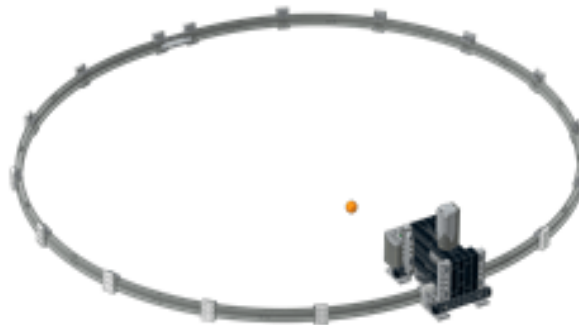
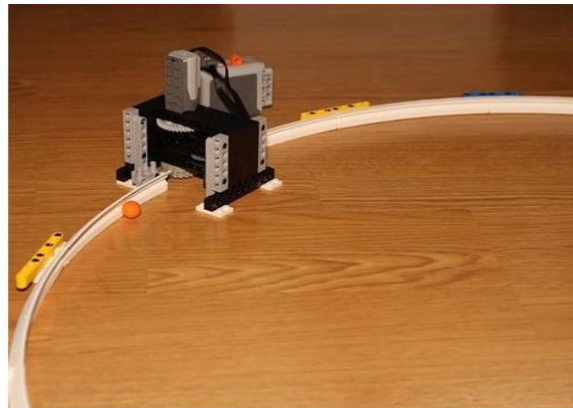
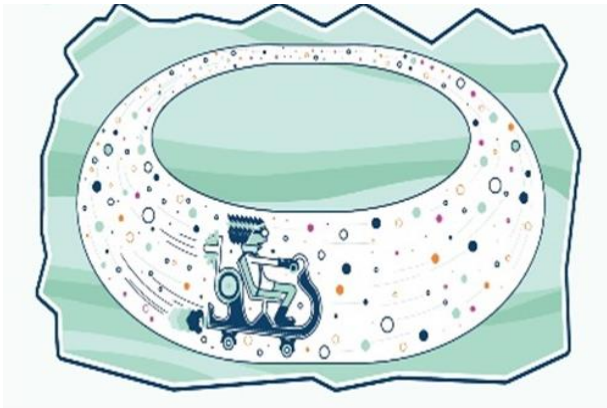


Can you build a LEGO accelerator?

Particle accelerators are tools that allow physicists to create and detect fundamental elementary particles – the basic building blocks of matter. Accelerators push beams of charged subatomic particles to very high speeds. In fact, they can accelerate particles to nearly the speed of light. There are two basic types of particle accelerators – linear and circular. Circular accelerators take particles around a ring where particles speed up by passing the same “kicking zones” several times until they reach the desired energy. Besides the basic research, particle accelerators are used in medicine, security, food industry and other important areas of our life.



Materials: see the list here <https://jkbrickworks.com/lego/customs/1419/1419acceleratorparts.htm>

Activity: see instructions here <https://jkbrickworks.com/particle-accelerator-instructions/>

Questions to ask: 1. When do you accelerate? What kind of acceleration would you have if you spin in the place? What pushes the ball forward in the LEGO accelerator?

Useful links:

<https://jkbrickworks.com/particle-accelerator-instructions/>

https://ed.fnal.gov/lsc_exhibits/list.html

<https://www.liveworksheets.com/id/uy41889bp>