members receive before difficulty arises?

- A. A clear concern, pause, withdrawal, and repair pathway
- B. A publication promise
- C. Unlimited access
- D. Automatic reassignment

Project Charter and Template Selection

Turn a shared question into a bounded project with recipients, responsibilities, milestones, and readiness gates.

Suggested learning time: 60-85 minutes

Learning objectives

- Choose a project template that fits the question
- Create a concise project charter
- Assign pathways across groups and individuals
- Define milestones and readiness gates

The template as a pathway

A reusable template supplies a sequence of stages, deliverables, readiness requirements, duration, and stewardship prompts. Assigning a template creates a distinct record for every group, laboratory, or individual recipient.

Local adaptation is expected. The crew records which stages remain shared, which require local approval, and where the project needs additional expertise.

The project charter

A charter names the question, purpose, audience, scope, exclusions, leads, contributors, authority, data source, methods, milestones, deliverables, communication rhythm, decision process, risks, conflicts, authorship approach, release pathway, and completion definition.

Scope exclusions are especially valuable. They preserve the work from expanding beyond available time, permissions, or methods.

Readiness gates

A project can move through question definition, evidence mapping, permissions and readiness, data work, analysis, interpretation, writing, review, dissemination, and stewardship. Each transition should have evidence appropriate to the project.

A project pauses when authority, data, methods, capacity, conflict, safety, or quality needs attention. A documented pause protects progress and supports a thoughtful return.

Applied practice

Select a template and draft a two-page charter for one bounded first-season project, including three milestones and explicit readiness evidence.

Module deliverables

- Template selection record
- Project charter
- Milestone map
- Readiness-gate table

Reflection prompts

1. Which project can this crew complete with excellence in its first season?
2. Which exclusions protect that scope?
3. What evidence should open each next stage?

Knowledge check

1. What does a reusable template supply?

- A. Stages, deliverables, readiness requirements, duration, and stewardship prompts
- B. Automatic ethics approval
- C. Automatic authorship
- D. Unlimited scope

2. What happens when one template is assigned to several recipients?

- A. Each receives a distinct assignment record
- B. All records merge permanently
- C. Only one recipient can complete it
- D. The template becomes public

3. Why record scope exclusions?

- A. To protect feasibility and authority
- B. To remove milestones
- C. To avoid documentation
- D. To guarantee publication

4. Which item belongs in a charter?

- A. Question, scope, roles, authority, methods, milestones, and release

- B. Only the project name
- C. Only a meeting link
- D. Only final conclusions

5. When may a project appropriately pause?

- A. When authority, methods, capacity, safety, conflict, or quality needs attention
- B. Only after publication
- C. Never
- D. Whenever a member asks a question

Data, Ethics, Methods, and Reproducibility

Prepare a project-specific pathway for data authority, ethics review, methods rigor, reproducibility, and responsible AI.

Suggested learning time: 70-95 minutes

Learning objectives

- Classify project activity and review needs
- Create a data stewardship plan
- Document methods and reproducibility
- Govern AI-supported work

Classify the activity

Education, quality improvement, program evaluation, research development, public scholarship, and formal human-subjects research can carry different review and authorization requirements. The responsible local and project authorities determine the pathway before restricted activity begins.

A website intake or collaboration record does not substitute for protocol approval, informed consent, institutional authorization, a data-use agreement, or a secure research environment.

Data stewardship across hubs

The stewardship plan names source, owner, authorized users, purpose, minimum necessary fields, transfer method, approved storage, access review, transformations, derived files, retention, destruction, breach response, and release authority.

Cross-institutional work needs explicit agreement about where analysis occurs, which outputs can move, and who reviews disclosure risk.

Methods, reproducibility, and AI

The methods record includes protocol version, inclusion logic, variables or concepts, code or analytic steps, quality checks, missingness, sensitivity work, deviations, and reviewer decisions. Reproducibility means another qualified reviewer can understand how the result was produced.

AI-assisted work receives a defined purpose, approved information boundary, human verification plan, bias and equity review, material-use record, and release decision.

Applied practice

Complete a project classification worksheet, data stewardship plan, reproducibility checklist, and AI-use decision for the crew first project.

Module deliverables

- Activity classification
- Data stewardship plan
- Reproducibility checklist
- AI-use and verification record

Reflection prompts

1. Which authority decides the review pathway?
2. Which outputs can safely travel across institutional boundaries?
3. Which methods decisions must future reviewers be able to reconstruct?

Knowledge check

1. Who determines the applicable review pathway?

- A. Responsible local and project authorities
- B. Any individual participant
- C. A public audience
- D. The project title

2. What does a website intake replace?

- A. It records high-level information; formal approvals use their own pathways
- B. A protocol
- C. Informed consent
- D. A data-use agreement

3. What belongs in cross-hub data planning?

- A. Analysis location, movable outputs, and disclosure review
- B. Only file size
- C. Only software preference
- D. Only the deadline

4. What does reproducibility allow?

- A. A qualified reviewer can understand how the result was produced

- B. Any person can access the data
- C. Methods can remain implicit
- D. Review can be skipped

5. What governs AI-assisted work?

- A. Purpose, information boundary, verification, equity review, and release decision
- B. Speed alone
- C. Tool popularity
- D. No human review

Collaborative Scholarship and Publication

Coordinate evidence, contribution, review, authorship, and publication across laboratories with transparency.

Suggested learning time: 60-80 minutes

Learning objectives

- Maintain contribution and decision records
- Coordinate cross-hub review
- Make fair authorship decisions
- Complete release-readiness review

Visible work across distance

Cross-hub scholarship depends on visible progress. Teams record evidence additions, methods decisions, analytic changes, draft ownership, review comments, responses, unresolved questions, and approved conclusions.

Version records should show the source, editor, change, reason, reviewer, and disposition for material revisions.

Contribution and authorship

The contribution record captures conceptual, methodological, investigative, analytic, data, writing, visualization, supervision, administration, funding, and other work according to the project and accepted standards.

Authorship conversations begin early, recur at milestones, and conclude through documented contribution, final approval, and accountability. Local title or institutional seniority does not replace the contribution review.

Release readiness

Before submission or public release, responsible reviewers confirm claims, sources, methods, data authority, permissions, uncertainty, equity considerations, conflicts, contributor recognition, institutional requirements, accessibility, and audience fit.

Reviewer responses preserve each material comment, the team decision, the revision, the responsible person, and any remaining disagreement.

Applied practice

Create a contribution matrix, version log, authorship discussion record, and release-readiness review for a current or simulated cross-hub output.

Module deliverables

- Contribution matrix
- Version and decision log
- Authorship discussion record
- Release-readiness review

Reflection prompts

1. Where could invisible work be overlooked?
2. Which decisions require agreement across hubs?
3. What evidence supports every public claim?

Knowledge check

1. What should a material version record show?

- A. Source, editor, change, reason, reviewer, and disposition
- B. Only the date
- C. Only the filename
- D. Only the final author

2. When should authorship conversations occur?

- A. Early, at milestones, and at final review
- B. Only after submission
- C. Only before work begins
- D. Only when conflict arises

3. What grounds authorship?

- A. Documented contribution, final approval, and accountability
- B. Seniority alone
- C. Membership alone
- D. Funding alone

4. What belongs in release readiness?

- A. Claims, sources, methods, authority, permissions, conflicts, recognition, and accessibility

- B. Only spelling
- C. Only a logo
- D. Only the due date

5. What should a reviewer-response record preserve?

- A. Comment, decision, revision, responsible person, and remaining disagreement
- B. Only accepted comments
- C. Only praise
- D. No history

Knowledge Return, Completion, and Continuity

Complete projects responsibly and return useful learning to local crews, partner hubs, and the wider network.

Suggested learning time: 50-70 minutes

Learning objectives

- Plan knowledge return for each audience
- Close access and stewardship responsibilities
- Evaluate the hub first season
- Prepare the next collaboration cycle

Knowledge has several homes

A manuscript may serve a scholarly audience while a brief, seminar, teaching tool, visual explanation, implementation aid, or community conversation returns the learning to people who can use it. Each product should preserve evidence, uncertainty, permissions, attribution, and accessibility.

Knowledge return begins during project planning so that audience relationships and permissions remain visible throughout the work.

Responsible completion

Completion confirms deliverables, contribution and authorship decisions, final approvals, file locations, access changes, retention, destruction, correction responsibilities, communications, and unresolved work. Each recipient assignment receives its own completion status.

A complete project can remain available as an approved template example while restricted information stays within its authorized setting.

The next season

The crew reviews participation, rhythm, project quality, mentorship, contribution equity, decision speed, data stewardship, publication progress, knowledge return, and support needs. The review produces specific improvements for the next cycle.

The hub may continue, pause, complete, welcome new members, form a project team, partner with another hub, or begin a new template assignment.

Applied practice

Prepare an audience-specific knowledge-return plan, closeout checklist, first-season review, and a ninety-day next-cycle plan.

Module deliverables

- Knowledge-return plan
- Project closeout checklist
- First-season hub review
- Ninety-day continuity plan

Reflection prompts

1. Who should receive this learning, and in which form?
2. Which responsibilities continue after public release?
3. What should the crew preserve, refine, or carry into its next season?

Knowledge check

1. When should knowledge return begin?

- A. During project planning
- B. Only after publication
- C. After access closes
- D. When requested by social media

2. What should every knowledge product preserve?

- A. Evidence, uncertainty, permissions, attribution, and accessibility
- B. Only visual appeal
- C. Only speed
- D. Only the conclusion

3. What belongs in project closeout?

- A. Deliverables, recognition, approvals, files, access, retention, correction, and unresolved work
- B. Only celebration
- C. Only deletion
- D. Only a final meeting

4. How are multi-recipient assignments completed?

- A. Each receives its own status

- B. All recipients share one immutable status
- C. Only the lead records completion
- D. The template is deleted

5. What may follow a first-season review?

- A. Continuation, pause, completion, new members, partnerships, or a new project
- B. Only closure
- C. Automatic expansion
- D. Automatic publication

Knowledge-check answers and learning rationales

Module 01: Hub Identity, Purpose, and Authority

1. A - The hub preserves local identity and responsibility while joining shared pathways.
2. A - Material decisions require clear responsible authority.
3. B - Approval supports formation while project-specific readiness still proceeds.
4. A - Local responsibilities travel with the collaboration.
5. A - The proposal gathers high-level capabilities, goals, governance, and readiness information.

Module 02: People, Roles, and Working Agreement

1. A - A single profile preserves continuity across spaces and project teams.
2. A - Placement and publication permission receive separate review.
3. A - The agreement provides a practical shared standard for the life of the crew.
4. A - A concise pulse preserves continuity and makes support visible.
5. A - A known pathway supports dignity and timely resolution.

Module 03: Project Charter and Template Selection

1. A - The template supplies a complete adaptable pathway.
2. A - Distinct records preserve dates, notes, status, and local adaptation.
3. A - Exclusions protect the project from ungoverned expansion.
4. A - The charter gathers the practical and scholarly conditions for the work.
5. A - A documented pause supports responsible resolution and return.

Module 04: Data, Ethics, Methods, and Reproducibility

1. A - Classification and review require the authorities responsible for the setting and activity.
2. A - The intake supports planning while formal requirements proceed separately.
3. A - Cross-hub stewardship defines how information and outputs move.
4. A - A transparent record makes methods and decisions inspectable.
5. A - Responsible AI use remains bounded, traceable, and human-accountable.

Module 05: Collaborative Scholarship and Publication

1. A - A complete version record makes consequential change traceable.

2. A - Recurring review keeps recognition aligned with evolving contribution.
3. A - Authorship joins meaningful work with responsibility for the final product.
4. A - Release review coordinates scholarly, legal, ethical, and audience responsibilities.
5. A - The response record preserves accountability and intellectual history.

Module 06: Knowledge Return, Completion, and Continuity

1. A - Early planning preserves audience, permission, and accessibility responsibilities.
2. A - Responsible translation preserves the integrity and conditions of the work.
3. A - Closeout completes the scholarly and stewardship record.
4. A - Distinct records preserve local progress and completion.
5. A - The review supports a deliberate next cycle suited to the hub.

Completion record

Completion combines the signed-in Site score record, the learner reflections, the listed module deliverables, and the applicable project or group review. Scores demonstrate knowledge-check performance and remain one part of the wider learning and contribution record.