A rubric for a science project or science fair, K–8 (free, printable)

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Free science project and science fair rubrics for K–2, 3–5 and 6–8: the real criteria, what changes by grade, and how to print or change them.

A good rubric for a science project scores the science idea first, then the model or display, the explanation, safety and the finished work, while a science fair rubric scores the question, the fair test, the data, the conclusion and the board and talk. Peabody Teach has both, free and printable, each written in three grade bands: K–2, 3–5 and 6–8. The science project rubric is for a model or display at the end of a unit, and the science fair project rubric is the judges' score sheet for a fair. Peabody is free through the end of 2026, and the rubrics need no sign-in.

This post walks through what each rubric actually scores, band by band, so you can pick the right one, and then how to print it, change it or hand it to students as a checklist.

Which rubric fits the assignment

The two get mixed up, and the difference matters. A science project shows an idea someone already knows: a model of the water cycle, a habitat, a simple machine, a cell. A science fair project tests a question the student asked. Score a model on "fair test" and every student loses points for something they were never asked to do.

- The assignment: A model or display at the end of a unit · The rubric to use: Science project rubric
- The assignment: A school or class science fair · The rubric to use: Science fair project rubric
- The assignment: A hands-on experiment in class · The rubric to use: Science experiment rubric
- The assignment: A written write-up of an experiment · The rubric to use: Lab report rubric

All four live in the same set of premade rubrics, so you can move between them if an assignment is part model, part test.

How the three grade bands differ

Every Peabody rubric is written three times, and the bands differ on purpose, not only in length.

- K–2 has three levels: Wow!, Yes and Not yet. There are no points, and each cell is short enough to read aloud to a child.

- 3–5 has four levels with points (Exceeds 4, Meets 3, Approaching 2, Beginning 1) and plain words. One row counts twice.
- 6–8 has the same four levels with points and asks more of an older student: evidence, sources, variables and limits.

Each row also has an "I can" line in the student's voice, which prints as a checklist.

The science project rubric, band by band

K–2 (four rows, no points). My science idea ("I can show one science idea with my project"), Labels, Telling about it, and Safe and careful. A Wow! for the first row reads: "My project shows a science idea and I can tell why it happens." Not yet reads: "It is hard to tell what science idea my project shows."

3–5 (five rows, 24 points). Science idea (counts twice), Model or display, Explanation, Safety and care, and Finished work. The top cell for the science idea asks for an accurate idea with the cause behind it explained in the student's own words. The top explanation cell asks the student to use science words correctly and say how the model differs from the real thing.

6–8 (five rows, 24 points). Science concept (counts twice), Model design, Evidence and sources, Safety and care, and Communication. Model design is where middle school gets harder: the top cell asks the model to show how the key parts interact, state its scale and name at least two limits of the model. Evidence and sources asks for data or facts from two or more reliable sources, cited correctly.

The science fair rubric, band by band

K–2 (five rows, no points). My question, My test, What I found, My board, and Talking to judges. The top cell for My question is "I ask a question I can test and I tell what I think will happen." That is a hypothesis in words a first grader can say.

3–5 (five rows, 24 points). Question and prediction, Fair test, Data (counts twice), Conclusion, and Board and talk. The top Fair test cell asks the student to change one thing, keep the rest the same, repeat the test at least three times and follow the safety steps. The top Data cell wants every result in a neat table with units and a correct, labeled graph.

6–8 (five rows, 24 points). Question and hypothesis, Variables and procedure, Data analysis (counts twice), Conclusion and error, and Board and interview. Here the student names independent, dependent and controlled variables, uses a control group, writes an if-then hypothesis with a reason from cited research, and names sources of error and how to fix them.

Why does data count twice? Because a fair project lives or dies on what the student measured. A beautiful board with no data should not outscore a plain board with careful results.

How to use it, step by step

1. Open the rubric page and pick the band. Each page shows all three bands as tables, with the number of levels, criteria and total points over each.
2. Print it. The Print button prints one band in landscape with Name and Date lines, plus a Total line in 3–5 and 6–8.
3. Or copy it. "Copy for Google Docs" copies the band as a table you can paste into Google Docs or Word.
4. Change any cell. "Open in the maker" loads that band into the rubric maker, where you can change a word, add a row, add points to K–2 with a switch, or turn it into a single-point rubric. What you change stays in your browser.
5. Send the checklist home. "Print the 'I can' checklist" gives students and families the same goals in a student's voice, before the work starts.

The science fair page suggests sending it home when the project is assigned, so families see what judges look for, and running a practice fair the week before with classmates as judges.

A sample rubric you can use right now

If you just need something to copy onto a page, here is a plain four-level rubric for a 3–5 science project. Change any word to fit your class. For the full, printable version in three grade bands, use the Peabody Teach rubric.

- Criterion: Science idea (counts twice) · 4: Exceeds: Accurate, and explains the cause in the student's own words · 3: Meets: Accurate, with a short explanation · 2: Approaching: Partly accurate or hard to follow · 1: Beginning: Unclear or not accurate
- Criterion: Model or display · 4: Exceeds: Neat, labelled and clearly shows the idea · 3: Meets: Shows the idea with most parts labelled · 2: Approaching: Some parts missing or unlabelled · 1: Beginning: Hard to tell what it shows
- Criterion: Explanation · 4: Exceeds: Uses science words correctly and says how the model differs from the real thing · 3: Meets: Uses some science words and explains clearly · 2: Approaching: Explains part of it · 1: Beginning: Cannot explain it
- Criterion: Safety and care · 4: Exceeds: Follows every safety step the teacher gave · 3: Meets: Follows the safety steps · 2: Approaching: Misses a step · 1: Beginning: Ignores safety steps
- Criterion: Finished work · 4: Exceeds: On time, tidy and complete · 3: Meets: Complete with small gaps · 2: Approaching: Missing pieces · 1: Beginning: Mostly unfinished

That is 24 points, because the science idea counts twice (8 + 4 + 4 + 4 + 4).

10 criteria to choose from

A rubric works best with four to six criteria. Pick the ones that match what you taught.

1. The science idea: is it correct, and does the student know why?
2. The question: can it be tested? (fair only)
3. The hypothesis or prediction: is it a guess with a reason?
4. The fair test: one thing changed, the rest kept the same, repeated at least three times.
5. The data: is it recorded, with units, in a table or graph?
6. The conclusion: does it say what the data show, and whether the prediction was right?
7. The model or display: is it neat, labelled and accurate?
8. Sources: for older students, two or more reliable sources, cited.
9. Safety: does the student follow the steps the teacher gave?
10. Communication: can the student explain it to a stranger in a minute?

8 tips for grading science projects fairly

1. Share the rubric on day one. Students do better when they know what a 4 looks like.
2. Score the criteria, not the glue. A plain board with careful data should beat a fancy one with none.
3. Grade the thinking, not the budget. Do not give points for an expensive kit or a parent's help.
4. Use the student's words. Ask a question or two and score what the student says, not just the board.
5. Score one criterion at a time across the whole class, so a long afternoon does not change your standards.
6. Write one specific comment per student: one thing done well and one thing to try next time.
7. Allow a redo for the explanation. Learning to say it clearly is part of the point.
8. Keep safety non-negotiable. A project that breaks a safety step does not meet it, whatever else it does.

Parents: a quick checklist before the project is due

- My child can say the science idea in one sentence.
- The project has a title and labels for the parts.
- If it's a fair project: there is a question, a prediction, a fair test, results and a conclusion.
- Any adult-only steps were done by an adult.
- My child has practised explaining it aloud once.

Looking for ideas? See science fair projects for kids, the science fair rules for elementary school, and last-minute science fair projects. Running a fair? How to organize a school science fair goes through it.

What to tell students before they start

The rubric pages include lines to say out loud. For a science project: your project should teach someone one science idea, so say it in one sentence first, and label the parts so a visitor could understand it without you. For a science fair: pick a question you can answer with a test, not with a book, and change only one thing in your test.

Both rubrics include safety in their criteria, written as "the safety steps the teacher gave", so your school's own rules are the standard. The criteria are generic and carry no standards codes, so they fit any curriculum.

If your students also read about science, Peabody's free stories include plenty of curious characters and real-world questions, and they are a good warm-up for "what do you want to find out?"

Questions

What should a science project rubric include?

The science idea, how the model or display shows it, the student's explanation, safety, and the finished work. Peabody's science project rubric scores those five in grades 3–5 and 6–8, with the science idea counting twice, and four plain rows for K–2.

What is the difference between a science project rubric and a science fair rubric?

A science project rubric scores a model or display of a known idea. A science fair rubric scores an investigation: a testable question, a fair test, the data, the conclusion and the talk to the judges. Use the fair rubric only when students ran their own test.

Is there a science fair rubric for kindergarten to 2nd grade?

Yes. Peabody's K–2 science fair rubric has five rows (my question, my test, what I found, my board, talking to judges) at three levels, Wow!, Yes and Not yet, with no points, written so a child can follow it read aloud.

Are Peabody's science rubrics free?

Yes. Every rubric page prints, copies into Google Docs and opens in the rubric maker with no sign-in, and Peabody is free through the end of 2026.

How many points should a science project be worth?

There is no standard. A common shape is five criteria at four levels, with the most important one counting twice, which gives 24 points. Convert to a percentage or a letter grade your school uses.

How do I grade a science project?

Score each criterion on its own using the rubric, add up the points, and leave one comment about what went well and one about what to try next. Score the science idea before the display.

What makes a good science project?

A clear science idea explained in the student's own words, a model or display that shows it, an honest account of how it differs from the real thing, and safe, careful work. For a fair, add a testable question and real data.

Can I make my own rubric?

Yes. Start from the sample above or open a premade one in the rubric maker, change the words, and save the print.

Free at peabody.kids/blog/rubric-for-science-project