

## EXERCISES

Friction, gravity, and energy

Complete the simulations and answer the related questions.

1. **Simulation about friction** at [tinyurl.com/val-kitka](https://tinyurl.com/val-kitka).  
Rub the surfaces together.



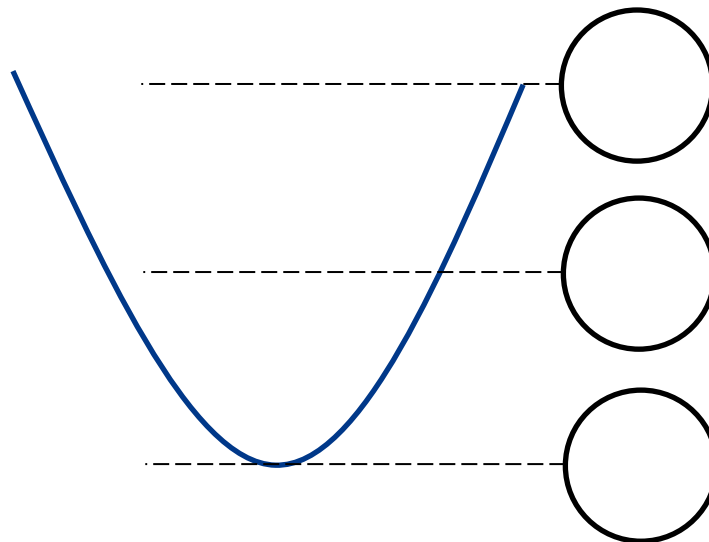
- macro: What changes can you observe in the state of the objects?
- micro: What changes can you observe in the state of the particles?

2. **Simulation about energy** at [tinyurl.com/val-energy](https://tinyurl.com/val-energy).



- Choose **Johdanto**.

Toggle the pie chart option on. Choose the U-shaped track. Use the simulation to fill appropriate energy forms as fractions in the charts below.



- Choose **Kitka**.

Toggle the pie chart option on. Choose the U-shaped track.

- Describe the motion.
- Let the skater move till a halt. Into which form did the energy of the skater transform? What made the energy deplete?
  - kineettinen, or kinetic
  - potentiaali, or potential
  - lämpö, or thermal