START POLE MOUNTAIN LEARNING / ARTICLE COMPANION

Teaching with Technology

Two working sessions for secondary teachers | Plans, examples and printable handouts

Companion to the article
What Classroom Technology Taught Me About the Role of Teachers
Start with one lesson you already teach. Decide what students need to understand, what work will reveal it and how you will respond when a student is stuck or absent.

1 | Make the thinking visible

In the article, programming, websites, videos and discussions give students ways to investigate and explain. A finished product can still hide a gap in understanding. Session 1 helps you plan the question, evidence, feedback and independent check before the production work.

Use: working session, page 2; sample history lesson, page 3; readings, page 4; worked revision, page 5; your lesson planner, page 6.

2 | Build participation and support online

The Canvas experience in the article separates platform training from online teaching. Session 2 turns that distinction into a lesson routine: a clear starting point, a response each student can make, a teacher checkpoint and a way back after missed work.

Use: working session, page 7; online lesson example, page 8; weekly plan, page 9; student directions, page 10; reconnecting and checking understanding, page 11.

Work alone, with a coach or with a team

Allow about 45 minutes per working session, or complete one section at a time. Bring a learning target, a current task and your school-approved tools. Leave with a revised lesson and a date to inspect student work. The schedules are planning estimates; adjust them for your class.

Keep the teacher in the process

Notice who is participating. Ask what is getting in the way. Give useful feedback and a manageable next step. Keep missing work separate from evidence of what a student understands. No platform setting can make those decisions for you.

The history lesson is an illustrative planning example. The sample student drafts are fictional. Adjust the activities for your students and required supports.

Read the companion article at polemountainlearning.com

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Working session 1 | Design the learning

Outcome: one technology-supported activity with visible reasoning and a later independent check

Prepare: bring an upcoming lesson, its learning target and a tool already approved by your school. A coach or colleague can ask the prompts; for self-study, write your answers. Use pages 3-6 as a model.

0-5 min — **Name the learning**
Write what students should explain or do. Replace "make a slideshow" with the idea the slideshow must communicate. Ask: "What would I look for if the technology were removed?"

5-12 min — **Inspect the example**
Read the Roman Britain task and fictional revision on pages 3-5. Compare the first draft with an explanation supported by sources. Identify where the teacher sees each student's reasoning.

12-22 min — **Plan the task**
Use page 6. Choose the student question, two or three success criteria, the first checkpoint and a workable paper or offline route. Explain what the tool adds to this learning.

22-32 min — **Rehearse the teacher move**
Show a rough response before adding design. A partner asks: "How does that detail support your claim?" Practice giving one focused comment and time to use it. Alone, test the same prompt against a draft you create.

32-40 min — **Check access and individual thinking**
Can a student find and begin the task? Can they respond without public posting? Decide how you will see individual understanding in a group product. Use accessible text and source credits.

40-45 min — **Plan the return**
Write one short task students will complete without project help. Set a date to compare that work with your criteria. Record what you will reteach if the product looks stronger than the explanation.

Leave with a decision
"I chose this tool because ____. I will look at ____ before students finish the product. If I hear ____, I will teach ____."

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A history page that explains

Illustrative secondary lesson | About 45 minutes | Claim, evidence, feedback and revision

Learning target
Use source details to support a historical claim and explain a limit on that claim. Student question: **Did Roman roads and travel services serve everyone in the same way?**

Materials: page 4, page 6 or a notebook, and one school-approved slide/document/webpage tool. No new account or open-web search is needed for this short task. Teach unfamiliar terms such as *official* and *permit* before students begin.

Start with an idea | 0-10 minutes

Ask for an initial answer before opening the tool. Read the two short summaries on page 4. Explain that both describe Roman Britain and both draw on modern English Heritage accounts. They are not two independent witnesses or original Roman documents.

Build the explanation | 10-20 minutes

Each student identifies a detail from each text and explains how the details fit together. Ask: "Does sharing a road mean sharing every service? What does each text actually show?" Check these notes before students begin production.

Create, question and revise | 20-38 minutes

Pairs build one page or two slides: a claim, two credited details, an explanation and one limit. One student explains while the other points to evidence, then they switch. A partner comments on one reasoning gap. Allow time to revise it. Design choices should help a reader follow the argument.

Check each student | 38-45 minutes

Close the shared product, keeping Text A available. Each student answers independently: "A classmate says Roman roads were used only by soldiers. Does Text A support that? Explain." Accept spoken or written reasoning; record any help. At a later lesson, use a new source and question before drawing conclusions about independent use of the skill.

What to listen for

A defensible answer distinguishes roads used for several purposes from an official service with restricted access. Students should not turn those details into a claim about every person's experience. For the exit question, Text A also names traded goods and officials; "only soldiers" is too narrow.

A shared product is practice evidence. The exit response checks a new question using familiar text; it is not proof of lasting learning or a causal test of the technology.

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Roman Britain | Roads and travelers

Student materials for the example lesson | Two modern teaching texts about Roman Britain

Text A | More than troop movement

In Roman Britain, roads connected military sites and towns. Soldiers used them to move between places, and officials used them for travel and messages. Roads also carried traded goods. Boats could move goods more cheaply, so roads were one part of a wider transport system.

Facts checked against Pete Wilson, English Heritage, "Roads in Roman Britain." Read the full account.

Text B | A service with limits

The imperial message service kept places where official travelers could change animals or stop. It was supported at public expense. Ordinary travelers did not automatically have access to that service; private use required a special permit. Sharing a road did not mean sharing every service along it.

Facts checked against English Heritage, "Romans: Networks." Read the full account.

Your task
Did Roman roads and travel services serve everyone in the same way? Create one page or two slides for classmates. Include a claim, one useful detail from each text, your explanation and one limit on what these texts can tell you.

My claim:

A detail and why it helps:

Before designing: tell a partner how your evidence supports your claim. For your final product, identify each text and include its source link. These summaries are about Britain; do not present them as a complete account of every part of the Roman Empire.

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What changed in the explanation?

Fictional student drafts for teacher discussion | Inspect the reasoning before the design

First draft
"Roman roads were great for everyone. People could travel anywhere they wanted. My pictures show how advanced Rome was."

The teacher response

"Your claim says everyone could travel anywhere. What does Text B say about using the official service? Revise the claim so it fits both texts. Explain how each detail helps, then tell us what you still cannot conclude."

Revised draft
"Roman roads in Britain had military and trade uses (Text A), but the official travel service had restricted access (Text B). People could use the transport network in different ways. These texts do not tell us every traveler's experience."

What the revision shows

The claim is narrower, both sources have a job and the explanation includes a limit. Ask the student to explain why the permit detail changes the first claim. A revised sentence alone does not show whether the student understands the change.

Use discussion to inspect thinking

A threaded-discussion prompt can ask: "Which source makes you change or qualify your claim? Explain how." A useful reply addresses a classmate's reasoning with a detail, rather than only saying "I agree." Give students time to revise afterward.

If a tool helped produce the words

Record what the tool, model or adult supplied. Ask the student to explain the reasoning and complete a short check without answer-generating help. Keep required accessibility supports in place and note them. Do not treat product polish as evidence of independent understanding.

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Plan the task before the product

Teacher planning handout | Use an upcoming lesson and school-approved tools

Class / unit: _____ Date: _____

What should students understand or be able to explain?

Student question and evidence of a strong response:

What does the tool help students investigate, explain or revise?
If it adds little to this task, use a simpler format.

First checkpoint: What will each student show before production takes over?

Feedback: What will you ask, and when will students use the response?

Access / offline route / individual contribution:

Independent check, help to record and date to revisit the work:

Judge the idea, source use and explanation. Add design criteria when design is part of the target. For programming, ask students to explain a test and a revision; for a spreadsheet, ask why a filter or graph answers the question. A finished product is not enough evidence by itself.

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Working session 2 | Teach online

Outcome: one lesson routine, a response plan and student directions you have tested

Prepare: bring one lesson, your school-approved learning platform and its student-view or practice space if available. Use pages 8-11. Work with a colleague, coach or by yourself.

0-5 min **Name the participation problem**
Choose a concrete moment: starting, responding, returning after absence or using feedback. Describe the observed participation and leave its cause open until you have checked with the student.

5-13 min **Walk the student route**
Find the task, read the instructions, submit a small response, locate feedback and ask for help. Test links and access from the learner view. Fix one barrier before adding features.

13-23 min **Rehearse the interaction**
Use page 8 or your own content. Teach a short segment; give everyone a response route; pause to inspect the thinking. Practice inviting a text or spoken explanation without requiring a camera as evidence of engagement.

23-33 min **Plan for missing responses**
Use page 11. Rehearse a private message that asks about the barrier and names a manageable return step. Decide who follows up, how and when, using your school's procedures.

33-40 min **Write the directions**
Complete page 10 for your class. Keep one starting location, one first task, a clear submission route and help contact. Say when students can expect a reply; do not promise constant availability.

40-45 min **Choose the next evidence**
Write what you will inspect in the first response and the later independent check. Put a date on the review. Record participation and subject understanding separately.

A platform test is only one part
A student may be able to open the page and still need help understanding the question, beginning the work, managing the steps or reconnecting with the teacher.

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A short online lesson with a teacher

Illustrative 35-minute live lesson plus an equivalent route for students who cannot attend live

Example goal: the historical claim-and-evidence goal on page 3. Put page 4 and the response prompt in one approved class location. Check readable text, accessible files and any required accommodations. Use the same learning goal for live and later participation.

0-4 min — **Reconnect and begin**
Greet students and show the first small task. Students can signal "ready" or "need help" through an approved channel. Do not treat camera or microphone settings alone as evidence of attention or understanding.

4-8 min — **Model a reasoning move**
Use one detail to explain how evidence relates to a claim. Ask students to notice the explanation, rather than only repeat the source sentence. Keep the model brief enough to leave time for their thinking.

8-14 min — **Hear from each student**
Ask for one claim and a supporting detail through text, audio or a response sheet. Students answer before seeing classmates' responses when the platform allows it. Note who needs a follow-up; silence does not explain the reason.

14-21 min — **Respond to what appeared**
Use a teacher-created example or appropriately shared, anonymous work. Address one actual reasoning gap. If many students are stuck, teach the missing idea before giving another independent task.

21-28 min — **Make time for revision**
Ask students to revise one part and explain what changed. Check a few responses while others work, and make a follow-up list for the remaining students.

28-35 min — **Check and close**
Use the individual exit question on page 3 without hints. Give the next task and help route. Record who submitted and what each available response shows; keep those as different observations.

If a student cannot attend live
Provide the same short texts, an accessible written or captioned model, the response prompt and a realistic deadline. Use an approved private feedback route. If access fails, agree on a phone or paper route through school procedures. Do not make a live login the only way to show the target.

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Plan one online learning week

Teacher planning handout | Keep routines visible and follow-up manageable

Class / week: _____ Learning target: _____

One place to start and the first task students will see:

How each student can respond:
Live route, later route and a workable option if the usual access fails.

Where you will inspect thinking and how students will use feedback:

Contact and response window:
School-approved channel, teacher availability and when a student should seek immediate help.

If a student does not respond:
Who checks in, by when, and how will the return task be made manageable?

Independent check, support to record and date to review:

Check before sharing: links work in learner view; text and media are accessible; directions name the expected response; the next step is clear. Record any support or tool assistance that affects what the work demonstrates.

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How our online class works

Teacher: complete the classroom details before sharing this page with students.

Start here
Class starting page or folder: _____
First task: _____
Where to submit: _____

When you join or open the lesson

Read the first task and begin the small response. If something will not open or you cannot understand how to begin, ask for help right away. If you missed the live lesson, use the later route your teacher has listed.

Later / offline route: _____

Show your thinking

Your teacher needs to hear or see your explanation, not just know that you logged in. Use the response route agreed for this lesson: a written answer, a spoken response or another approved format. Tell your teacher about any help you used.

If you get stuck

Check the directions and one example. Try a small part if you can. Then describe where your thinking stopped: "I tried ____. I am stuck on ____." You can ask immediately if you cannot access or begin the work, or need urgent help. You do not have to struggle through a fixed number of steps first.

When feedback arrives

Read or listen to it. Make the requested change and explain what you changed. If the comment is unclear, ask your teacher to show what it means.

Contact and reconnect
Ask for help here: _____
Teacher reply window: _____
If you miss work or a lesson, use this return step: _____
_____

Use school-approved class spaces. Keep classmates' names, images and work out of public posts unless the required permission and school process are in place. Follow your school's directions for urgent concerns.

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When participation stops

Teacher response guide | Keep the relationship, the next task and the evidence in view

1 | Describe what you know

"No response to Tuesday's prompt" is an observation. "Does not care" is an interpretation. Check for access problems, unclear instructions, reading demands, workload, wellbeing or a difficulty outside class. Ask privately; a nonresponse does not tell you which barrier is present.

2 | Offer a manageable return

Example message to adapt
"I haven't seen your response to the question about ____. What is making it hard to get started? Let's begin with ____. You can send me one sentence or talk it through using our class help route. We will plan the next step from there."

Choose a small step that still addresses the target. Avoid replacing a backlog with a demand to complete everything before reconnecting. If the student does not reply, follow your school's contact and support procedures. A template cannot determine what is happening at home.

3 | Separate participation from understanding

Record the missing submission as missing evidence. Examine any explanation the student can provide and note support given. Follow school reporting requirements while distinguishing completion and academic behavior from what the available work shows about the subject.

4 | Return to the learning

Give time to use feedback, then check a short response without the project help. Ask what the student can now explain and what still needs teaching. Keep supported revisions, independent responses and participation notes distinct; none alone proves why learning changed.

Follow-up owner / date: _____
Next learning step / evidence to review: _____

Sources, use and further reading

This companion was newly written for Pole Mountain Learning around Mike's article and experiences. Sample prompts and student wording are illustrative, not recovered classroom transcripts. Historical facts on page 4 were checked against English Heritage: Roads in Roman Britain and Romans: Networks. The linked sites and their images keep their own rights.

For background on technology, access and teacher preparation: UNESCO 2023 Global Education Monitoring Report. This companion has not been tested for effectiveness; no research endorsement is claimed.

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