STEM Assessment Rubrics

Age-Appropriate Evaluation Tools

Why Use Rubrics?

Rubrics help students understand expectations and allow teachers to assess STEM projects fairly. They focus on process, not just final products, and recognize that there are many ways to solve problems.

Engineering Design Rubric (K-2)

Criteria:

1. Understanding the Problem (1-4 points)
1 = Doesn't understand the challenge
4 = Clearly explains what needs to be solved

2. Planning (1-4 points)
1 = No plan or drawing
4 = Detailed drawing with labels

3. Building (1-4 points)
1 = Doesn't attempt to build
4 = Creates a working prototype

4. Testing & Improving (1-4 points)
1 = Doesn't test design
4 = Tests multiple times and makes improvements

5. Explaining (1-4 points)
1 = Can't explain design
4 = Clearly explains how it works

Scientific Inquiry Rubric (Grades 3-5)

Criteria:

1. Question (1-4 points)
Asks a testable scientific question

2. Hypothesis (1-4 points)
Makes a prediction based on prior knowledge

3. Procedure (1-4 points)
Describes clear, repeatable steps

4. Data Collection (1-4 points)
Records observations accurately

5. Conclusion (1-4 points)
Analyzes results and connects to hypothesis

6. Communication (1-4 points)
Presents findings clearly

Collaboration Rubric (All Ages)

Criteria:

1. Teamwork
* Shares materials and ideas
* Listens to others
* Takes turns

2. Communication
* Expresses ideas clearly
* Asks questions
* Gives helpful feedback

3. Problem-Solving
* Stays positive when challenged
* Tries different solutions
* Helps team overcome obstacles

4. Responsibility
* Completes assigned tasks
* Stays focused

* Contributes fairly