Proposed Annual Review Cycle

1. **INTENT NOTIFICATION (On or Before May 31 of School Year PRIOR to the Review School Year)**
    - Programs hoping to become designated or renew their designation will notify the STEM AC by May 31 of the school/fiscal year prior to the year they hope to be reviewed/approved in.
2. **PORTFOLIO BUILDING & SELF ASSESSMENT (Summer/Early Fall of Review School Year)**
    - The STEM AC will provide access to an online platform (Canvas) to upload narratives and evidence/artifacts for each STEM Designation standard. This will become the program's "review portfolio". The program's leadership team will also perform a self-assessment of their portfolio by scoring against the rubrics that will be provided. Once the portfolio and self-assessment are completed, the program will notify STEM AC that they are requesting official review.
3. **PORTFOLIO READINESS CHECK (End of Fall/Early Winter of Review School Year)**
    - STEM AC staff will do an informal check of the program's review portfolio and self-assessment to ensure it is complete and appears sufficiently developed to warrant formal review. If ready, a review team will be assembled and an on-site visit will be scheduled. If it is not ready, formative feedback will be given and the program will need to delay review until necessary adjustments can be made.
4. **DESK REVIEW & ON-SITE VISIT (Late Winter/Early Spring of Review School Year)**
    - Review team will perform a desk review of the portfolio to identify areas of interest, gaps in evidence, or questions that may still need clarified. Basic feedback from the desk review will be given to the program's leadership team to provide a preparation focus for the on-site review visit. The on-site visit will take place and the review team will determine final scores on each standard and an overall recommendation for/against designation.
5. **STEM AC RECOMMENDATION (Mid/Late March of Review School Year)**
    - STEM AC staff will prepare a final report summarizing the review team's findings and bring all recommendations for designation to the STEM AC board for approval.
6. **STATE BOARD DESIGNATION (April of Review School Year)**
    - STEM AC staff will bring the approved recommendations to the State Board of Education for official designation. That designation is good for 5 school years, counting from when school starts in the coming Fall. (A program may publicly announce themselves as having achieved Idaho STEM Designation as soon as the State Board of Education votes to officially approve the designations)
7. **STEM AC AGREEMENT & AWARD EXECUTION (By May 31 of Review School Year)**
    - The STEM AC will work with the program's administrative/financial team to execute an agreement and invoice a payment for STEM Designation. The agreement and payment are for the *following* school year of designation and will be renewable for up to the 5 school years of statutory designation (pending STEM AC funding and program compliance with STEM AC reporting requirements). STEM AC will also work with the program to schedule an official public recognition of their designation.

Proposed Review Team Composition

The review team will be composed of 5 individuals as described below:

- 1 representative from the STEM AC staff (who is familiar with the STEM Designation Process and can lead the review team)
- 1 representative from the State Department of Education (with relevant expertise in STEM-related K-12 instruction, assessment, and/or educational program evaluation)
- 1 representative from the Division of Career Technical Education (with relevant expertise in STEM-related K-12 CTE instruction, college & career readiness, and/or educational program evaluation)
- 1 certified staff member from the leadership team of a current STEM-designated program or school (strong preference given to individuals who hold a current Teacher Leader or Administrator endorsement).
- If possible, 1 representative from a STEM-related industry or community partner (vetted by STEM AC staff as having relevant background with K-12 education or youth STEM programs) will also serve.
    - If an appropriate industry or community partner is not available for the review team, the 5th member may be an additional individual from any of the groups listed above.

If exceptional circumstances necessitate it, a review may be conducted with fewer than 5 individuals serving on the review team or without membership from one of the required groups listed above. However, this exception must be approved by both the Executive Director of the STEM AC and the leadership team of the program being evaluated prior to the start of the formal review.

- The reason for the exception must be explicitly documented in the review team's final report and cited in the recommendations provided to the STEM AC Advisory Board and the State Board of Education.

Proposed Rubric & Scoring Structure

The Idaho Standards for STEM School Designation state that a school or program must demonstrate clear and convincing evidence of meeting the approved standards "in a consistent and systematic manner."

As such, the review process involves scoring the standards on how ***consistently*** and ***systematically*** they are being implemented. These are the two ***Criteria*** that make up the rubric for each standard.

To clearly articulate the levels of performance in the rubric, each of the criteria is broken into two ***Observable Traits***.

- To show that they are meeting the standard ***systematically***, a program must demonstrate that their implementation of the standard is ***structured*** and ***monitored***.

- To show that they are meeting the standards ***consistently***, they must demonstrate that their implementation of the standard is ***ubiquitous*** and ***sustainable***.

Each of those four ***observed traits*** will receive a rating between 1 and 4 using the rubric descriptors. Those ratings will be used to calculate an overall score for each of the two criteria.

- Systematic Score = Structured Rating + Monitored Rating
- Consistent Score = Ubiquitous Rating + Sustainable Rating

To earn a STEM Designation, the school/program must earn a score of 6 or higher on both ***criteria*** of every standard.

- This allows for exceptional strengths to offset weaknesses within a given criteria of a standard (e.g., a 4 in ***structured*** compensating for a 2 on ***monitored***), but prevents high performance on one standard from compensating for low performance on another. All standards need to be met at a minimum acceptable level.
- Ideally, we'd be encouraging STEM Designated school/programs to aim for a Rating 3 on all the ***observed traits***.

This model leaves room to recognize exceptionally well-established programs with an additional distinction if we decide to implement a "demonstration school" mentoring/training model at some point, all without changing the process or scoring.

- For instance, a "STEM Demonstration School" could be any school that passes their review with 3+ on all observed traits, and maybe has a certain number of 4s.

Proposed Rating Method – Modified Consensus Scoring

The review team will use a modified consensus scoring method. A final rating on each **observed trait** will be assigned using the following procedure:

- All review team members will assign scores individually to all observed traits.
- The scores for each trait are then compiled and analyzed:
    - If all members of the team assign the same score, then no additional discussion is needed and the rating level for that observed trait is set to match the group consensus.
    - If all but one member of the team assigns the same score and the discrepant rating is within one level of the agreeing members, the majority determines the rating level for that observed trait and no further discussion is required.
    - If more than one member of the team differs on the rating level OR if the range of individual scores for an observed trait is greater than one level on the rubric, then a consensus-building discussion is held in which the review team negotiates their individual scores until one of the above two conditions are met.

GLOSSARY OF TERMS USED IN REVIEW RUBRICS:

Area: A content-based subject or field of study. Often has its own learning standards and may be used to differentiate instructional periods, classes, or departments (e.g., Visual Arts, Math, Science, ELA/Literacy, Social Studies, Debate, Music, World Languages, Health, Physical Education, etc.)

Level: A grouping of students that is based years of schooling, age, or level of mastery. Includes grade-levels (e.g., Kindergarten-12th Grade), grade-bands (e.g., elementary, middle school, high school), and ability groupings within specific grade-levels or classes.

Program: A school—or course of study, institute, or academy within a school—that is multigrade and multidiscipline. This is the organizational unit which is awarded STEM designation upon successful review. All staff and students within the organizational unit are considered as part of review.

STEM: Comprehensive science, technology, engineering and mathematics. Meaningful and intentional integration of at least two of these four domains is necessary for the term to apply to any given circumstance.

STEM-related: Any topic, subject, discipline, or content area that directly falls within one or more of the four domains of STEM, regardless of whether it integrates other STEM domains (e.g., arithmetic, earth science, algebra, programming, biology, robotics, statistics, physical science, agriculture, welding, construction, geometry, chemistry, etc.).

Descriptors of Quantity:

Nearly all: Applying to all, excluding isolated exceptions (such as where it would be clearly impractical or unreasonable).

Most: Applying to the majority (half or more) and strongly representing the dominant group or cultural norm.

Some: Applying to a notable portion (less than half) and representing a non-dominant group or cultural norm.

Few: Applying to a relatively small portion or isolated individual examples that represent exceptions to the norm.

Descriptors of Frequency:

Continuously: Occurring with such ongoing regularity that it defines the norm and deviations are considered notable exceptions.

Frequently: Occurring with enough regularity to be considered familiar and part of the usual established norms.

Occasionally: Occurring infrequently enough to be considered inconsistent or somewhat outside the norm, but not entirely unusual or unfamiliar.

Rarely: Occurring so infrequently that any occurrences are considered major departures from the norm, likely feeling highly unusual or unfamiliar.

Acronyms: *still need to be properly defined*

PBL (Project/Problem-Based Learning)

CTE (Career Technical Education)

SEP (Science & Engineering Practices)

CCC (Cross-Cutting Concepts)

SMP (Standards for Mathematical Practice)

IPLP (Individualized Professional Learning Plan)

Standard:	**1) STEM Learning:** Learners actively engage with STEM instruction and curricular resources that focus on problem-solving, collaborative project-based learning, and the engineering design process.			
Criteria:	Meeting the standard **SYSTEMATICALLY** means implementation is…		Meeting the standard **CONSISTENTLY** means implementation is…	
Observed Traits:	***STRUCTURED***	***MONITORED***	***UBIQUITOUS***	***SUSTAINABLE***
Rating Level 4	• Program-wide structures (calendars, curricula, plans, etc.) ensure that students are continuously engaging with STEM learning opportunities. • Curricula implemented in nearly all areas are primarily centered on collaborative PBL. • Nearly all STEM-related learning opportunities are anchored in real-world phenomena and/or problems.	• STEM learning data is collected and analyzed in an ongoing manner to guide program-wide continuous improvement. • Students regularly generate public products or present to an authentic audience as part of their work in nearly all areas. • Opportunities for student-led critique and revision occur regularly in nearly all subjects/classes.	• Problem solving, sensemaking, and collaboration define the typical student experience in nearly all areas. • Shared language/practices related to PBL and engineering design are embedded in the typical learning interactions of students and staff. • STEM learning is central to the culture and core identity of the program across all areas/levels.	• Compelling evidence that performance in all other observed traits of this standard is being maintained from year-to-year *AND* at least some aspect of a trait appears to be seeing significant improvement over time.
Rating Level 3	• Program-wide structures (calendars, curricula, plans, etc.) ensure that students are regularly engaging with STEM learning opportunities. • Curricula implemented in most areas regularly feature collaborative PBL. • Most STEM-related learning opportunities are anchored in real-world phenomena and/or problems.	• STEM learning data is collected and analyzed each academic term (at least) to guide improvement in STEM-related areas. • Students regularly generate public products or present to an authentic audience as part of their work in STEM-related areas. • Opportunities for student-led critique and revision occur regularly in STEM-related areas.	• Problem solving, sensemaking, and collaboration define the typical student experience in STEM-related areas. • Shared language/practices related to PBL and engineering design are formally established and their use is encouraged program wide. • STEM learning is an established part of the culture and identity of the program across all areas/levels.	• Sufficient evidence that performance in all other observed traits of this standard is being maintained from year-to-year, with no aspects of any trait appearing to decline over time.
Rating Level 2	• Program-wide structures (calendars, curricula, plans, etc.) ensure that students are occasionally engaging with STEM learning opportunities. • Curricula implemented in most STEM-related areas feature some opportunities collaborative PBL. • Some STEM-related learning opportunities are anchored in real-world phenomena and/or problems.	• STEM learning data is collected and analyzed yearly to guide improvement in STEM-related areas. • Students occasionally generate public products or present to an authentic audience as part of their work in STEM-related areas. • Opportunities for student-led critique and revision occur occasionally in STEM-related areas.	• Opportunities for student problem solving, sensemaking, and collaboration occur frequently in STEM-related areas. • Shared language/practices related to PBL and engineering design exist but may be established informally or used inconsistently. • STEM learning is an established part of the culture and identity of the program across most areas/levels.	• Sufficient evidence that performance in most other observed traits of this standard is being maintained from year-to-year, while some aspect(s) of a single trait might be inconsistent or declining over time.
Rating Level 1	• Program-wide structures to ensure students engage in STEM learning opportunities either don't exist or are ineffective. • Curricular resources that students engage in most subjects/classes do NOT explicitly feature opportunities for collaborative PBL. • Few (if any) STEM-related learning opportunities are anchored in real-world phenomena and/or problems.	• STEM learning data is NOT used to guide improvement in STEM-related areas. • Students rarely (if ever) generate public products or present to an authentic audience as part of their work in STEM-related areas. • Opportunities for student-led critique and revision occur rarely (if ever) in STEM-related areas.	• Opportunities for student problem solving, sensemaking, and collaboration do NOT occur frequently. • Language/practices related to PBL and engineering design are either NOT established or vary substantially between areas/levels. • STEM learning is NOT an established part of the culture or identity of the program across most areas/levels.	• Insufficient evidence to show that performance in most other traits of this standard is being maintained from year-to-year *OR* aspects of multiple traits appear to be inconsistent or declining over time.

Standard:	**2) STEM Instruction:** Staff members strategically integrate evidence-based STEM practices into all disciplines, fostering cross-curricular connections and enhancing the overall educational experience for learners.			
Criteria:	Meeting the standard **SYSTEMATICALLY** means implementation is…		Meeting the standard **CONSISTENTLY** means implementation is…	
Observed Traits:	***STRUCTURED***	***MONITORED***	***UBIQUITOUS***	***SUSTAINABLE***
Rating Level 4	All aspects of Rating Level 3, plus: • The program is fundamentally organized around interdisciplinary instruction, with a particular emphasis on STEM. • Formal mechanisms/processes are established for identifying best-practices in STEM instruction and strategically implementing them program-wide.	• Program leadership continuously assesses the quality/frequency of STEM-related instruction using multiple formal (staff surveys, evaluations, learning plans, scope & sequence / alignment docs, etc.) and informal (walk throughs, student check-ins, etc.) data sources. These data are used to improve STEM instruction program wide. • Nearly all instructional staff have frequent opportunities to engage in peer observations/reflections focused on improving STEM instructional practice.	• The SEPs and SMPs are continuously and explicitly woven into instruction at all levels and in nearly all areas. • Authentic and meaningful connections to STEM occur frequently during instruction in nearly all areas. • The CCCs are continuously and explicitly used in instruction to bridge boundaries between the various STEM-related areas.	• Compelling evidence that performance in all other observed traits of this standard is being maintained from year-to-year *AND* at least some aspect of a trait appears to be seeing significant improvement over time.
Rating Level 3	• Program-wide structures (scope & sequence docs, curricular materials, unit plans, etc.) ensure that STEM-related instruction is fully aligned to—and fully implements—all relevant and required content standards. • Program-wide structures ensure that all other STEM-related instruction required by law is fully addressed (Computational Thinking & Digital Literacy, Career Exploration, College & Career Readiness) • Program-wide structures (common planning time, scheduling, PLCs, etc.) facilitate STEM instruction that crosses levels/areas.	• Program leadership assesses the quality/frequency of STEM-related instruction at least once an academic term, using multiple formal (staff surveys, evaluations, learning plans, scope & sequence / alignment docs, etc.) and informal (walk throughs, student check-ins, etc.) data sources. These data are used to improve STEM instruction program wide. • Nearly all STEM-related instructional staff have frequent opportunities to engage in peer observations/reflections focused on improving STEM instructional practice.	• The SEPs and SMPs are frequently and explicitly woven into instruction at all levels and in most areas. • Authentic and meaningful connections to STEM occur frequently during instruction in most areas. • The CCCs are frequently and explicitly used in instruction to bridge boundaries between the various STEM-related areas.	• Sufficient evidence that performance in all other observed traits of this standard is being maintained from year-to-year, with no aspects of any trait appearing to decline over time.
Rating Level 2	• Program-wide structures ensure that STEM-related instruction is fully aligned to—and fully implements—most of the relevant and required content standards. • Program-wide structures ensure that most other STEM-related instruction required by law is fully addressed (see list above) • Structures which facilitate STEM instruction that crosses levels/areas exist, but are limited to sub-groups within the program.	• Program leadership assesses the quality/frequency of STEM-related instruction at least yearly with at least one formal data source. This data is used to improve STEM instruction in at least some areas/levels. • Most STEM-related instructional staff have occasional opportunities to engage in peer observations/reflections focused on improving STEM instructional practice.	• The SEPs and SMPs are occasionally woven into instruction at all levels and in most areas, but may not be explicit. • Connections to STEM occur occasionally during instruction in most areas, but may not be authentic and meaningful. • The CCCs are occasionally used in instruction to bridge boundaries between the various STEM-related areas, but may not be explicit.	• Sufficient evidence that performance in most other observed traits of this standard is being maintained from year-to-year, while some aspect(s) of a single trait might be inconsistent or declining over time.
Rating Level 1	• Absence of program-wide structures pertaining to STEM-related instruction OR failure to address most required STEM-related standards and instruction. • Lack of formal structures to explicitly encourage STEM instruction that crosses levels/areas, even among sub-groups.	• Program leadership does NOT collect data to assess the quality/frequency of STEM-related instruction OR it is unclear if this data is used to improve STEM instruction. • Few (if any) STEM-related instructional staff have opportunities to engage in peer observations/reflections focused on improving STEM instructional practice.	• The SEPs and SMPs are rarely (if ever) woven into instruction, or are isolated to only some areas/levels. • Connections to STEM occur rarely (if ever) during instruction, or are isolated to only some areas. • The CCCs are rarely (if ever) used in instruction to bridge boundaries between the various STEM-related areas.	• Insufficient evidence to show that performance in most other traits of this standard is being maintained from year-to-year *OR* aspects of multiple traits appear to be inconsistent or declining over time.