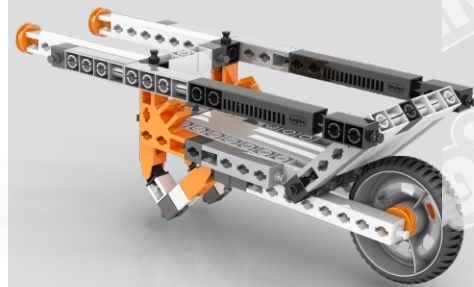




DISCOVERING STEM



build a wheelbarrow

Construct this model of a wheelbarrow and learn how it is used to carry heavy loads, using the elements of levers: fulcrum, effort and load; discovering the properties of second-class levers.

- How to carry heavy loads.
- What a second-class lever is.



build a cube

Different shapes offer different kind of rigidity. Experiment with line shapes (triangle and square) and a 3-dimensional shape (cube) to learn how to modify and strengthen structures.

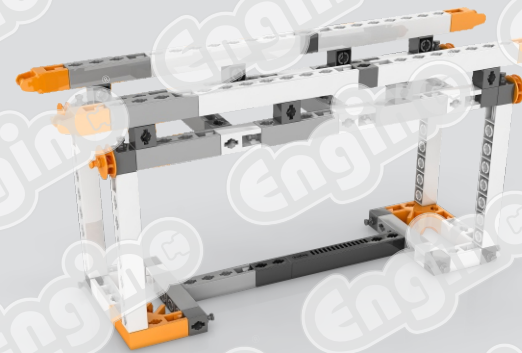
- What is the benefit of triangulation.
- How can you strengthen different shapes.



build a folding platform

This model of a folding platform is fully operational. It comprises of several levers connected together, creating a linkage able to raise the platform. Learn how levers work and how we get a mechanical advantage.

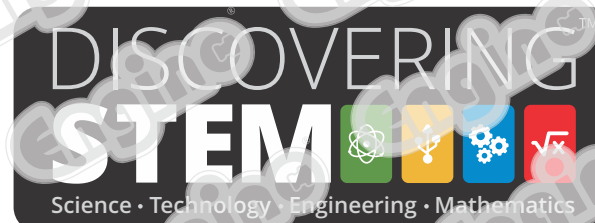
- What a parallel linkage is.
- How levers and linkages work together.



build a double deck bridge

Bridges can change type through specific modifications. This is simulated easily with the Engino system. Transform a single beam bridge into a double deck bridge and check the rigidity of the two models.

- What are the different types of forces.
- How to create a rigid bridge.



MECHANICS

levers, linkages & structures

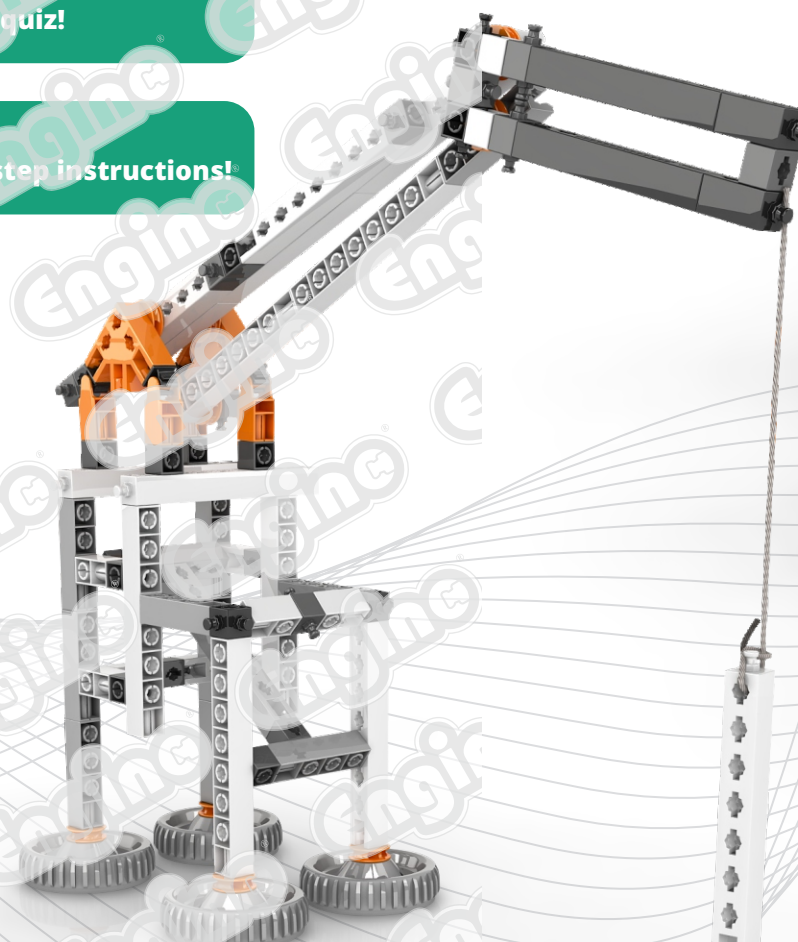
Learn how Levers are used to increase a force for lifting heavy objects and how you can create models with complex motion by connecting many levers together. Discover all the types of forces acting on structures and find out ways to reduce their effects. Build 16 working models such as a seesaw, a movable weight scale, a wheelbarrow, a parking gate, a toy with moving figures, a pantograph, a cube and a double deck bridge. You can find easy-to-follow building instructions for all models either online or in the booklet included. The booklet provides detailed explanations of the different scientific principles applied and incorporates innovative experimental activities for hands-on learning. A Quiz section is also available to challenge your newly acquired knowledge!

14 pages of theory and amazing facts!

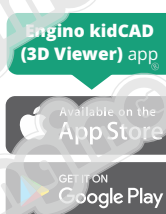
8 pages of experimental activities!

3 pages of revision quiz!

1 page of step by step instructions!



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Product Code: **STEM901**

Edition 3.0



16 models to build

9+

master engineers

15 online instructions

1 printed instructions

Discovering STEM

The purpose of STEM education - Science, Technology, Engineering and Mathematics - is to provide students with the necessary skills, knowledge and experience in order to cope with the technological challenges of the future. Modern pedagogical theories suggest that the study of engineering should be incorporated in all other subjects, starting from elementary level. DISCOVERING STEM series offers a practical solution for facing all these educational issues, aiding the teacher to engage students in STEM disciplines in a fun, exciting and interesting way! The educational packages are also ideal as a home learning tool! The series covers a broad area of subjects: Mechanics and Simple machines, Structures, Newton's Laws, Renewable Energy and even Programmable Robotics.

Brand AWARDS:



More models online

- A** Use your PC or tablet and go to the following link for more models:

www.engineo.com/instructions/stem901

- B** Download the app to discover step-by-step instructions in 3D view!

Engine kidCAD (3D Viewer) app:



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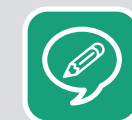
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