

Paper Holder Test

Test a paper holder to see if it holds cubes and stays standing.

Name: _____ Date: _____

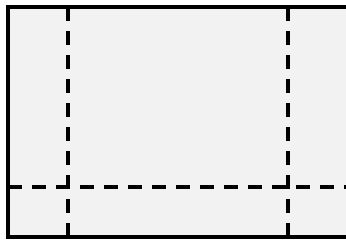
Make Your Paper Holder

Listen as your teacher reads the build directions. Your holder has a job: it should hold 5 cubes and stay standing.

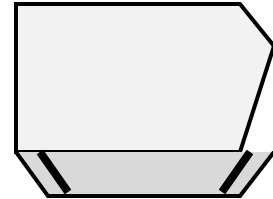
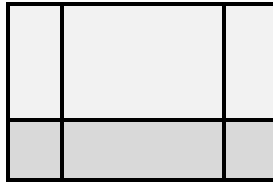
1. Start with your marked paper.

2. Fold the bottom up. Fold both sides in.

3. Tape both bottom corners.



fold lines



tape here and here

Use one paper and two small pieces of tape. Keep the top open.

Put your name on the holder. Do not test it yet. Take it to the testing space when your teacher says so.

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Test, Record, and Improve

Test it yourself. Do not mark an answer until after you look closely.

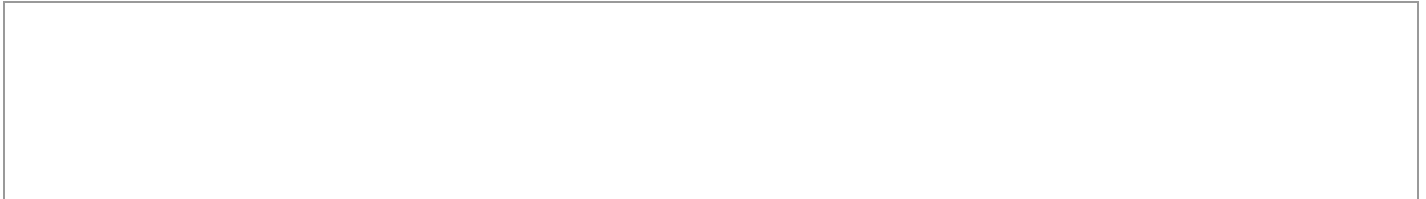
Test 1 - Capacity

Put 5 cubes in the holder at the same time. Let go.

Did it hold all 5 cubes without a cube falling out?

Result: ☐ Yes ☐ Not yet

Draw what you saw.



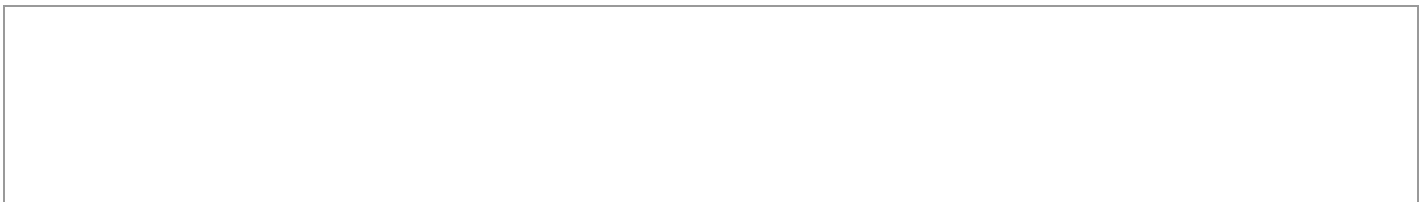
Test 2 - Stability

Leave the 5 cubes inside. Keep your hands off. Count 10 slow counts.

Did the holder stay standing?

Result: ☐ Yes ☐ Not yet

Draw what you saw.



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Test, Record, and Improve (continued)

Make it better. Draw one change you could make. You may change a fold or a tape spot.



I will change:

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Answer Key and Teaching Notes

Companion purpose: Children evaluate a design using two criteria. Results are based on each child's actual test; do not predict or announce a pass/fail result.

Materials to supply: For each child: one 6 x 9 inch sheet of sturdy paper, pre-marked with a horizontal line 1 inch from the bottom and vertical lines 1 inch from each side; two short pieces of tape; pencil; 5 same-size linking cubes. Also supply a flat testing surface and extra paper/tape for changes.

Exact setup: Before students arrive, mark each paper as described and place materials in a tray. Make one teacher model only for demonstrating folds; do not test the model in front of students. Put a clear testing space on a table. Print and supply all student pages, keeping teacher-key pages separate.

Teacher-read script for “Make Your Paper Holder”: “Your paper holder has two jobs. It must hold five cubes. It must stay standing for ten slow counts. Fold the bottom on the bottom line. Fold each side on its line. Tape the two bottom corners. Keep the top open. We will find out what happens when you test your own holder.”

Teacher-read script for “Test, Record, and Improve”: “Put in five cubes. Let go and look. Mark what happened. Next, leave the cubes inside. Keep your hands off while we count ten slow counts together. Mark what happened. Your drawing is evidence of what you saw. Then draw or write one change you could try.”

Observation method: Use a clipboard checklist while children work. For each child, observe: (1) places 5 cubes in the holder and releases it; (2) observes before recording; (3) leaves 5 cubes in place and keeps hands off during 10 counts; (4) records Yes or Not yet from the observed result; (5) draws or names one possible change. If a child needs motor help, an adult may hold tape while the child directs placement, but the child must still conduct the test and record the observation. Do not correct a recorded result before the child has observed it.

Numbered key and rubric:

1. Construction: Accept a holder with bottom flap folded up, side flaps folded inward, and both lower corners taped. Minor fold differences are acceptable.
2. Capacity record: “Yes” is correct only when all 5 cubes remain in the holder after the child lets go. “Not yet” is correct when one or more cubes falls out. The drawing should show the observed holder/cubes.
3. Stability record: “Yes” is correct only when the holder remains upright with 5 cubes inside for all 10 slow counts. “Not yet” is correct if it tips, collapses, or must be held. Outcomes may differ among children.
4. Improvement: Accept any plausible, specific change connected to the design, such as “Press the tape tighter,” “Put tape on a loose corner,” “Make the side fold wider,” or a matching drawing. Do not require the change to guarantee success.

Source credit: Task standard reference: LessonMaker Pro, “K.2.D,” evaluate a design or object using criteria to determine if it works as intended. <https://lessonmakerpro.com/standards/teks-science/k-2-d>