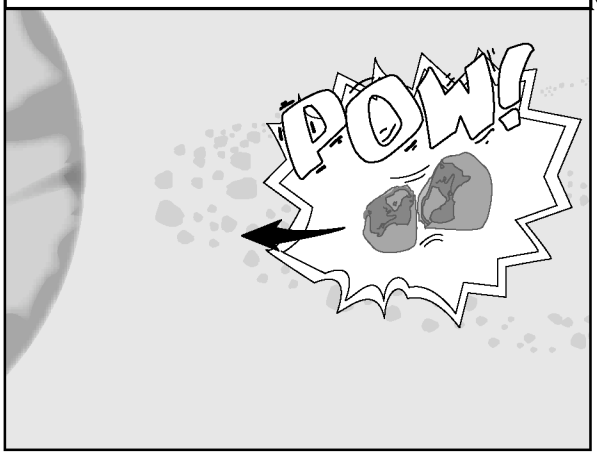
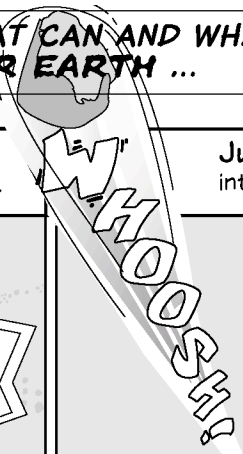
IMPACTS

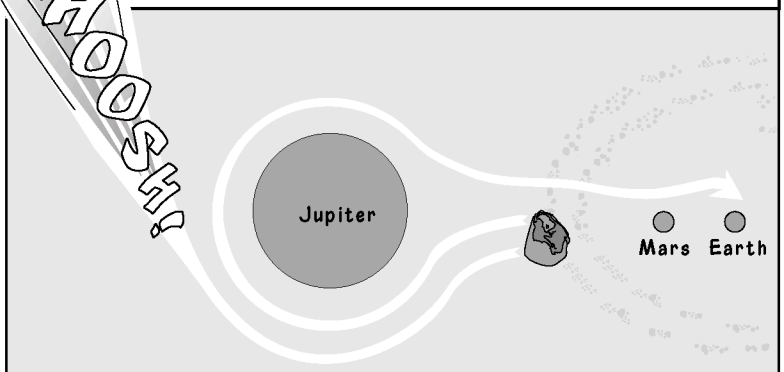
FIND OUT WHAT CAN AND WHAT DOES HAPPEN TO ASTEROIDS HEADED FOR EARTH ...

Sometimes asteroids collide within the asteroid belt, nudging one of them into a gap.





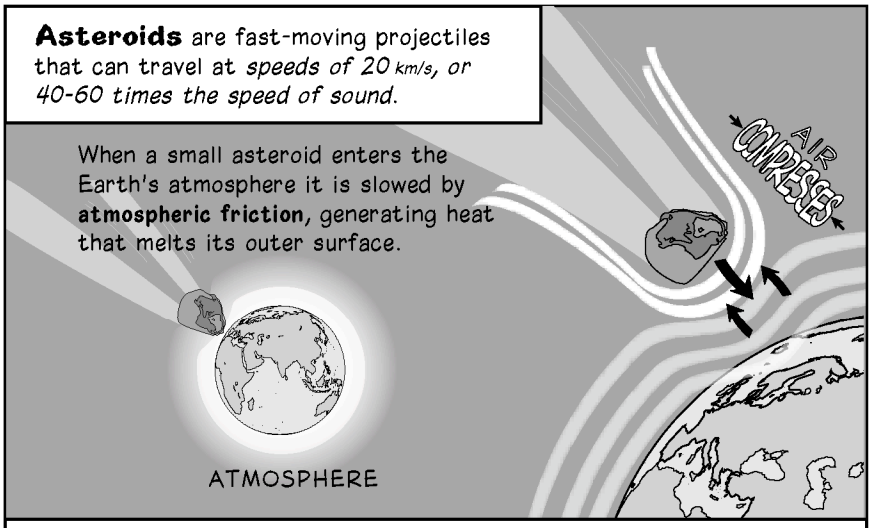
Jupiter's gravity then pulls the asteroid into an elliptical orbit.



The orbit carries the asteroid toward **The Inner Planets** or toward **The Outer Solar System**.

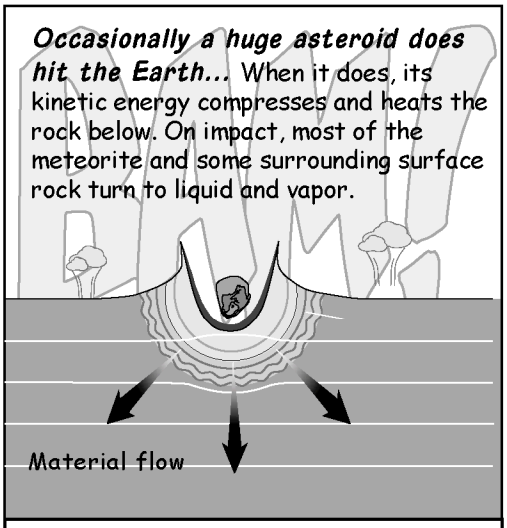
Asteroids are fast-moving projectiles that can travel at *speeds of 20 km/s, or 40-60 times the speed of sound.*

When a small asteroid enters the Earth's atmosphere it is slowed by **atmospheric friction,** generating heat that melts its outer surface.

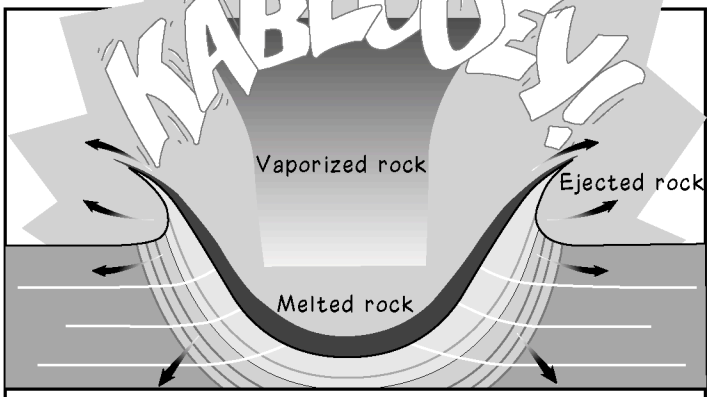


The air in front of these larger asteroids cannot get out of the way and becomes compressed. The compressed air exerts a force back on the asteroid. The asteroid explodes in the lower atmosphere, shattering into thousands of fragments.

Occasionally a huge asteroid does hit the Earth... When it does, its kinetic energy compresses and heats the rock below. On impact, most of the meteorite and some surrounding surface rock turn to liquid and vapor.



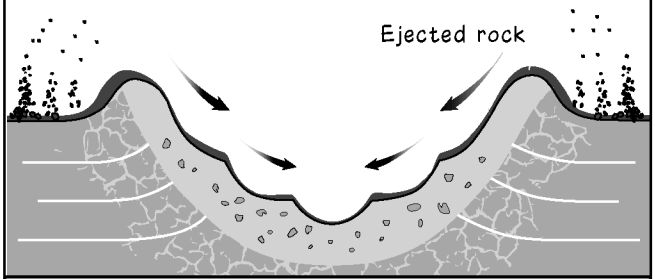
As the molten meteoritic rock and surface rock splash up and out of the widening crater, a wave of pressure travels down into the rocks below.



The pressure wave rebounds, forcing millions of tons of broken rock out of the crater. The pressure pushes outward, forming the crater's raised rim. The surrounding rock fractures into a network of cracks hundreds of feet deep.

DUST AND SMOKE FILL THE AIR...

The ejected debris crashes back to the ground.



Much of it forms a concave-shaped layer of ***pulverized, fused,*** *and* ***fractured rock*** inside the crater and around the rim. ***A mist of molten meteoritic rock*** hardens in midair and rains down as tiny rock spheres.