Fanling Government Primary School

P.6 STEAM Cross – Curricular Learning

Smart Living

English

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Creating a mini solar car

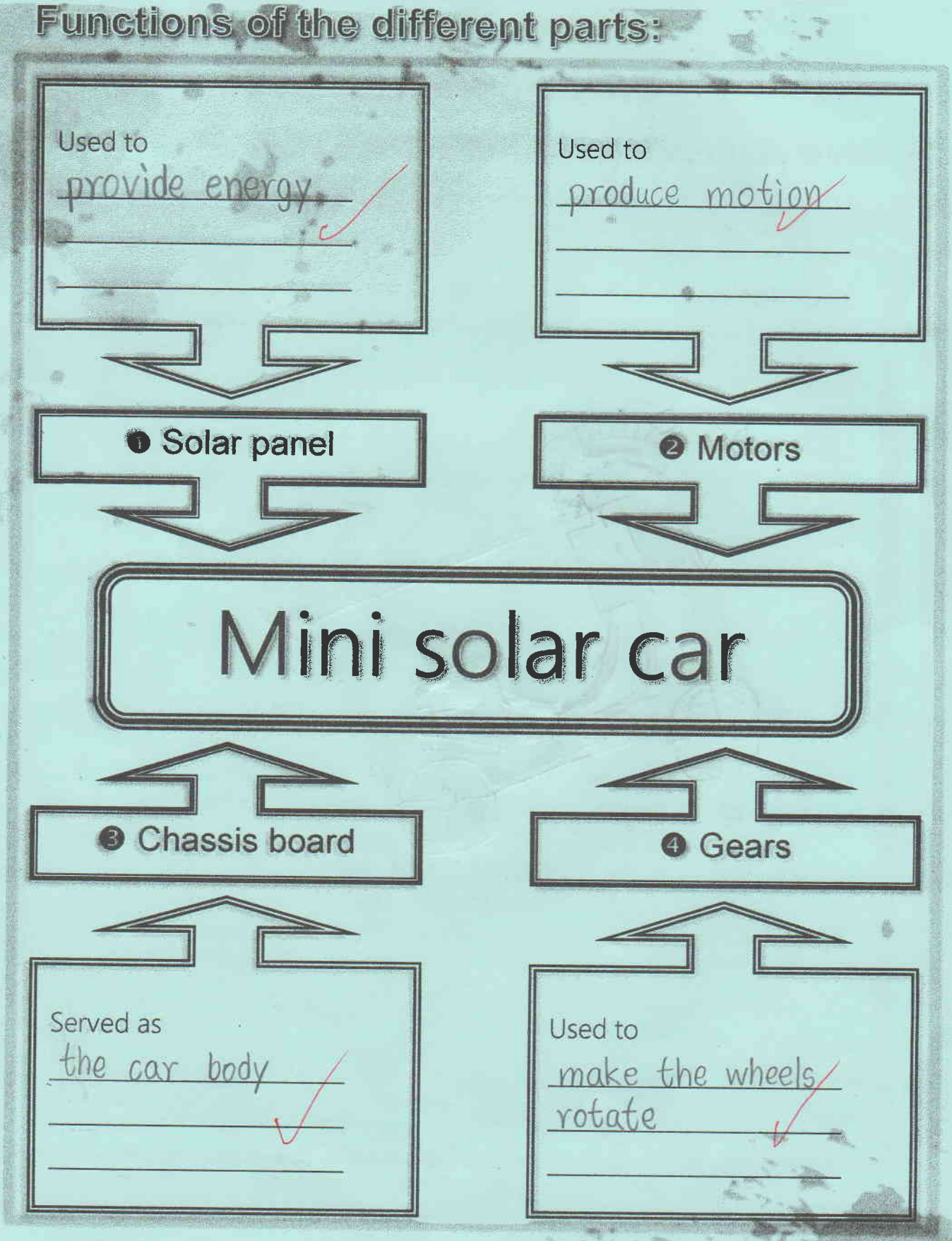
A. Based on your knowledge and daily experience, design a mini solar car.

Your design:

B. Analyze the functions of different parts and fill in the blanks with the correct words from the box.

make the wheels rotate	provide energy	provide electricity
produce motion	the car body	stop the car

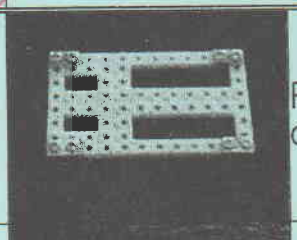
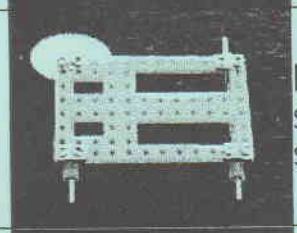
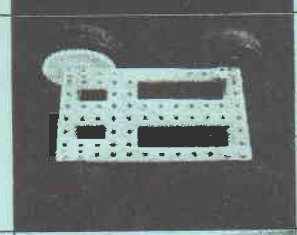
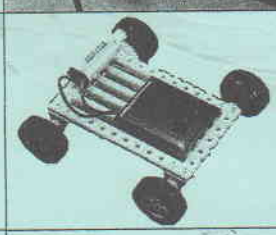
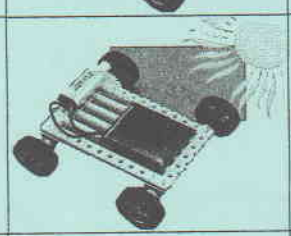
Functions of the different parts:



C. **Some information is missing in the following procedural text. Complete it by filling in the blanks with the words from the box.**

solar airplane	solar car	steps	procedures

D. **Make your mini solar car according to the following instruction manual.**

Making a Mini solar car		
steps	procedures	
1		First, screw support frame to the four corners of the chassis.
2		Insert two shafts into the support frame and secure with stoppers. Attach the gear as shown.
3		Next, attach four wheels to each end of the shafts respectively.
4		Connect the solar panel to the motor with wires. Put the wires through the holes of the motor. Gently twist each wire once.
5		Then, install the motor onto the chassis to drive the gear.
6		Place under sunlight and observe.
7	?	Finally, decorate your mini solar car to make it unique (special), cool and beautiful.

E. **Variable test :**

The direction which the solar panel faces.
Change the direction which the solar panel faces in each test by changing the direction the mini solar car goes towards.

Test the solar car and record its speed.

Test	Direction the solar panel faces (Put a ✓ in the appropriate boxes)			Time taken to travel 2 m (seconds)
	Towards sunlight	Away from sunlight	Others 45°	
1	✓			3 seconds
2		✓		X
3			✓	2 seconds

Result: *(circle the correct answers)*

After testing different directions the solar panel faces, we found that:
a) The solar car moves (**faster** / **slower**) when the solar panel faces the sun.
b) It moves (**faster** / **slower**) when the solar panel is away from the sunlight.