

FREE STEM CURRICULUM

Educator Evaluation and Adoption Toolkit

Printable worksheets + editable planning tools for K-12 STEM and CTE programs

Use this toolkit to evaluate whether a free curriculum is instructionally sound, standards-aligned, accessible, privacy-conscious, affordable to implement, and sustainable over time.

Includes

- Quick review checklist
- 100-point evaluation rubric
- Standards alignment map
- Privacy and accessibility review
 - Total-cost planner
- Pilot plan and decision memo

Prepared for TechEd Magazine readers

How to Use This Toolkit

The worksheets are designed for curriculum committees, STEM coordinators, CTE directors, classroom teachers, technology staff, accessibility specialists, and school administrators. Use the process below for a single resource, a pilot, or a district adoption review.

Step	Purpose
1. Classify the resource	Determine whether it is a full course, supplemental lesson, simulation, engineering challenge, or technical module.
2. Screen for critical issues	Complete the quick checklist before investing teacher time in a full review.
3. Score the evidence	Use the weighted rubric and cite specific pages, standards maps, privacy terms, or implementation evidence.
4. Calculate the real cost	Include teacher time, equipment, consumables, software, accessibility work, and ongoing maintenance.
5. Pilot before scaling	Use the pilot worksheet to define scope, training, assessment evidence, and success criteria.
6. Document the decision	Record why the resource will be adopted, revised, used only as a supplement, or rejected.

A zero-dollar license does not eliminate implementation costs or local review responsibilities. District policy, state standards, privacy law, accessibility requirements, and funding rules should control the final decision.

1. Resource Profile and Classification

Complete this page before scoring. The same review standard should not be applied to a one-day NASA lesson and a full-year OER course without first defining the intended use.

Resource or course title: _____

Provider / author: _____

Reviewer(s): _____

Review date: _____

URL: _____

Course / unit: _____

Grade band: _____

Subject or CTE pathway: _____

Resource Type	Best Use	Check
Full OER course	Core course or unit sequence	☐
Government agency lesson	Supplemental real-world application	☐
University research curriculum	Advanced or specialized topic	☐
Simulation or interactive tool	Visualization and concept development	☐
Engineering design challenge	Project-based learning	☐
CTE technical module	Career pathway instruction	☐

Intended use: Core / Supplement / Pilot / Bridge:

Instructional problem this resource should solve:

2. Ten-Minute Quality Screen

Stop the review and resolve any critical issue marked “No” before proceeding to a pilot or adoption recommendation.

Review Question	Yes	No	Needs Evidence
The provider and authors are identifiable and credible.	☐	☐	☐
The resource states its license or terms of use clearly.	☐	☐	☐
Content is current enough for the subject area.	☐	☐	☐
The resource addresses specific standards, competencies, or course outcomes.	☐	☐	☐
Students produce evidence of learning beyond activity completion.	☐	☐	☐
Required equipment, materials, and technology are realistic for the program.	☐	☐	☐
Safety procedures are adequate for tools, labs, materials, and student age.	☐	☐	☐
Digital content can be accessed by students with disabilities.	☐	☐	☐
Student accounts, data collection, advertising, and vendor terms have been reviewed.	☐	☐	☐
Teachers have enough guidance, preparation time, and professional learning to implement it well.	☐	☐	☐
Assessments measure the learning goals the resource claims to teach.	☐	☐	☐
The total implementation cost has been estimated.	☐	☐	☐

Critical concerns requiring resolution:

3. Weighted Curriculum Evaluation Rubric

Score each criterion from 0 to 4 and multiply by the listed weight. The spreadsheet in this download calculates the score automatically.

Score	Meaning
0	Not evident, unusable, or unsupported
1	Weak; substantial redesign is required
2	Developing; usable only with meaningful local adaptation
3	Strong; meets expectations with minor adaptation
4	Exemplary; clear, complete, credible, and implementation-ready

Criterion	Weight	Score 0-4	Weighted	Evidence / Action
Instructional quality	3	_____	_____	_____ _____
Standards alignment	3	_____	_____	_____ _____
Depth and rigor	3	_____	_____	_____ _____
Assessment quality	3	_____	_____	_____ _____
Teacher guidance	2	_____	_____	_____ _____
Student accessibility	3	_____	_____	_____ _____
Multilingual supports	2	_____	_____	_____ _____
Cultural relevance	2	_____	_____	_____ _____
Technology compatibility	2	_____	_____	_____ _____
Student privacy	3	_____	_____	_____ _____
Licensing and reuse	2	_____	_____	_____ _____
Content accuracy	3	_____	_____	_____ _____
CTE / workforce alignment	2	_____	_____	_____ _____
Safety alignment	3	_____	_____	_____ _____
Equipment feasibility	2	_____	_____	_____ _____
Teacher preparation	2	_____	_____	_____ _____
Implementation time	1	_____	_____	_____ _____
Total cost	2	_____	_____	_____ _____
Update and maintenance plan	2	_____	_____	_____ _____
Evidence of effectiveness	2	_____	_____	_____ _____

Total points earned: _____

Maximum points: _____

Overall percentage: _____

Recommendation: _____

4. Standards and Pathway Alignment Map

Do not accept a generic statement such as “aligned to STEM standards.” Identify where each standard or competency is taught, practiced, and assessed.

Standard / Competency	Lesson or Resource	Student Activity	Evidence / Assessment	Depth
				I / P / M
				I / P / M
				I / P / M
				I / P / M
				I / P / M
				I / P / M
				I / P / M
				I / P / M
				I / P / M
				I / P / M

Depth codes: I = introduced, P = practiced, M = mastered or formally assessed.

- ☐ Course outcomes and state standards are fully represented.
- ☐ Required technical skills and safety competencies are included.
- ☐ Mathematical, scientific, computational, or engineering practices are explicit.
- ☐ Career connections and credential expectations are documented where applicable.
- ☐ Gaps have an identified local lesson, assessment, or resource.

5. Privacy, Security, and Accessibility Review

Complete this review for any website, app, simulation, coding platform, AI tool, LMS integration, or online portfolio system.

Review Area	Evidence to Check	Status / Notes
Student accounts	Are accounts required? What identifiers are collected?	
Data collection	Usage, location, audio, image, behavior, device, or assessment data	
Data sharing	Third parties, advertising, analytics, model training, or subcontractors	
Retention and deletion	How long data is stored and how deletion is requested	
Security	Encryption, breach notification, access controls, and district compatibility	

Review Area	Evidence to Check	Status / Notes
Terms and age limits	Terms of service, parental consent, and minimum age	
Keyboard access	All functions can be completed without a mouse	
Captions and transcripts	Video and audio content includes accurate alternatives	
Screen reader support	Headings, labels, forms, tables, and navigation are meaningful	
Color and contrast	Information is not communicated by color alone	
Document accessibility	PDFs, slides, and worksheets use accessible structure	
Alternative participation	Students can engage and demonstrate learning in multiple ways	

District reviewer / department: _____

Required remediation: _____

Approval decision: _____

6. Total Cost of Implementation Worksheet

Calculate the cost of using the curriculum, not just the cost of acquiring it. The included spreadsheet provides formulas for first-year and recurring totals.

Cost Category	Quantity	One-Time Cost	Annual Cost	Notes
Teacher planning and curriculum mapping				
Professional development				
Substitute coverage or release time				
Printing and student materials				
Lab consumables				
Safety equipment and facility controls				
Devices, sensors, robotics, or equipment				
Software, hosting, or LMS integration				
Accessibility remediation				
Privacy, security, or legal review				
Assessment development				
Maintenance, repairs, and replacement				
Credentialing or certification expenses				

Cost Category	Quantity	One-Time Cost	Annual Cost	Notes
Other				

Estimated first-year cost: _____

Estimated ongoing annual cost: _____

Funding source(s): _____

Budget owner: _____

7. Curriculum Pilot Plan

A pilot should answer a defined adoption question. Avoid a pilot that measures only teacher satisfaction or whether students appeared engaged.

Pilot question: _____

School / program: _____

Course and grade band: _____

Pilot teacher(s): _____

Start date: _____

End date: _____

Number of students: _____

Success Measure	Baseline	Target	Evidence Source	Review Date
Standards mastery				
Technical skill performance				
Student participation / completion				
Accessibility and inclusion				
Teacher implementation time				
Technology reliability				
Student feedback				
Cost and material use				

- ☐ Teachers received training before the pilot.
- ☐ Required privacy and accessibility reviews were completed.
- ☐ Students completed baseline and outcome measures.
- ☐ Implementation problems were logged rather than informally remembered.
- ☐ Teacher-created adaptations were documented for possible reuse.
- ☐ The pilot included a representative range of learners.

8. Teacher Implementation Reflection

Complete after the pilot. Attach examples of student work, assessment results, adaptations, and implementation logs.

Prompt	Response
Which lessons or features produced the strongest evidence of learning?	
Where did students struggle because of content, reading level, technology, or prior knowledge?	
What had to be added, removed, or rewritten?	
Which assessments were useful, and which were inadequate?	
What accessibility or language supports were needed?	
What equipment, materials, or technical problems affected instruction?	
How much planning and preparation time was required?	
Would another teacher be able to implement the resource using current documentation?	
What should change before broader use?	

9. Adoption Decision Memo

Use this page to create a clear record of the recommendation, evidence, conditions, and ownership of next steps.

Resource title: _____

Committee / reviewer: _____

Decision date: _____

Decision	Select
Adopt as core curriculum	☐
Approve for a structured pilot	☐
Use only as a supplemental resource	☐
Revise and reassess	☐
Do not adopt	☐

Overall score: _____

First-year cost: _____

Ongoing annual cost: _____

Decision Factor	Summary of Evidence
Instructional value	
Standards and pathway alignment	
Assessment quality	
Accessibility and inclusion	
Privacy and security	
Implementation feasibility	
Cost and sustainability	

Decision Factor	Summary of Evidence
Pilot outcomes	

Conditions of approval: _____

Required revisions: _____

Responsible owner(s): _____

Next review date: _____

10. Starting Points for Curriculum Research

These directories and standards are useful starting points. Review the terms, licensing, accessibility, privacy, and local alignment of each individual resource before adoption.

Resource	Use	URL
OER Commons	Open educational resources repository	https://www.oercommons.org/
OpenStax	Open textbooks in science, mathematics, and computing	https://openstax.org/subjects/
CK-12	Customizable K-12 STEM content and simulations	https://www.ck12.org/
Code.org	K-12 computer science and AI curriculum	https://studio.code.org/catalog
PhET	Interactive science and mathematics simulations	https://phet.colorado.edu/
TeachEngineering	Standards-aligned K-12 engineering lessons	https://www.teachengineering.org/
NASA Educator Resources	Space, Earth science, engineering, and mathematics	https://www.nasa.gov/learning-resources/for-educators/
NOAA Education	Weather, climate, ocean, and environmental data	https://www.noaa.gov/education/resources
NIH STEM Teaching Resources	Biomedical and health science resources	https://science.education.nih.gov/
NIST NICE	Cybersecurity learning and workforce alignment	https://www.nist.gov/itl/applied-cybersecurity/nice/resources/online-learning-content
NGSS	Science and engineering performance expectations	https://www.nextgenscience.org/
CSTA 2026 Standards	Current PK-12 computer science standards	https://csteachers.org/pk12standards/
ITEEA STEL	Technology and engineering literacy standards	https://www.iteea.org/stel
CAST UDL Guidelines	Inclusive curriculum and lesson design	https://udlguidelines.cast.org/

Publication and Local Review Note

This toolkit is an educator planning resource. It is not legal advice, an accessibility certification, a privacy approval, or a determination that a particular expense is allowable under a federal or state grant. Local policy and qualified district reviewers control those decisions.