

Science Task 1b

Daredevil Dean Potter climbs mountains - just to jump off them

The prospect of free climbing the Eiger is a pretty scary one but it didn't worry adventurer Dean Potter – he had a (very small) parachute on his back.



The much-revered daredevil managed to scale the famous Swiss mountain using little more than a spot of talc, before leaping off the summit, as these breathtaking images show.

‘It is an incredibly difficult climb. But with the parachute I felt confident. I designed one that weighs only 5lb and which I carry in a small pack on my back. A normal parachute weighs up to 14lb, which is too heavy to carry when climbing up a mountain. It enables me to climb to previously unthinkable heights because I know I have the safety of the parachute if I slip or cannot continue,’ said Mr Potter, who starred in the Channel 4 series Daredevils last year.

What you need to do

A Skydive Experience company needs a safety information leaflet to reassure its nervous customers. Research the science of how parachutes help skydivers land safely. Your leaflet should explain what happens through the skydive experience and include relevant diagrams.

Extend this information to include the use of parachutes to safely land space exploration equipment on planets and moons where the force of gravity may be different from that felt on Earth.

You may find these words helpful

mass, weight, force, gravity, air resistance, drag, balanced, unbalanced, resultant, speed, acceleration, deceleration

Level ladder

| What a pupil might do or say to show evidence of attainment at each level | |
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| Level 5 | Express speed in terms of distance covered and time taken. Explain different situations in terms of balanced and unbalanced forces. Explain methods of reducing resistance. Explain falling as the effect of resultant forces. |
| Level 6 | Interpret distance time graphs. Explain situation using overall (resultant) forces. Explain the effects of resistance on speed. Interpret speed time graphs for falling objects. |
| Level 7 | Calculate acceleration with correct units. Relate mass and the effect of resultant forces on acceleration/deceleration. Use particle theory to explain why streaming is required. Use particle model to explain forces which provide resistance to falling objects. |