

Options for use in the classroom

Competencies that can be gained when building and working with the catapult:

- naming parts of the catapult, using them and improving their function
- creating drawings (as a planning proposal or an illustration)
- investigating the law of the lever and putting it to use
- enhancing or changing the lever construction
- developing and building machines

Suggestions for the use of the material in lessons:

1. Use the construction task to think about, sketch and test how the throwing range can be increased.
2. Use the instructions or your imagination to build the catapult (depending on existing knowledge, motor ability and time available this can be done in groups, pairs or individually).
3. Write down the students' experiences, evaluate and test the construction within the group.
4. Create more work pieces utilising the laws of levers and simple mechanics (see also OPITEC model 114664 Savonius-wind generator, OPITEC model 103410 wind generator or models from the children's own experiences).
5. Finally test the created catapults in different competitions. This could be a "furthest throw" competition or a competition where targets have to be hit (e.g. a ball has to hit a waste paper basket).
6. Extension: Write a non-fiction text possible in context of medieval history and find out more about the development of mechanical machines (e.g. Leonardo da Vinci).