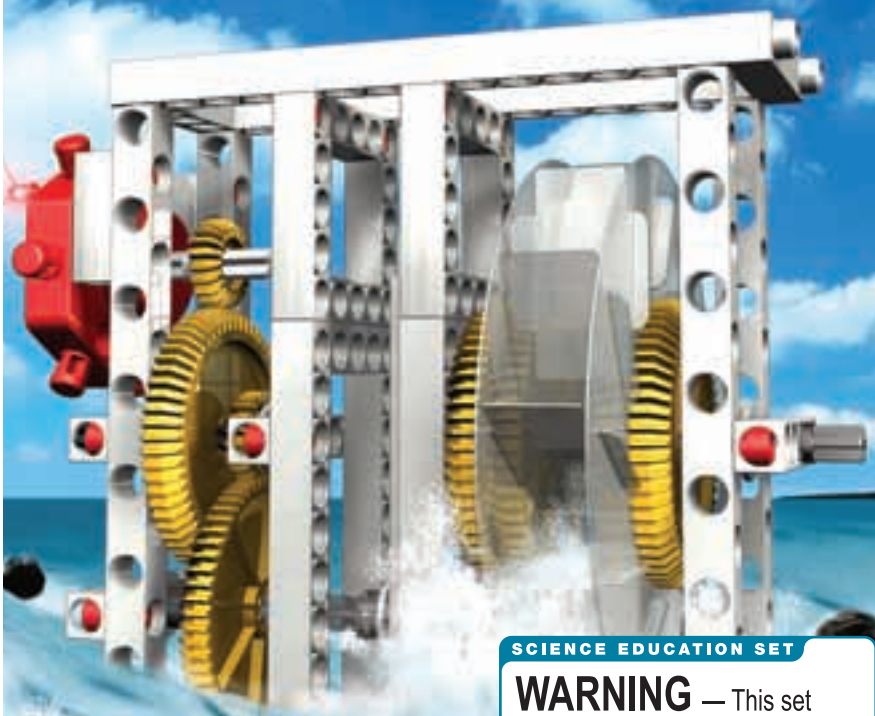


hydropower

renewable energy science kit



SCIENCE EDUCATION SET

WARNING — This set contains chemicals that may be harmful if misused. Read cautions on individual containers carefully. Not to be used by children except under adult supervision.

Experiment Manual

Thames & Kosmos®

Kit Contents

No.	Name	Quantity	Part No.
1	Joint pin	1	702524
2	Shaft plugs	2	705525
3	Shaft pin	1	702526
4	Anchor pins	26	702527
5	Axle locks	5	702813
6	Washers	6	703242
7	LED, red	1	704072
8	3-hole rods	2	705015
9	5-hole rods	4	704063
10	Short rod	1	703233
11	Long rods	4	703235
12	5-hole frames	2	705016
13	Small frames	2	703232
14	Large frames	2	703239
15	Small gear wheels (20 teeth)	3	702504
16	Large gear wheels (60 teeth)	5	702506
17	Short axle	1	703236
18	Medium axle	1	703238
19	Long axles	2	703234
20	Anchor pin lever	1	702590
21	Universal adapter w/ motor and axle	1	704068
22	Tubing, 2.5 mm ID by 120 cm	1	707144
23	Red straw, 2 mm OD	1	703513
24	Tubing, 2 mm ID by 5 cm	1	707142
25	Plastic sheet	1	707141
26	Experiment book	1	707131

Additional items needed: scissors, tape, large shallow basin, pitcher or watering can, two plastic bottles (1 L water or soda bottles), drinking glass, plate, and towels.

We reserve the right to make technical changes.

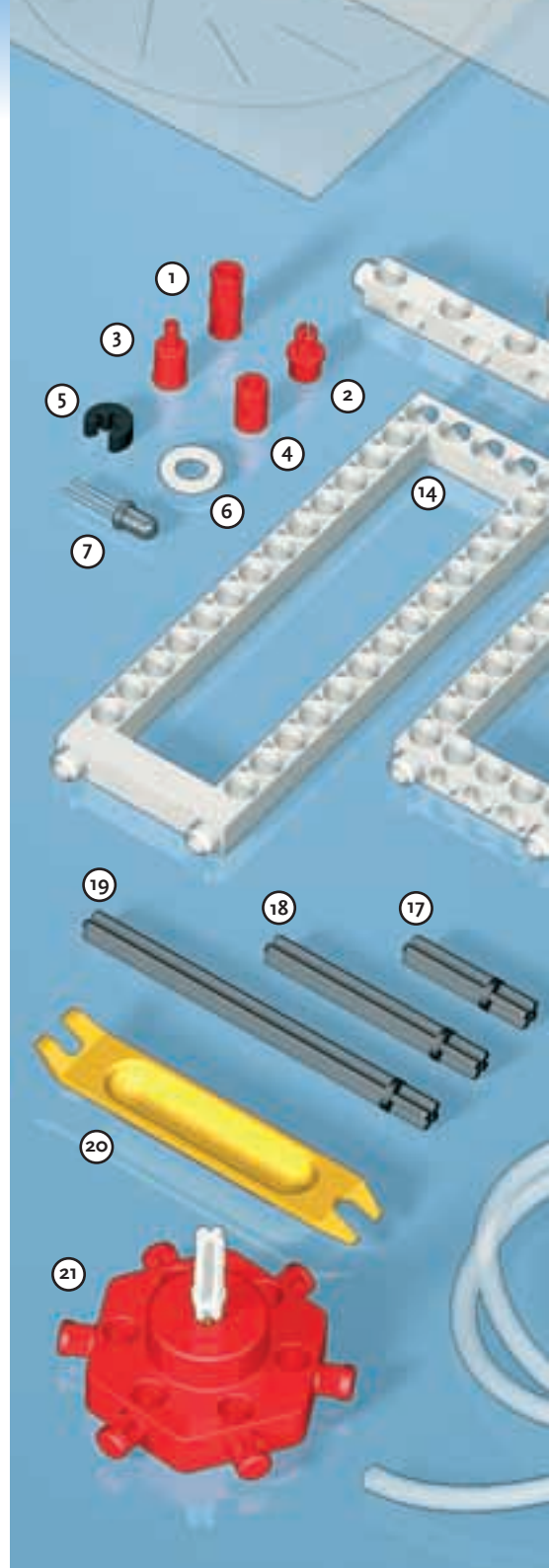
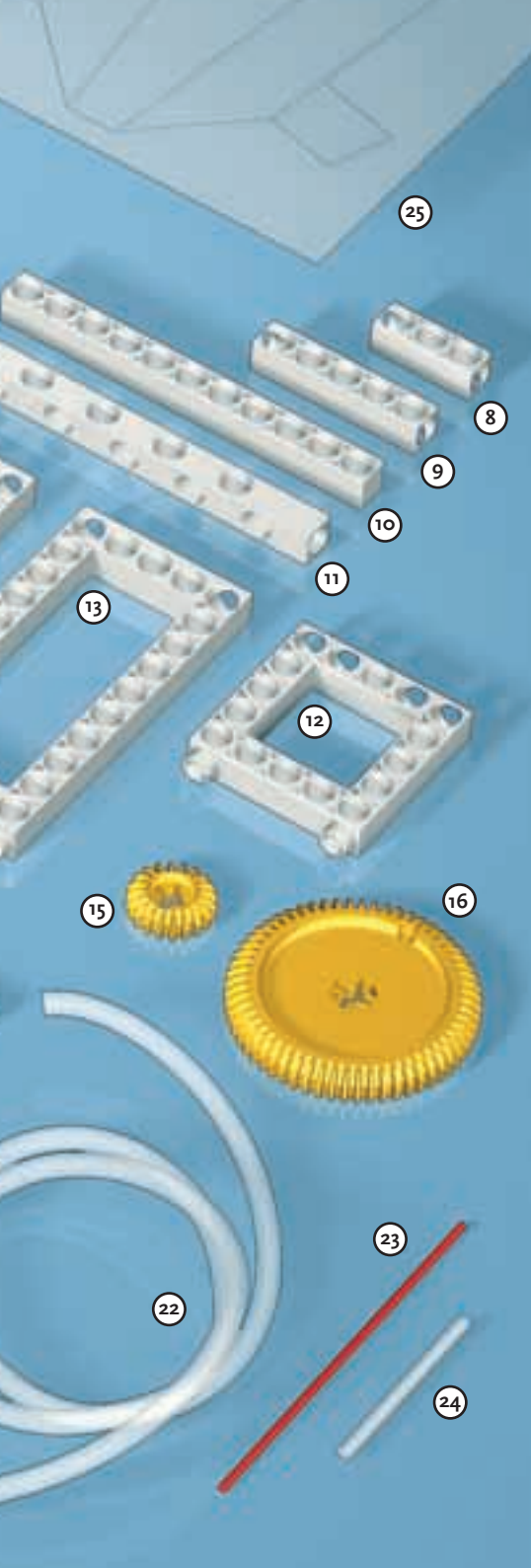


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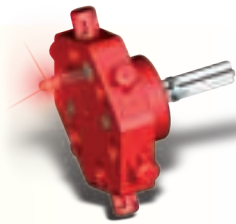
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Building Projects

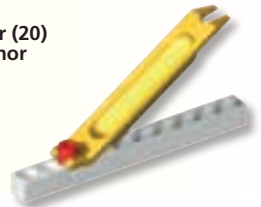
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Universal adapter (21) with LED (7): Attach the LED to the connection socket of the universal adapter with the two wires.



The anchor pin lever (20) is for removing anchor pins (4).



Hydropower Sawmill

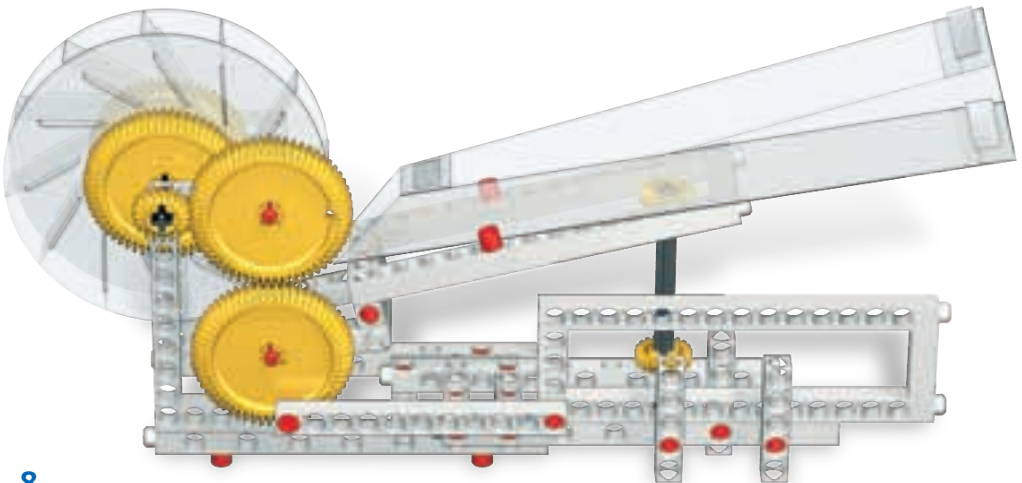
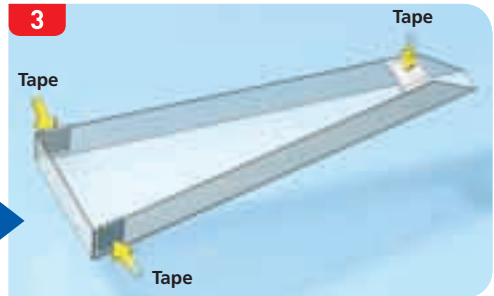
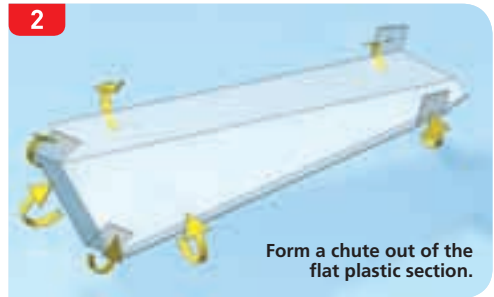
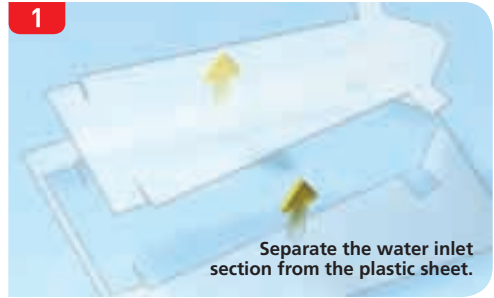
02 Workshop

Sawmill

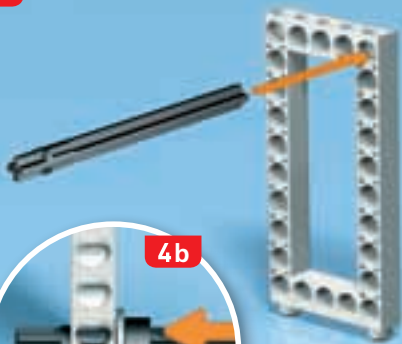
You will need:

- 1 water inlet (plastic sheet)
- 2 water wheel disks (plastic sheet)
- 12 water wheel paddles (plastic sheet)
- 1 plastic strip to make a ring (plastic sheet)
- 4 large gear wheels (16)
- 3 small gear wheels (15)
- 1 long axle (19)
- 1 medium axle (18)
- 2 large frames (14)
- 2 small frames (13)
- 1 short rod (10)
- 4 long rods (11)
- 4 5-hole rods (9)
- 2 3-hole rods (8)
- 1 washer (6)
- 2 shaft plugs (2)
- 1 shaft pin (3)
- 1 joint pin (1)
- 19 anchor pins (4)

Use tape to secure the two flaps on the long edge to the sides of the chute, and to secure the two flaps on the narrow edge to each other, as shown here.



4



4b



6



7b



8



5



You can pull the assembled water wheel off the axle and stick it back on again. You may have to do this if the paddle direction is wrong.

When removing the water wheel, press the two gear wheels tightly together so that the paddles don't fall out. Then carefully remove the axle.

Be careful not to twist the water wheel disks and gears, or to crush them.

If the water wheel falls apart, you will have to reassemble it with the instructions on page 6.

7



9

