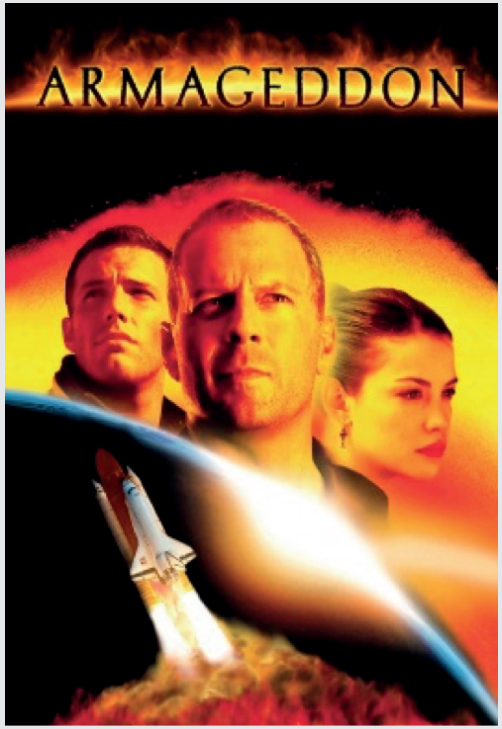
ACTIVITY 18.1 ARMAGEDDON TIME?

In the 1998 film Armageddon, Bruce Willis and his team of oil drillers are asked to save the world from a massive asteroid impact by going to the asteroid, drilling down into the asteroid, and placing a nuclear weapon to blow it into two fragments that will miss the Earth.



In this lesson you will learn about asteroids and meteorites, calculate the kinetic energy of a previous Earth impact, and extend these ideas to establishing whether you think the premise of the movie is realistic or not.

ACTIVITY 1: HOW BIG WAS THE BARRINGER IMPACTOR?

Kinetic energy = **2500kT TNT (1kT TNT = 4.3 x 10^{12} J)**

Entry velocity = **12.8 km/s**

Density of iron meteorite = **7g/cm^3 = 7000kg/m^3**

Impactor diameter = _____