

## Diving and Science: Gravity and Weight

Diving is a spectacular sport that can only take place thanks to gravity. The invisible force of gravity acts on divers as they jump off their springboards or platforms, pulling them downwards towards the water. As the divers fall they twist, turn and somersault and then enter the water as smoothly as possible. Using what you have learned answer the following questions to explain some of the science behind diving.

1. What is the invisible force that pulls objects towards the Earth or causes objects to fall?
2. Weight is actually a force acting on an object. What is this force measured in?
3. Why can a spaceman take such giant steps on the Moon and what do spacemen do to overcome the reduced gravity they experience on the Moon?
4. Would it be possible for a spaceman to perform a more or less complicated dive on the Moon, if there was air and water present, or on the Earth? Explain your answer.
5. Explain why objects appear to weigh less in water than they do in air.