

# Building Paper Bridges



Place two piles of books/boxes some distance apart on a stable table. Ask students to make a simple paper bridge using one A4 sheet of paper. They **cannot** use cello tape, sticking tape, glue, pins or any other sticking material.

Get students to “test” the strength of the bridge by adding a fixed unit of mass, for example, 1 rupee coins. There are a number of variations which can be imposed to make the activity more difficult. In this activity, students will design, test and re-design their own paper bridges.

Above image is only representative of the design task.  
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## Background

Bridges are commonly seen all over the globe. Be it to cross a water body or to have multiple roads and railways over each other. Bridges are built using different materials, and are often dependent on how much load they have to carry and across what distances.



Four commonly seen structures are: beam, arch, truss and suspension types of bridges. Through this activity, the young “bridge engineers” can understand more about shapes and their strength. The teacher along with students can brainstorm on different designs of bridges. Get students to present their plans to the rest of the class. This well known D&T activity is aimed at sparking creative problem solving among students and provides them an opportunity to think, make and test, by giving a flavour of working with hands while using their imagination. Developers of the Engineering is Elementary (EiE) curriculum say that their research suggests that students exposed to such tasks; show greater gains in science learning, and that these tasks promote students’ knowledge of engineering content and awareness of the diverse fields of engineering (EiE, 2016).

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## References

[http://www.primaryscience.ie/media/pdfs/col/design\\_a\\_bridge.pdf](http://www.primaryscience.ie/media/pdfs/col/design_a_bridge.pdf)

<https://web.kidsactivitiesblog.com/26605/build-a-bridge>

[https://www.mos.org/sites/dev-elvis.mos.org/files/docs/education/mos\\_engineering-bridges\\_paper-bridges.pdf](https://www.mos.org/sites/dev-elvis.mos.org/files/docs/education/mos_engineering-bridges_paper-bridges.pdf)

<https://tecnoelpalo.wikispaces.com/file/view/bridge+building+lesson+plan.pdf>

Engineering is Elementary (EiE). (2004-2016). Executive summary of research findings. Retrieved from <https://eie.org/sites/default/files/eie-executive-summary.pdf>