

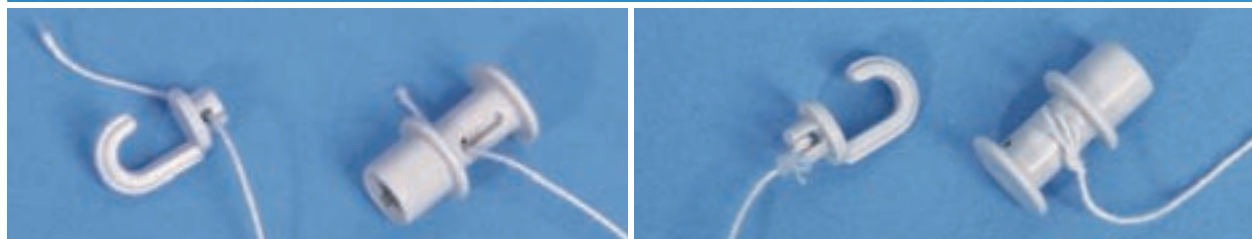
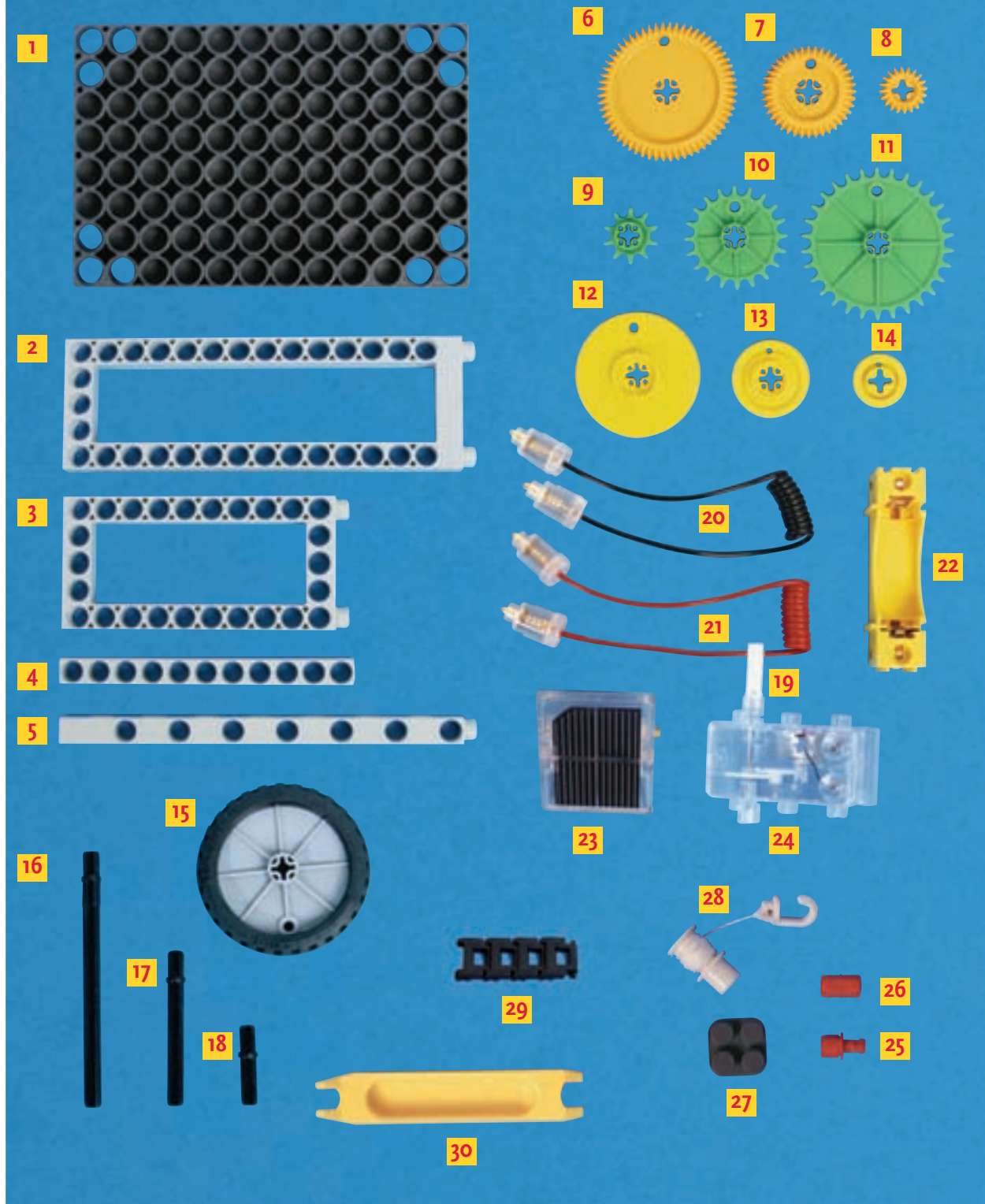


PHYSICS

solar workshop

Experiment Manual

Kit Contents



The crane hook and the cord holder (28) have to be fastened to the cord.

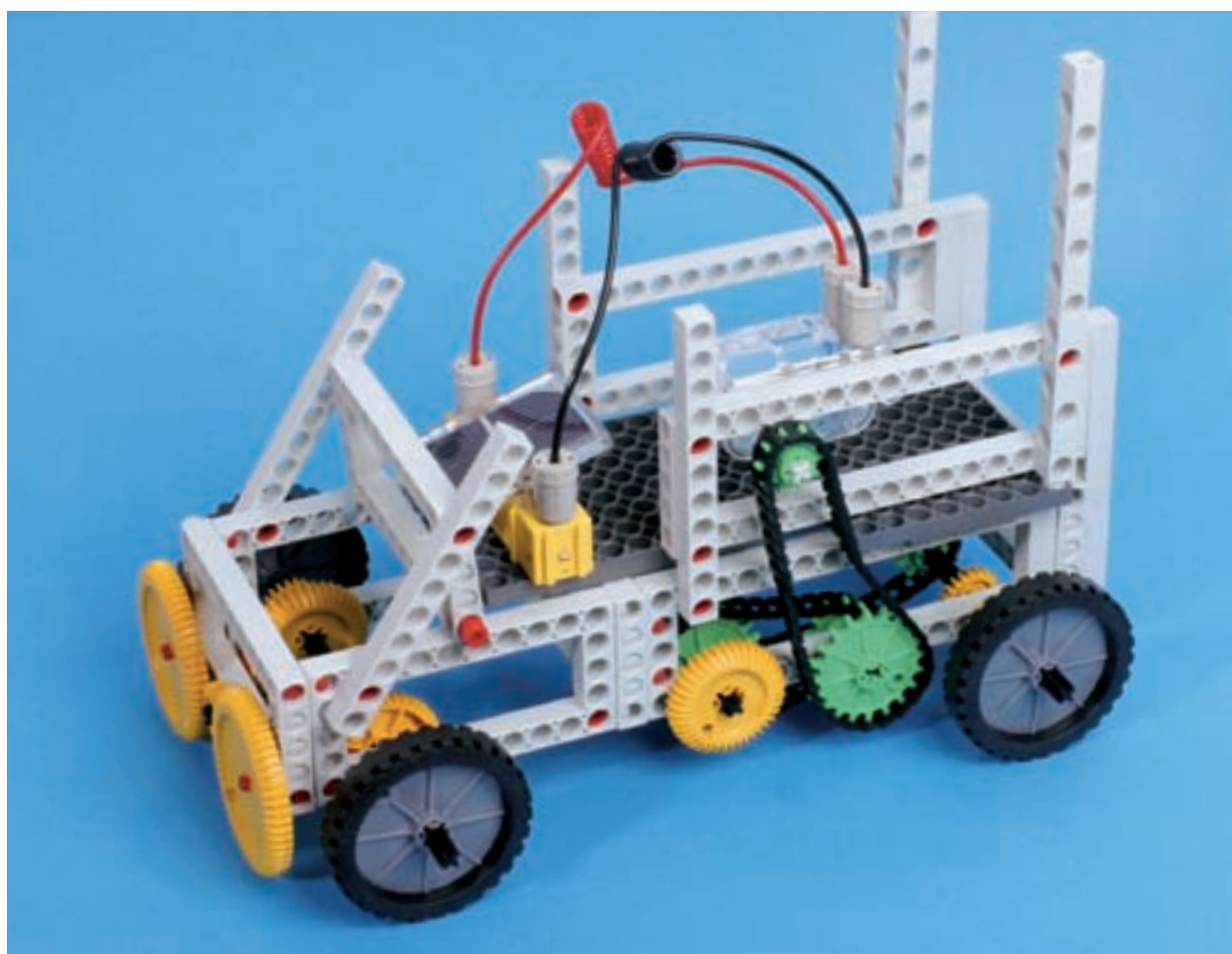
Truck with Large Cargo Bed

Undercover Technology

This truck has command of a pure chain drive that turns the wheels on the rear axle. The unusual thing about it is that the transmission to the rear axle is practically invisible. Only the chain from the engine to the drive shaft is visible — the other chains are hidden by the large cargo bed. The big headlights on the front grill turn when the truck is moving. They are set in motion by the front wheels, and have no direct contact with the engine. The yellow gear wheels move in reverse of the vehicle's motion: while the truck is driving forward, they turn in the opposite direction. Another special feature is the vehicle's moveable front end.

Parts List

2 x base plates 1	4 x long frames 2
6 x short frames 3	6 x short rods 4
2 x long rods 5	2 x large gear wheels 6
4 x medium gear wheels 7	10 x small gear wheels 8
4 x small sprockets 9	3 x medium sprockets 10
4 x tire wheels 15	4 x long axle shafts 16
2 x medium axle shafts 17	2 x short axle shafts 18
1 x engine shaft 19	1 x black cable 20
1 x red cable 21	1 x battery holder 22
1 x solar module 23	1 x solar engine 24
3 x shaft plugs 25	24 x anchor pins 26
121 x chain links 29	
2 x attachment plates 27	

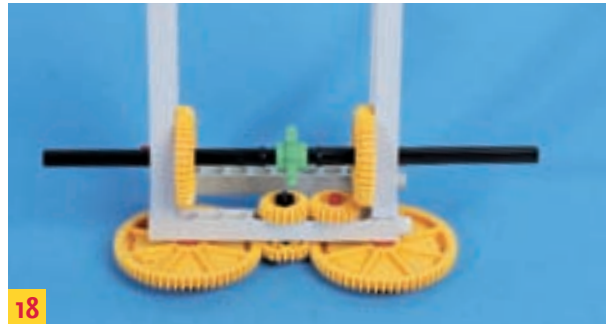


On this truck with a big cargo bed, it isn't just the tires that turn: The gear wheels on the front grill are also rotated by the front axle.



17

17. Now attach the two short frames to the frame with the large gear wheels. The medium gear wheel on the inner right has to mesh with the small gear wheel shown below it.



18

18. Now connect the two axle shafts with a small sprocket wheel (9) to form one long axle. Turn the axle to make sure that all the gears move smoothly.



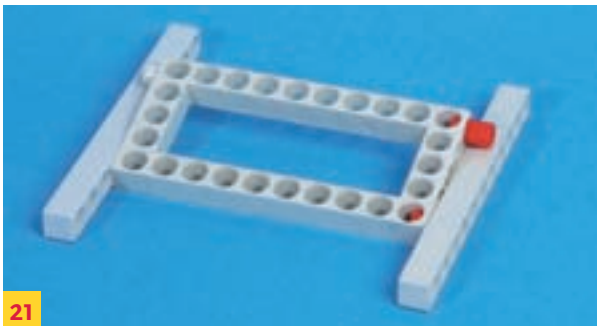
19

19. To complete the front of your truck, attach a small gear wheel (8) and a tire (15) to each end of the front axle.



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20. Now you will connect the front section to the cargo bed. Then attach two short rods (4) vertically to the front of the upper side frames.



21

21. At the front, the truck still has to get its movable front section. It is constructed from two short rods (4), one short frame (3), and two anchor pins (26).



22

22. Attach this structure to the forward area of the two side sections with two anchor pins (26). When you attach it, you will have to push the two rods apart a little.



23

23. Now you just need the solar module (23) with holder (22) and cables (20/21). When you mount it, be careful not to push down on the cargo bed.



24

24. Finally, turn the model upside down again. Adjust the wheels and tires so that they form straight lines.