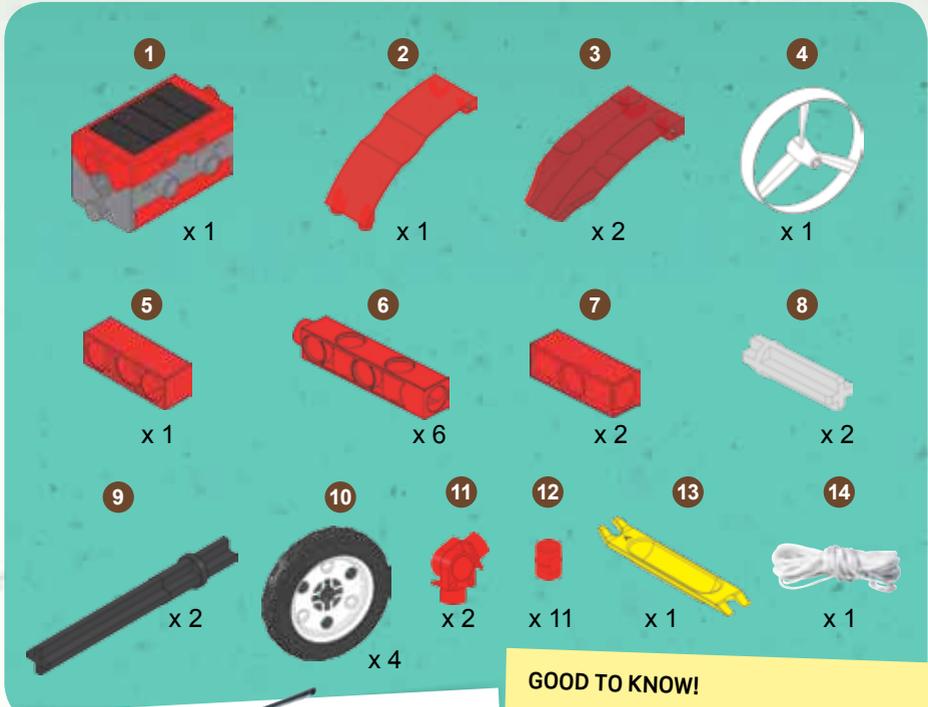




SOLAR CAR | The parts in your kit



You will also need:

Source of energy (sunlight, 1 x 1.5-volt battery, type AAA/LR03, or 1 x 1.2-volt rechargeable battery, min. 800 mAh/type AAA, light bulb (only halogen energy-saving bulb, 42 W)), ruler, sheet of white letter-sized paper, pencil, scissors, paper clip, chair

GOOD TO KNOW!

If you are missing any parts, please contact Thames & Kosmos customer service.

Any materials not included in the kit are indicated in *italic script* under the "You will need" heading.

No.	Description	Qty.	Item No.	No.	Description	Qty.	Item No.
1	SOLAR MODULE with Motor	1	714002	8	MOTOR SHAFT	2	702801
2	BODY PANEL, large	1	714003	9	MEDIUM AXLE	2	703238
3	BODY PANEL, small	2	714004	10	WHEEL	4	714006
4	PROPELLER	1	714005	11	JOINT	2	714123
5	3-HOLE ROD	1	714120	12	ANCHOR PIN	11	714124
6	5-HOLE DUAL-ROD	6	714121	13	ANCHOR PIN LEVER	1	702590
7	3-HOLE DUAL-ROD	2	714122	14	STRING	1	714240
						Total	37



Safety information inside front cover

Experiment to hit the ground running 1

The parts in your kit 2

Contents 3

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MODELS AND EXPERIMENTS

Solar Car 5

Experiment 1: Vroooooom... The solar cell lets your car zoom across the floor in an environmentally friendly way.

Solar Helicopter 9

Experiment 2: Whup whup whup... With the help of the solar cell, your helicopter is ready for liftoff.

Wind Maker 13

Experiment 3: Whoosh... Your solar cell can really help you make a lot of wind.

Solar Jet 17

Experiment 4: Ready to take off? Your solar jet is sure to get some attention.

Gyrocopter 21

Experiment 5: Whirr... What is a gyrocopter, and what does it have in common with maple seeds?

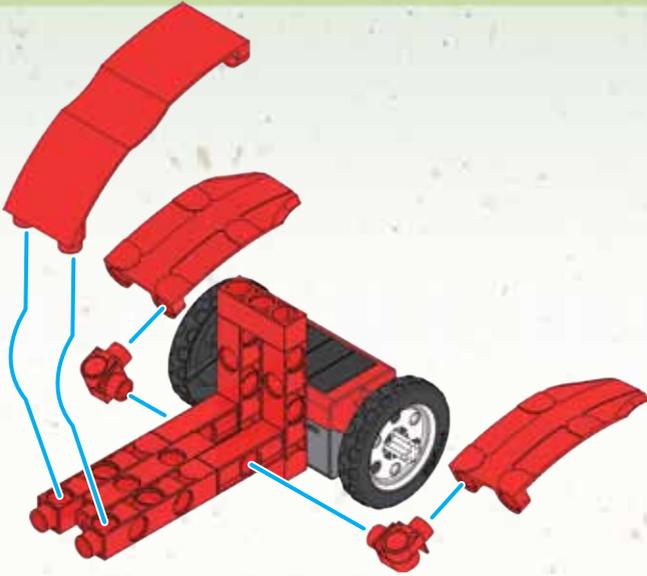
Copyright page inside back cover

TIP!

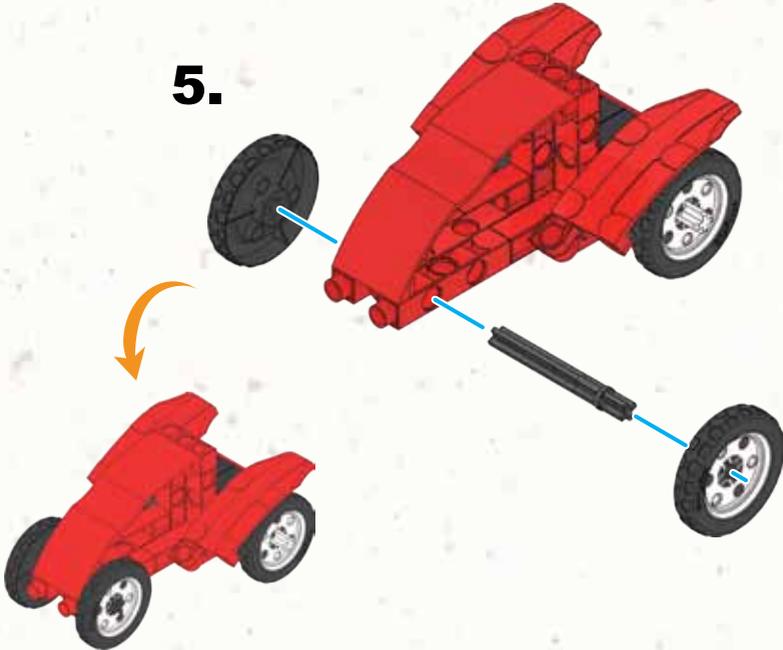
You will find additional information here: "Check It Out"
Pages 25, 26, 27, and 28



4.



5.



Completed



EXPERIMENT 1

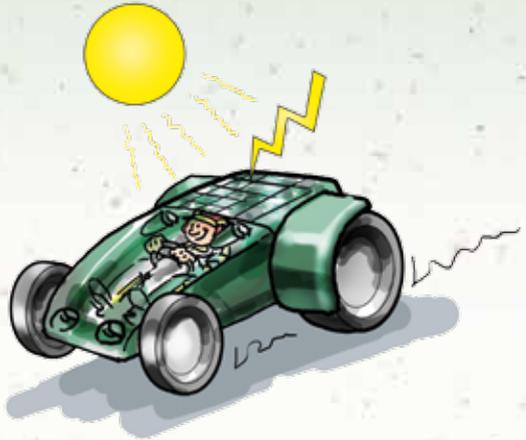
Can your car drive forward and backward?

YOU WILL NEED

- › The assembled solar car
- › Energy source (sunlight, halogen energy-saving bulb, battery)

HERE'S HOW

1. Run the car with the solar cell or the battery, sliding the switch to the appropriate setting.
2. In what direction does your car move?
3. Now remove the solar module from the model along with the tires, and re-mount it after rotating it 180 degrees.
4. Let the car run again. What happens now?



WHAT'S HAPPENING?

The current from the solar cell or the battery powers the motor inside the module. Several gears transfer this movement to the axles, and hence to the wheels. The wheels start to turn and your car drives forward. If you turn the solar module around, the axles turn in the opposite direction and your car races in reverse.

TIP!

Try driving your car on different surfaces, such as a hard, smooth floor and a carpet. If you're testing your car outside, you might try running it on a garden path, balcony, or terrace. On what kind of surface does the car drive best?

DID YOU KNOW ...

This yellow racer, which was built at Bochum University in Germany, is called "SolarWorld No. 1." At a race held in Australia in 2007, it got a prize for being the best-looking solar car in the world!

