BIG FLOOR PLANS · GRANT PACKET · GRADES 1-5

Walk the Math: an elementary STEM unit on one life-size floor plan

Copy-ready answers for STEM and CTE grant applications. 5 free lessons on one reusable 1:1 print. Checked October 10, 2026.

How to use this packet

- Pick the funder below that fits your grade and timeline, and confirm its current deadline on the official page.
- Copy each section into the application. Replace everything in [brackets] (highlighted in the Word version).
- Get a written quote for the print at bigfloorplans.com/get-a-quote and put the exact figure in your budget.
- Optional: attach the free Evidence PDF from bigfloorplans.com/education-funding (research base and standards).

Funders that fit this project

FUNDER	AMOUNT	TIMING	WHAT THEY ASK FOR
AFCEA Gravely Grants (elementary STEM) https://www.afcea.org/gravely-and-paige-grants	Up to $2,000	Rolling; the official page said "Applications Now Being Accepted" on October 10, 2026.	Title and description, number of students, goals and objectives, methods and procedures, timetable, evaluation method, budget, and a letter of recommendation from your principal. Teachers in schools serving economically disadvantaged students are considered first.
DonorsChoose / PTA / PTO https://www.donorschoose.org/	Your project total	Ongoing.	A plain-language project story, the student impact and an exact cost. Use the summary and budget below.
ESSA Title IV-A (Student Support and Academic Enrichment) https://www.ed.gov/	Formula funds held by your district	Ask your district federal-programs / Title IV coordinator; uses are set locally.	A short request tying the purchase to well-rounded STEM education: use the summary, objectives and budget below.
Toshiba America Foundation, grades K-5 https://www.toshiba.com/taf/k5.jsp	Up to $1,000	Annual deadline October 1 (the 2026 date has passed; plan for the next cycle).	Project-based classroom STEM with tangible outcomes. At about the cost of a print, pair it with a PTA gift or DonorsChoose.

Funder details checked on the official pages on October 10, 2026. Amounts, eligibility and deadlines change every cycle: confirm them before you apply.

1. Project title

Walk the Math: an elementary STEM unit on one life-size floor plan

2. Project description

[Number] students in grades 1-5 at [School name] will learn measurement, area and perimeter, unit conversion, states of matter and food webs by walking, measuring and testing ideas on a full-size (1:1) printed floor plan of a real building, the Teaching House. Over [5 weeks], students complete 5 standards-aligned lessons, 2 of them on the print and the rest in taped spaces. Each team leaves with a checked area-and-perimeter design for a room addition and a measured food web of the house. The print is a durable, reusable classroom material: after this project it stays in use for future classes and other subjects, with 75 free lesson plans written for it.

3. Students served

[Number] students in [number] class sections, Grades 1-5, at [School name], [City, State]. [Percent]% of students qualify for free or reduced-price meals. [Optional: number of students with IEPs or English learners; the lessons include SPED and ELL supports.] Because the print is reused, about [number] students per year will use it after this project.

4. Goals and measurable objectives

Goals

- Students build measurement, area and unit-conversion skills by walking and measuring real spaces at true size.
- Students use the same full-size house to model science ideas (states of matter, food webs) with their whole bodies.
- Students explain their reasoning with numbers and evidence they collected on the floor.

Measurable objectives (set your own targets)

- By [date], at least [80]% of students will read room lengths on a plan. (Fractions of the Plan), measured by the lesson's exit ticket.
- By [date], at least [80]% of students will find the perimeter of a room from its plan dimensions. (Baseboard Run), measured by the lesson's exit ticket.
- By [date], at least [80]% of students will read room lengths on a plan. (Story Problems on the Plan), measured by the lesson's exit ticket.
- By [date], at least [80]% of students will measure real lengths in feet and convert to inches, yards, and meters (Convert the House), measured by the lesson's exit ticket.

5. Methods and lesson sequence

Students work in small teams on the full-size print. Each lesson follows the same routine: a short teacher model, guided practice on the floor, team work, a check for understanding and an exit ticket with an answer key. Every lesson also has a paper version at desks and supports for SPED and English learners.

WEEK	LESSON	TIME	WHAT STUDENTS DO	STANDARDS
[Week 1]	Fractions of the Plan https://www.bigfloorplans.com/lessons/fractions-of-the-plan	35-45 min	Students write each Tiny House room as a fraction of the whole from the plan, show the fractions add to one, and walk them at full size.	CCSS 3.NF.A.1, CCSS 4.NF.B.3

[Week 2]	Baseboard Run https://www.bigfloorplans.com/lessons/baseboard-run	35-45 min	Students find Bedroom 2's perimeter, subtract its doorways, order 8-ft trim pieces and walk the run on the print.	CCSS 4.MD.A.3, CCSS MP4
[Week 3]	Story Problems on the Plan https://www.bigfloorplans.com/lessons/story-problems-on-the-plan	25-35 min	Children solve story problems told on the Teaching House plan and walk the answers on the full-size print.	CCSS 2.MD, CCSS 2.OA.A.1
[Week 4]	Convert the House https://www.bigfloorplans.com/lessons/convert-the-house	35-40 min	Students measure features in feet, convert to inches, yards and meters, and prove one conversion by re-measuring.	CCSS 4.MD.A.1, CCSS 5.MD.A.1
[Week 5]	Dream Home Addition https://www.bigfloorplans.com/lessons/dream-home-addition	40-50 min	Students draw a dream room on grid paper (1 square = 1 ft), compute area and perimeter, and teams tape one design full size to test the fit.	CCSS 3.MD.C.7, CCSS 4.MD.A.3

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6. Timetable

- [Month 1]: order the print on award (about 48-hour proof, then printing and shipping); copy student sheets.
- [Months 1-3]: teach the 5 lessons above, one per week or two per week.
- [Final month]: post-assessment, student presentations, report results to the funder.

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7. Evaluation plan

Pre/post check. Give these items at the start of the unit and again at the end (answers are in the lesson keys):

- A 12-ft room in a 24-ft house: what fraction? (Fractions of the Plan)
- A 10 ft x 10 ft room with one 3-ft door. Trim needed? (Baseboard Run)
- A room is 14 ft and the next is 9 ft. Both together? (Story Problems on the Plan)
- Exit tickets from every lesson, scored with the lesson's answer key; report the percent of students meeting each objective.
- Team products (designs, data, takeoffs) checked against the lesson rubric.
- [Optional: a short student reflection: "What did you learn by walking the plan that you would not learn on paper?"]

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8. Standards alignment

- CCSS 3.NF.A.1 - https://www.thecorestandards.org/Math/Content/3/NF/A/1/
- CCSS 4.NF.B.3 - https://www.thecorestandards.org/Math/Content/4/NF/B/3/
- CCSS 4.MD.A.3 - https://www.thecorestandards.org/Math/Content/4/MD/A/3/
- CCSS MP4 - https://www.thecorestandards.org/Math/Practice/MP4/
- CCSS 2.MD - https://www.thecorestandards.org/Math/Content/2/MD/
- CCSS 2.OA.A.1 - https://www.thecorestandards.org/Math/Content/2/OA/A/1/
- CCSS 4.MD.A.1 - https://www.thecorestandards.org/Math/Content/4/MD/A/1/

- CCSS 5.MD.A.1 - https://www.thecorestandards.org/Math/Content/5/MD/A/1/
- CCSS 3.MD.C.7 - https://www.thecorestandards.org/Math/Content/3/MD/C/7/

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9. Research basis

- Uttal, D. H., Meadow, N. G., Tipton, E., Hand, L. L., Alden, A. R., Warren, C., & Newcombe, N. S. (2013). The malleability of spatial skills: A meta-analysis of training studies. Psychological Bulletin, 139(2), 352-402. https://doi.org/10.1037/a0028446
- Lowrie, T., Logan, T., Harris, D., & Hegarty, M. (2018). The impact of an intervention program on students' spatial reasoning: student engagement through mathematics-enhanced learning activities. Cognitive Research: Principles and Implications, 3, 50. https://doi.org/10.1186/s41235-018-0147-y

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10. Budget

ITEM	DETAIL	COST
1:1 printed floor plan: Teaching House	56' x 42' (2,192 SF of rooms, 17 rooms); printed on 4 panels at $0.45 per printed sq ft	about $1,060-$1,110 [replace with your written quote]
Shipping	Quoted with the print	[from quote]
Painter's tape, tape measures, grid paper	Classroom consumables for the lessons	[amount, or "school supply"]
Lesson plans and student sheets	75 lesson plans, teacher guides, student sheets and answer keys	$0 (free, CC BY 4.0)
Total request		[about $1,060-$1,110 + shipping + consumables]

Prices are estimates from the published rate ($0.45 per printed sq ft, $100 minimum); the exact figure depends on the final print size, so get a written quote (bigfloorplans.com/get-a-quote) before you submit. Purchase orders are accepted.

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11. Sustainability

The print is a durable, lightweight spunbonded synthetic that is tear- and water-resistant, so it can be rolled out and stored for repeated use. After this project, the same Teaching House print supports other lessons across grades and subjects (the Teaching House alone is used by nearly 30 of the free lessons), so the purchase keeps serving new classes each year at no added cost.

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12. Principal letter (template)

[Date]

To the [Funder] review committee,

I am writing to recommend [Teacher name], [subject/grade] teacher at [School name], for funding of "Walk the Math: an elementary STEM unit on one life-size floor plan." [Teacher name] plans to use a full-size printed floor plan so that [number] students can practise measurement, data and design by walking and testing their work at real scale. The project fits our school's goals for [goal, e.g. hands-on STEM / math achievement / career readiness], and the print will remain in use for future classes.

[One sentence about the teacher.]

Sincerely,
[Principal name]
[School name], [phone/email]

Before you submit

- Deadline and eligibility confirmed on the official page.
- Every [bracket] replaced.
- Written quote attached or its figure entered in the budget.
- Principal letter signed (if required).
- Lessons linked above checked against your grade and schedule.