

KIDS FIRST PHYSICS LAB



THAMES & KOSMOS



What's inside your experiment kit:



Checklist: Find – Inspect – Check off

✓	No.	Description	Qty.	Item No.
<input type="radio"/>	1	Axle, 10 cm	2	703 234
<input type="radio"/>	2	Axle, 15 cm, without head	1	703 518
<input type="radio"/>	3	Axle, 4 cm, without head	1	715 807
<input type="radio"/>	4	Axle, 6 cm	2	703 238
<input type="radio"/>	5	Axle, 7 cm	1	713 490
<input type="radio"/>	6	Worm screw	1	715 046
<input type="radio"/>	7	Axle lock	3	702 813
<input type="radio"/>	8	Red anchor pin	30	702 527
<input type="radio"/>	9	Joint pin	4	702 524
<input type="radio"/>	10	Shaft plug	7	702 525
<input type="radio"/>	11	Hinge	10	714 052
<input type="radio"/>	12	Rubber band, medium	2	703 374
<input type="radio"/>	13	Rubber band, XL	1	715 801
<input type="radio"/>	14	Hook	1	715 800
<input type="radio"/>	15	5-hole dual rod	2	715 675
<input type="radio"/>	16	Long dual rod	4	715 676
<input type="radio"/>	17	90-degree converter - X	5	715 051
<input type="radio"/>	18	Crank	1	715 809
<input type="radio"/>	19	Dual frame	2	715 045
<input type="radio"/>	20	Long frame	3	715 803
<input type="radio"/>	21	Square frame	6	714 284
<input type="radio"/>	22	Short frame	3	715 044
<input type="radio"/>	23	Wheel	4	715 804

✓	No.	Description	Qty.	Item No.
<input type="radio"/>	24	Medium pulley wheel	1	707 010
<input type="radio"/>	25	Two-to-one converter	4	714 286
<input type="radio"/>	26	11-hole rod	3	714 282
<input type="radio"/>	27	3-hole rod	5	715 042
<input type="radio"/>	28	5-hole rod	3	714 179
<input type="radio"/>	29	Curved rod	2	714 285
<input type="radio"/>	30	Washer	6	703 242
<input type="radio"/>	31	Large gear wheel, yellow	1	715 047
<input type="radio"/>	32	Small gear wheel, red	5	710 062
<input type="radio"/>	33	Medium gear wheel, blue	2	710 061
<input type="radio"/>	34	Extra-large gear wheel, orange	1	715 048
<input type="radio"/>	35	Small body plate	2	715 280
<input type="radio"/>	36	Body plate 3	1	714 276
<input type="radio"/>	37	Body plate 4	1	714 277
<input type="radio"/>	38	Blue anchor pin	2	714 129
<input type="radio"/>	39	Anchor pin lever (Part separator tool)	1	702 590
<input type="radio"/>	40	Horn	1	715 054
<input type="radio"/>	41	Elastic cord	1	703 245
<input type="radio"/>	42	String	1	714 240
<input type="radio"/>	43	Spiral spring	1	714 475
<input type="radio"/>	44	Marble	1	715 798
<input type="radio"/>	45	Die-cut sheet	1	715 797



Forms of energy storage

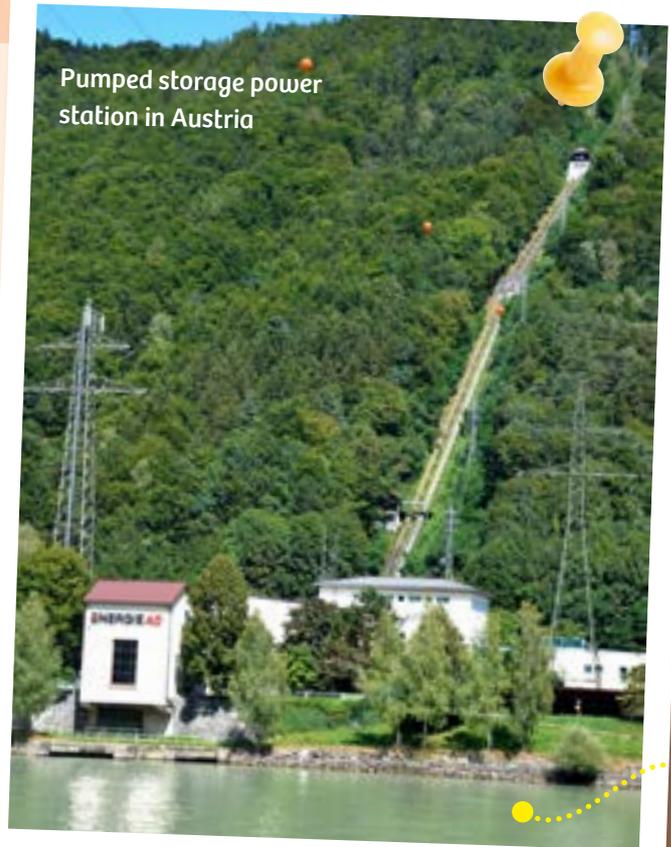
Energy can be stored in many ways, but only a few of them are effective or efficient.



BATTERIES

Electrical energy can be easily converted into other forms (which is why it is often used for transporting energy), but it's hard to store. A battery produces electrical energy, but it is stored in the form of chemical energy (meaning that the acid inside the battery undergoes a change in order to release electrical energy).

If a battery is capable of being recharged, it may be called a rechargeable battery or an accumulator. Large rechargeable batteries are an important component in electric cars.



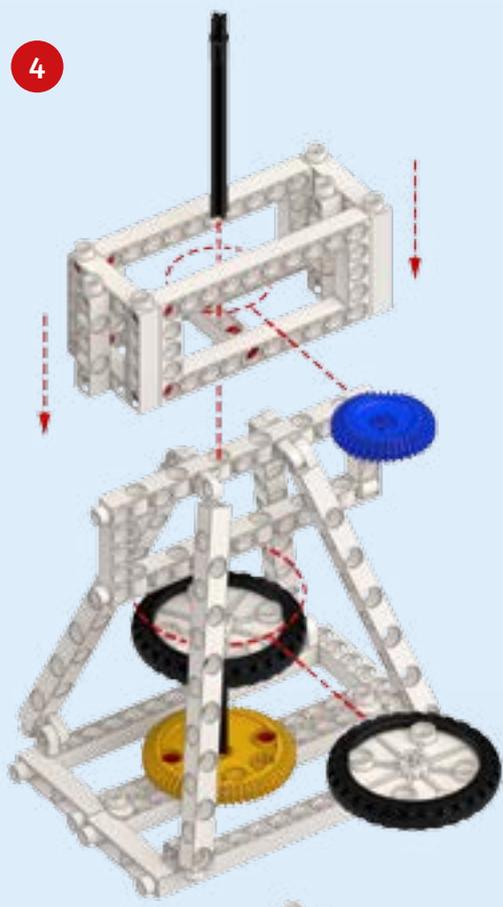
Pumped storage power station in Austria

Pumped storage

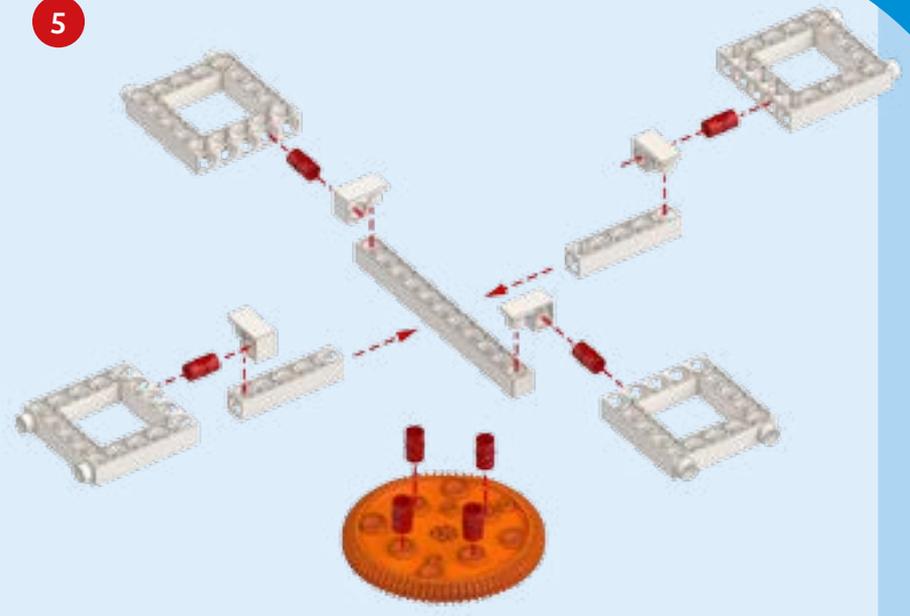
One way to store mechanical energy on a large scale is in a **pumped storage power plant**. These pump water up to a reservoir so the water "stores" more potential energy. When needed, the water is released through penstocks or sluice pipes, thus converting the potential energy into kinetic energy. Turbines are then used to convert the kinetic energy into electrical energy.

The largest pumped storage power station in the world is in Bath County, Virginia. With a generation capacity of over 3,000 megawatts, it is sometimes called the "largest battery in the world." By comparison, the largest nuclear power plant in the U.S., Palo Verde in Arizona, uses three reactors for a total capacity of 3,937 megawatts. But that plant is only designed to produce energy, not to store it.

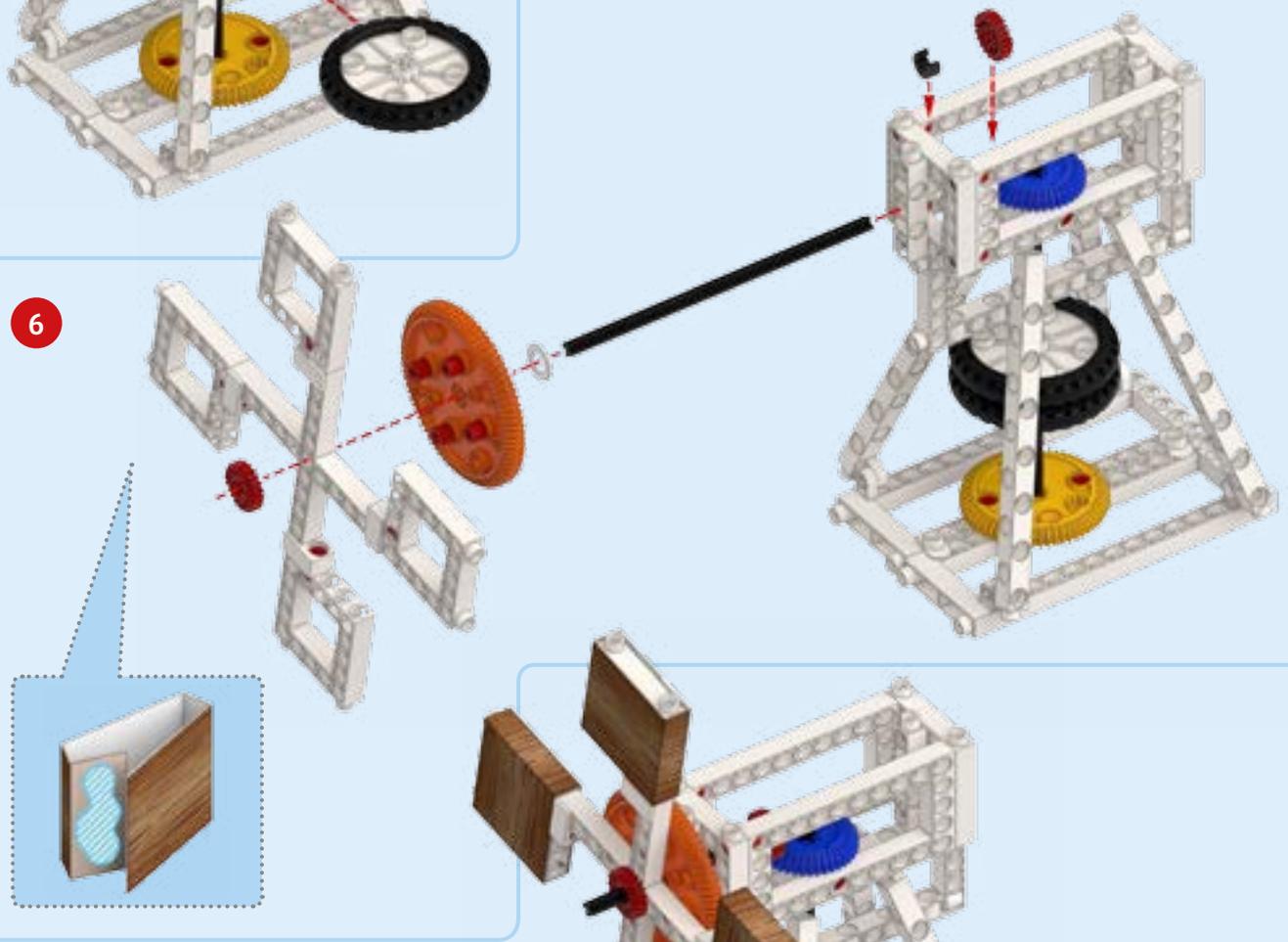
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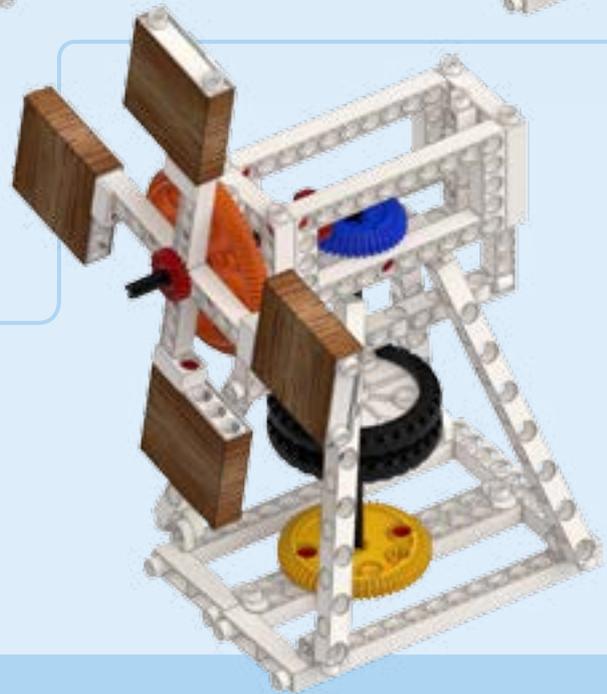
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Done!