



BROWN VIRTUAL LAB

COMPLETE
CURRICULUM
GUIDEBOOK

Professional Collaboration Curriculum

This six-module pathway helps each professional enter with clarity, prepare for governed collaboration, shape consequential questions, work responsibly with methods and information, document contribution, and carry learning into a durable portfolio.

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

A complete learning pathway

Independent professionals, advanced trainees, early-career professionals, established professionals, returning members, volunteers, mentors, and project-specific contributors.

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 complete professional identity and participation intention
- A readiness, authority, and information-boundary map
- A focused question and evidence pathway
- A methods, data, AI, and reproducibility plan
- A contribution, authorship, and publication-readiness record
- A portfolio, capstone reflection, and next-season commitment

Professional Identity and Intention

Name the experience, questions, values, and contribution that you bring into Brown Virtual Lab.

Suggested learning time: 45-60 minutes

Learning objectives

- Describe your present professional identity with precision
- Connect prior experience with a meaningful scholarly direction
- Define a sustainable participation intention
- Prepare an introduction that supports thoughtful placement

A living professional identity

A professional identity is more than a title. It gathers training, practice, lived experience, methods, relationships, questions, and the responsibilities attached to them. Brown Virtual Lab begins by helping each person name that whole picture with clarity.

Returning members may carry earlier publications, relationships, and unfinished questions. New members may arrive with mature professional experience or early-career momentum. Both enter through a current account of who they are, what they can responsibly contribute, and where they hope to grow.

Intention before activity

A clear intention turns general enthusiasm into a workable direction. Strong intentions name the issue that matters, the community or audience that may benefit, the contribution available now, the capacity available over time, and the learning sought through collaboration.

Intention also supports fit. A project may need clinical judgment, literature synthesis, data quality review, qualitative inquiry, writing, visualization, mentoring, implementation insight, or coordination. Naming the desired contribution gives stewards a strong basis for placement.

The introduction as a doorway

Your introduction should help collaborators understand your present work, the questions that draw your attention, the strengths you bring, and the contribution you hope to make. Your longer biography provides context, while your permissions determine where approved material may appear.

The Lab preserves the difference between identity, aspiration, assignment, contribution, and authorship. Each develops through its own evidence and review.

Applied practice

Draft a 120-word introduction, a 250-word professional biography, and one sentence naming the contribution you can sustain for the next twelve weeks.

Module deliverables

- Professional introduction
- Professional biography
- Twelve-week participation intention
- Initial contribution statement

Reflection prompts

1. Which thread connects the most meaningful parts of my professional journey?
2. Which question continues to call for my attention?
3. What contribution can I sustain with excellence in this season?

Knowledge check

1. Which description best supports thoughtful placement?

- A. A title alone
- B. A complete account of experience, capacity, questions, and contribution
- C. A publication count
- D. A broad statement of interest

2. What turns enthusiasm into a workable direction?

- A. A clear participation intention
- B. Immediate authorship
- C. A large meeting schedule
- D. Public profile visibility

3. What does an introduction primarily help collaborators understand?

- A. Private credentials
- B. Present work, questions, strengths, and hoped-for contribution
- C. Compensation terms
- D. Restricted project data

4. Which item develops through documented contribution and review?

- A. Authorship

- B. Professional identity
- C. Time zone
- D. Display name

5. What time horizon anchors the module practice?

- A. One week
- B. Twelve weeks
- C. Five years
- D. One day

Collaboration Readiness and Stewardship

Prepare the boundaries, permissions, working rhythm, and professional conduct that allow collaboration to flourish.

Suggested learning time: 50-70 minutes

Learning objectives

- Assess fit, capacity, authority, and readiness
- Separate high-level collaboration from restricted information
- Choose an asynchronous working rhythm
- Use concerns and correction as part of stewardship

Readiness has several dimensions

Readiness includes expertise, capacity, role clarity, institutional authority, data permissions, communication reliability, and willingness to document work. A person may be highly accomplished and still need a narrower project scope, a secure channel, or a local approval before activity begins.

The readiness conversation gives each participant a dignified way to state availability, limits, supervision, accessibility needs, conflicts, and the conditions that support excellent work.

Protecting the information boundary

Public and general collaboration surfaces are designed for professional context, educational material, high-level research descriptions, reflections, project status, and approved resources. Protected health information, identifiable participant records, credentials, restricted datasets, confidential manuscript text, and proprietary third-party files belong in separately approved secure systems.

Every participant carries responsibility for source authority. A file that can be accessed is not automatically a file that can be shared, analyzed, uploaded, summarized, or used with artificial intelligence.

Asynchronous reliability

Asynchronous work becomes humane and rigorous when people record progress, questions, decisions, handoffs, blockers, sources, and support needs in a predictable rhythm. Live sessions can then focus on mentorship, interpretation, methods, relationships, and consequential decisions.

Correction is part of scholarly care. Participants raise uncertainties early, document changed decisions, repair errors, and preserve the reason for revision.

Applied practice

Complete a readiness map covering role, authority, information boundary, weekly capacity, response rhythm, accessibility, conflicts, and escalation pathway.

Module deliverables

- Readiness map
- Information-boundary statement
- Weekly working rhythm
- Concern and correction pathway

Reflection prompts

1. Which conditions help me produce my most reliable work?
2. Which permissions or approvals shape my participation?
3. How will I surface uncertainty before it becomes a larger problem?

Knowledge check

1. Which factor belongs in collaboration readiness?

- A. Authority and capacity
- B. Popularity
- C. Public visibility
- D. Unrestricted access

2. Where do restricted datasets belong?

- A. A public intake
- B. A separately approved secure system
- C. A general reflection box
- D. A public directory

3. What should routine asynchronous records carry?

- A. Only final results
- B. Progress, questions, decisions, handoffs, blockers, and support needs
- C. Private credentials
- D. Unreviewed personal data

4. What is a responsible response to an error?

- A. Hide the earlier version

- B. Document the correction and its reason
- C. Wait for publication
- D. Transfer responsibility

5. What does access to a file establish?

- A. Authority for every possible use
- B. Availability only; use still depends on authority and permission
- C. Authorship
- D. Public-domain status

Questions, Evidence, and Scholarly Direction

Transform an important concern into a focused question, evidence map, and feasible scholarly pathway.

Suggested learning time: 60-80 minutes

Learning objectives

- Frame a consequential and answerable question
- Distinguish observation, interpretation, and claim
- Map evidence and uncertainty
- Select a fitting project pathway

From concern to question

Consequential work often begins with a persistent concern: a pattern in practice, an inequity, a gap in implementation, an unanswered scientific question, or a need for clearer public understanding. The first scholarly move is to define who or what is affected, the setting, the decision at stake, and the kind of answer that would be useful.

A focused question creates room for rigor. It also reveals which expertise, methods, approvals, data, and project duration may be required.

An evidence map

An evidence map records key concepts, search terms, source types, landmark work, current syntheses, contradictory findings, population and setting limits, and areas of uncertainty. It is a navigational record rather than a decorative bibliography.

Participants distinguish direct observation from interpretation, association from causation, exploratory findings from confirmatory evidence, and scholarly judgment from established fact.

Choosing a pathway

Brown Virtual Lab templates support question-to-publication projects, rapid evidence syntheses, data and analytics work, innovation development, manuscripts, public scholarship, curriculum design, and methods clinics. The right pathway follows the question, available authority, evidence, resources, audience, and desired contribution.

A strong first project is bounded enough to finish and meaningful enough to teach the team something worth returning to the network.

Applied practice

Write one primary question, define the decision or audience it serves, identify five evidence categories, name three uncertainties, and select the most fitting project template.

Module deliverables

- Focused question
- Evidence map
- Uncertainty register
- Template recommendation

Reflection prompts

1. What decision could this question improve?
2. Where am I most likely to overstate the evidence?
3. Which bounded first project could create a trustworthy foundation?

Knowledge check

1. What should a focused question clarify?

- A. Only the topic
- B. Affected population or setting, decision, and useful answer
- C. Only the preferred method
- D. Only the publication venue

2. What belongs in an evidence map?

- A. Only favorable sources
- B. Sources, contradictions, limits, and uncertainty
- C. Credentials
- D. Private contact lists

3. Which distinction protects causal interpretation?

- A. Association and causation
- B. Title and role
- C. Meeting and email
- D. Draft and font

4. How should a project template be selected?

- A. By popularity

- B. By question, authority, evidence, resources, audience, and contribution
- C. By shortest title
- D. By public visibility

5. What characterizes a strong first project?

- A. Unlimited scope
- B. A bounded, meaningful project that can finish and teach
- C. Immediate public release
- D. No review

Methods, Data, and Responsible AI

Match questions with appropriate methods while preserving data authority, reproducibility, equity, and human judgment.

Suggested learning time: 65-90 minutes

Learning objectives

- Connect study questions with fitting methods
- Document data provenance and permissions
- Use artificial intelligence within approved boundaries
- Plan reproducible and equity-aware work

Method follows purpose

Methods are chosen because they can produce evidence suited to the question. Descriptive, comparative, predictive, causal, qualitative, mixed-methods, implementation, design, and educational approaches answer different kinds of questions and carry different assumptions.

A methods plan records population or corpus, inclusion logic, variables or concepts, outcomes, analysis, missingness, uncertainty, sensitivity work, and review responsibilities.

Data provenance and authority

Every dataset, document set, image collection, transcript, and derived file requires a provenance record: source, owner or steward, permitted purpose, access conditions, transformations, storage location, retention, and release authority.

De-identification lowers certain risks while leaving governance responsibilities in place. Formal human-subjects research proceeds through the appropriate protocol, ethics review, consent, institutional authorization, and data-use pathway.

Responsible AI as assisted work

Artificial intelligence may support approved brainstorming, organization, coding assistance, language refinement, search development, summarization of authorized material, or pattern exploration. Human reviewers remain accountable for sources, factual accuracy, interpretation, bias, privacy, authorship, and release.

Participants record material AI assistance, verify every consequential claim against authoritative sources, inspect outputs for fabricated content and inequitable assumptions, and keep restricted information outside unapproved tools.

Applied practice

Create a one-page methods and stewardship plan naming the question, design, data source, authority, variables or concepts, analysis, AI role, verification, equity review, reproducibility record, and release decision.

Module deliverables

- Methods sketch
- Data provenance record
- AI assistance and verification plan
- Reproducibility and equity checklist

Reflection prompts

1. Which assumptions could most strongly shape the result?
2. Who has authority over each source and derived output?
3. Where must human judgment remain especially visible?

Knowledge check

1. What should determine the method?

- A. The question and intended evidence
- B. The newest software
- C. The largest dataset
- D. The preferred visual

2. What does a provenance record include?

- A. Source, authority, transformations, storage, retention, and release
- B. Only a filename
- C. Only a citation
- D. Only the analyst name

3. Who remains accountable when AI assists the work?

- A. The AI provider alone
- B. The human project team and authorized reviewers
- C. The reader
- D. No one

4. What should happen to a consequential AI-generated claim?

- A. Publish immediately

- B. Verify it against authoritative sources
- C. Treat it as confidential
- D. Count it as authorship

5. What accompanies formal human-subjects research?

- A. A general website form
- B. Appropriate protocol, review, consent, authorization, and data-use pathways
- C. A public reflection
- D. A template title

Contribution, Authorship, and Publication

Make scholarly contribution visible and carry work through review, authorship decisions, release, and correction.

Suggested learning time: 55-75 minutes

Learning objectives

- Record contributions as work develops
- Apply authorship and acknowledgment standards
- Prepare a publication-readiness review
- Preserve correction and knowledge return

Contribution is a living record

A contribution record captures the work performed, evidence produced, decisions influenced, drafts reviewed, methods strengthened, responsibility accepted, and time or milestones associated with the contribution. It gives the team a shared factual basis for recognition.

Roles can evolve. A contributor may begin with evidence mapping and later accept responsibility for analysis, interpretation, or drafting. The record should evolve with the work.

Authorship with accountability

Authorship is determined through project-specific contribution, substantial intellectual participation, drafting or critical revision, approval of the final work, and accountability for the contribution and integrity of the publication. Participation, seniority, funding, invitation, or group membership alone does not settle authorship.

Other meaningful contributions may be recognized through acknowledgments, contributor taxonomies, presentations, certificates, project portfolios, or other evidence-bearing records.

Readiness, release, and correction

Before release, the team confirms scope, methods, source integrity, permissions, data authority, uncertainty, authorship, conflicts, audience, accessibility, institutional requirements, and final approval. Public scholarship receives the same care for accuracy and permissions as formal manuscripts.

After release, questions and errors are documented, reviewed, corrected, and communicated in a manner proportionate to their importance.

Applied practice

Prepare a contribution table, provisional authorship discussion, publication-readiness checklist, and a plan for returning findings to the communities and collaborators who shaped the work.

Module deliverables

- Contribution table
- Provisional recognition plan
- Publication-readiness checklist
- Knowledge-return and correction plan

Reflection prompts

1. Which contribution can I document with clear evidence?
2. Which responsibilities am I prepared to accept?
3. Who should receive the learning before or alongside public release?

Knowledge check

1. What supplies the strongest basis for recognition?

- A. A factual contribution record
- B. Job title
- C. Meeting attendance
- D. Seniority alone

2. Which item is central to authorship?

- A. Group membership alone
- B. Substantial contribution and accountability
- C. Public profile permission
- D. Professional title

3. When should authorship be discussed?

- A. Only after acceptance
- B. Early and again as roles evolve
- C. Before the question exists
- D. Only in public

4. What belongs in release readiness?

- A. Permissions, source integrity, uncertainty, conflicts, and approval

- B. Only formatting
- C. Only title selection
- D. Only a deadline

5. What follows discovery of a material error?

- A. Silent deletion
- B. Documented review, correction, and proportionate communication
- C. Immediate blame
- D. No action

Portfolio, Mentorship, and Continuity

Gather learning, evidence, relationships, and next commitments into a durable professional portfolio.

Suggested learning time: 45-65 minutes

Learning objectives

- Assemble an evidence-bearing collaboration portfolio
- Use reflection to identify growth
- Plan mentorship in both directions
- Choose a next season of contribution

A portfolio of evidence

A professional portfolio may include the original intention, completed modules, reflection entries, quiz results, project charters, contribution records, drafts, reviewer feedback, presentations, methods artifacts, approved publications, knowledge-return products, and completion decisions.

Each item should carry enough context to show what it represents, who authorized it, what role the participant held, and which claims the evidence can support.

Mentorship as a reciprocal practice

Participants may receive guidance while also offering insight from their own disciplines, settings, and lived experience. Effective mentorship names the question, desired support, meeting or response rhythm, boundaries, and evidence of progress.

A person can be an early-career professional in one domain and a mature contributor in another. The Lab makes room for both learning and leadership.

Completion and the next season

Completion includes a final reflection, confirmed deliverables, contribution review, disposition of files and access, recognition decisions, knowledge return, remaining responsibilities, and a next-step choice. A participant may continue, pause, enter a new project, mentor another person, or close the season with a complete record.

Continuity grows when the learning becomes available to the next person without exposing confidential material or erasing the people who produced it.

Applied practice

Assemble a portfolio index and write a 500-word capstone reflection covering growth, contribution, evidence, mentorship, stewardship, and the next twelve-week commitment.

Module deliverables

- Portfolio index
- Capstone reflection
- Mentorship map
- Next-season commitment

Reflection prompts

1. What changed in the way I understand my contribution?
2. Which evidence demonstrates growth with integrity?
3. What can I now return to another professional or laboratory crew?

Knowledge check

1. What makes a portfolio item evidence-bearing?

- A. Decorative design
- B. Context, role, authority, and supported claims
- C. Length alone
- D. Public visibility

2. How is mentorship framed in this curriculum?

- A. One-directional instruction only
- B. Reciprocal learning with defined support and boundaries
- C. Unrecorded advice
- D. Automatic supervision

3. What belongs in project completion?

- A. Only a final file
- B. Deliverables, contribution review, access disposition, recognition, and next steps
- C. A new title
- D. Automatic publication

4. What can follow completion?

- A. Continuation, pause, a new project, mentorship, or closure

- B. Only departure
- C. Automatic authorship
- D. Unrestricted access

5. What protects continuity?

- A. Preserving useful learning with permissions and attribution
- B. Sharing every file publicly
- C. Removing contributor names
- D. Skipping reflection

Knowledge-check answers and learning rationales

Module 01: Professional Identity and Intention

1. B - Placement is strengthened by a complete, current account of professional identity, capacity, questions, and contribution.
2. A - A clear intention links purpose, contribution, capacity, learning, and the audience served.
3. B - The introduction creates a concise, permission-governed doorway into collaboration.
4. A - Authorship follows project-specific contribution, accountability, and review.
5. B - The practice asks for a sustainable twelve-week participation intention.

Module 02: Collaboration Readiness and Stewardship

1. A - Readiness includes authority, capacity, expertise, role clarity, permissions, and reliability.
2. B - Restricted information requires an approved secure pathway and appropriate authority.
3. B - Predictable asynchronous records preserve continuity and reduce unnecessary meetings.
4. B - Transparent correction protects the scholarly record and the people relying on it.
5. B - Access and authority are distinct; each use requires a valid basis.

Module 03: Questions, Evidence, and Scholarly Direction

1. B - A useful question connects the issue, setting, decision, and kind of answer needed.
2. B - Evidence mapping includes what is known, contested, limited, and unresolved.
3. A - Association alone does not establish causation.
4. B - The pathway follows the actual scholarly and operational conditions.
5. B - A bounded first project builds trust and useful shared learning.

Module 04: Methods, Data, and Responsible AI

1. A - Method follows the purpose and the evidence needed to answer the question.
2. A - Provenance makes authority and the life of the information traceable.
3. B - Human participants remain accountable for accuracy, sources, interpretation, privacy, and release.
4. B - Consequential claims require independent source verification.
5. B - Formal research requires the governing institutional and participant protections.

Module 05: Contribution, Authorship, and Publication

1. A - A living contribution record makes work and accountability visible.
2. B - Authorship joins contribution with review, final approval, and accountability.
3. B - Early and recurring discussion supports fairness as contributions change.
4. A - Release readiness is a coordinated scholarly and governance review.
5. B - Responsible correction protects the record and those relying on it.

Module 06: Portfolio, Mentorship, and Continuity

1. B - Evidence requires enough context to understand what the item can responsibly demonstrate.
2. B - Participants can learn and lead through a clear reciprocal mentorship practice.
3. B - Completion closes scholarly, operational, and stewardship responsibilities.
4. A - A complete record supports several thoughtful next-season choices.
5. A - Continuity carries learning forward while protecting confidentiality and provenance.

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.