

Toys, Science, Mars and SDGs!

Could you survive on Mars ?



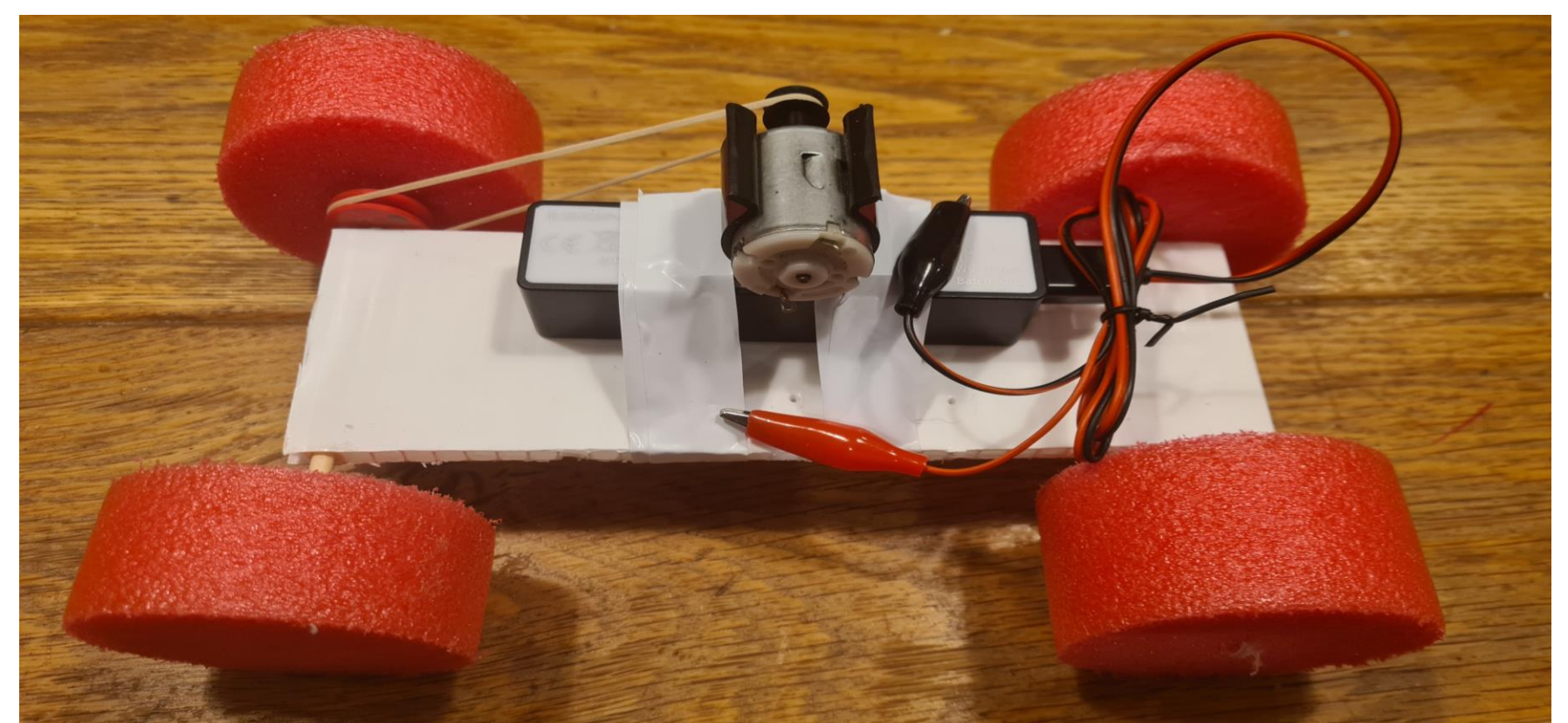
The purpose of this project is to use a Mars theme to excite students about design and engineering and to help them appreciate the importance of renewable energy in a world of limited resources. Students were challenged to produce their own energy from wind, to grow food crops using only a limited water supply and to build and test electric vehicles. Future Martians will need engineering skills to maximise limited resources!

Activity 1 : Students designed **wind turbines** that converted the K.E. of wind to P.E and then developed their designs to generate enough electricity to charge power supplies essential for life support and transport.



Activity 2: Students built **hydroponic systems** to produce a supply of food within 6 weeks with a limited water supply. Students learned about seed germination, nutrients, and the oxygen and light requirements of plants.

Activity 3: Students built an EPV or electric powered Martian vehicle to explore the red planet. Students investigated how solar energy could be used to charge their EPV and investigated the suitability of different tyres to navigate slopes and difficult terrain



Through these activities student developed both their engineering and design skills and also developed a deeper appreciation of the importance of the limited resources we enjoy here on Earth.

