How to run a homeschool science fair, from two families to a co-op

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Running a homeschool science fair: a six-week plan, mixed ages on one night, judging by entry code instead of name, judges from other families, and certificates.

A homeschool science fair works best as a small version of a school fair: a date six weeks out, one project per child, a check on each child's question at five weeks, boards due a few days before, and judges who score by entry code rather than by name, ideally parents judging other families' children. It can be two families round a kitchen table or forty children in a rented hall. The difference from a school fair is the mix of ages on one night, and that every judge probably knows every child.

I built the organizer and the fair-night kit on Peabody for school fairs, and both fit a co-op without changes. Here's how to use them for a homeschool fair, step by step.

Six weeks out: set the date and send the plan

Put your fair date into the organizer and it prints six dated lines: the letter home (six weeks before), each child's question due (five), testing starts (four), results and graph due for a check (two), the board due (three days before), and the fair. The letter has blanks for your co-op's details and no Peabody branding, so it reads as yours. It says what a project is (one question, one thing changed, one thing measured, three tries), gives the safety rules in a sentence, and asks parents to help with safety and supplies while the words stay the child's.

For a co-op, one parent runs it. Send the plan to every family at once so the youngest and oldest children get the same dates.

Five weeks out: check every question

This is the checkpoint that saves the most projects. Read each child's question for one thing: does it change one thing and measure one thing? "Do plants like music?" doesn't; "Do bean plants bend toward the window?" does. In a homeschool group the organiser often knows the children well enough to suggest a better question in one line. Send families who are stuck to Pick my project, which asks four questions and hands over a project that fits the child's grade, the time left and what's in the house.

Mixed ages on one night

A co-op fair might run from kindergarten to 8th grade. Give each age its own expectations and its own group:

- Kindergarten to 2nd: an answer you count or see, three tries, a picture graph. Kindergarteners have their own ten projects on the kindergarten page, each with a one-page picture board.
- 3rd to 5th: a results table with units, a mean from 4th grade, a bar or line graph.
- 6th to 8th: named variables, a mean for every level, and a second test by 7th grade. The middle school page lists every project that reaches 6th grade.

The fair-night tally starts with three groups (K–2, 3–5 and 6–8), each with its own letter, so a 2nd grader's board is ranked beside other 2nd graders' and never against an 8th grader's.

Codes, not names

In a small group, judges know the children. Judging by entry code keeps it fair anyway, and keeps names off anything that leaves the room. School fairs do the same: Washington County School District's science fair rules in Utah (read 31 October 2026) say a student may not display their name or school on the project, and "all projects will be identified only by an assigned number".

- The tally makes the codes: A1, A2 for the K–2 group, B1, B2 for 3–5, and so on.
- Print the key and write each child's name beside their code. The key stays on the organiser's paper.
- A table tent for every code stands by each board. The judges' printables print them, with a judge sign-up sheet and a schedule that pairs judges and gives each pair a run of codes.
- Names go on the back of the board, if anywhere.

Judges who aren't the child's parent

This is the homeschool fair's own problem: every adult in the room is somebody's parent. The fix is simple. Pair judges, and give each pair codes from families other than their own. The schedule on the judges' page puts judges in twos with a time for each code, so you can swap a pair's run if it lands on their own child. Grandparents, a neighbour who's an engineer, an older teen from another family: any adult who'll ask questions and listen makes a good judge.

On the night, each judge opens a judge card on their own phone from a QR code, taps a code, scores six rows from 1 to 4 (question, method, data, conclusion, board and interview, out of 24), and picks one line for the child from a list. The tally averages each entry's judges and shows ties without breaking them.

Certificates, and keeping it kind

A small fair can give every child a certificate. The organizer's print shop makes a "Science fair scientist" certificate for each child who takes part, plus awards you choose (first, second and third place, best question, clearest data, best board, most curious scientist), two to a page, with a line for the name you write by hand. The tally prints its own certificates by code and

place. There's more in the certificate post.

If ranking feels wrong for your group, skip the places and give every child the taking-part certificate and one judge's line. The rubric and the conversation are the valuable parts.

Safety, the same as any fair

The rules most school fairs share hold at home too: no flames, no live animals, no mold or bacteria grown at home, kitchen chemicals only, and a review before any project that tests people. Peabody's projects keep every one, checked in code. The rules page lists them with their sources, ready to paste into your letter.

Questions grown-ups ask

How many families do we need?

Two is enough to make it a fair. With one family, invite grandparents as the judges and use the same codes and rubric: the interview is still practice for a bigger fair.

Can we keep the project for our records?

Yes. Every project page prints its sheets, and the class packet prints nine blank pages from plan to certificate. The logbook, results table and photos of the board make a tidy record of the work.

Where do we hold it?

A living room, a library meeting room or a community hall all work. One table-width per project, boards standing, nothing wet, hot or alive on the tables.

Peabody (peabody.kids) is free through the end of 2026, with no ads and no sign-up, and nothing a child taps on the science fair pages is sent anywhere. The library has stories by reading level for every age in your group.

Free at peabody.kids/blog/how-to-run-a-homeschool-science-fair