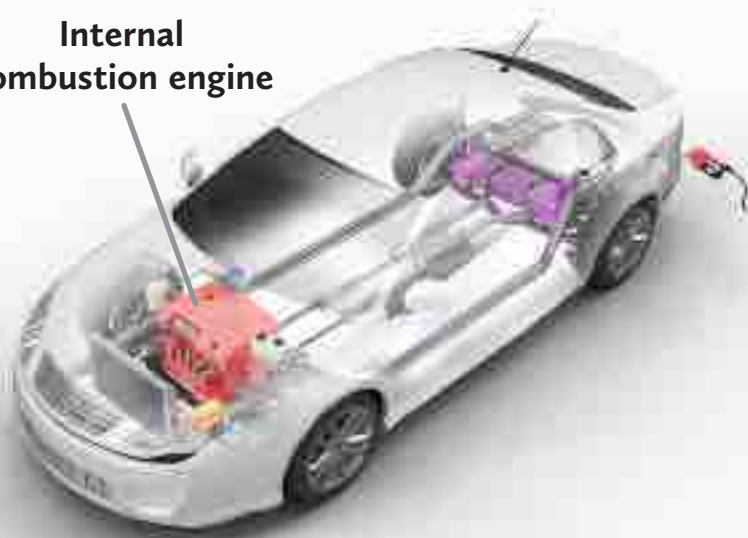


## Internal combustion engine



Most car engines are *internal combustion engines*.

**Internal  
combustion engine**

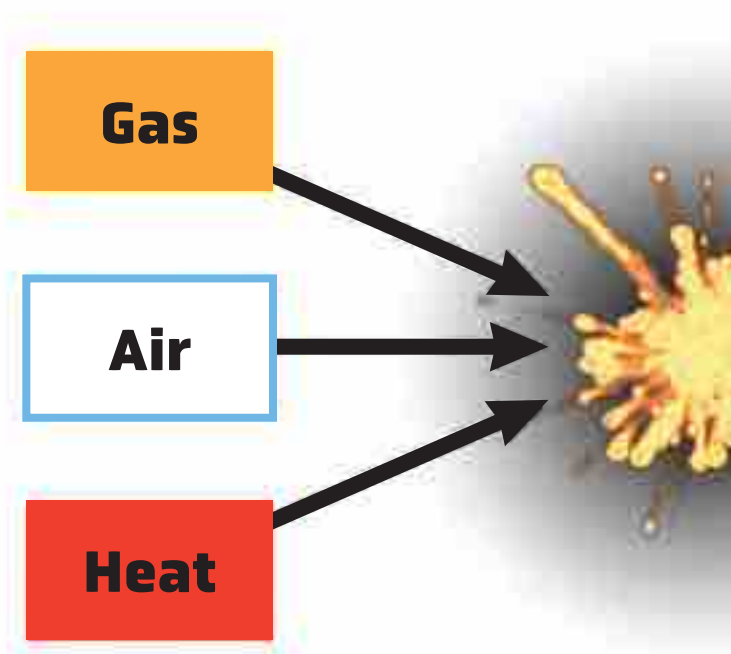


The engine is one of many parts of a working car.

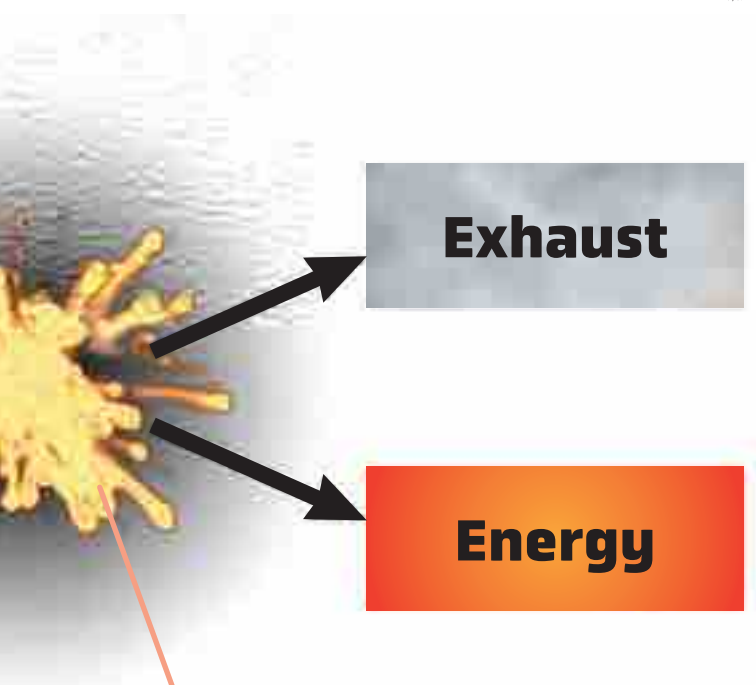


When a car engine runs, there are many, many little explosions inside.

The explosions happen when gas burns. When gas burns, we say it *combusts*.



The explosions create energy.  
This runs the engine.



Air and heat are needed  
for gas to combust.

It works like this: Car engines have metal tubes in them.





The tubes are called *cylinders*.  
Most engines have 4 to 12 of them.



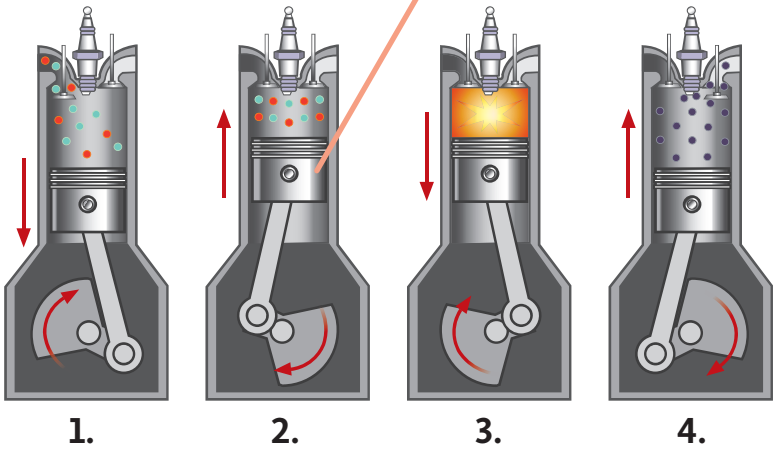


Piston

Each tube has a *piston*.  
The piston moves up and down.

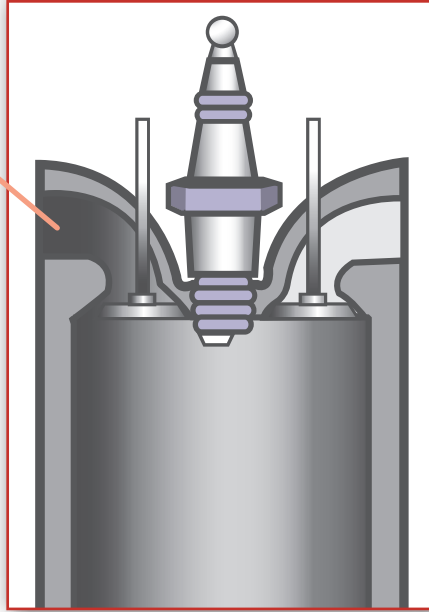


Piston inside  
cylinder



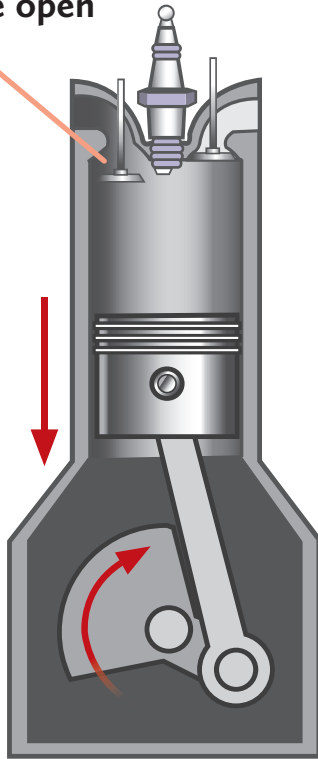
A piston's motion up or down is called a *stroke*. It takes four strokes to run an engine.

Intake valve



A cylinder has an opening called the *intake valve*.

Intake valve open



In the first stroke, the valve opens.  
The piston moves down.

## GLOSSARY

**axle** (AX•ul) a rod that holds a car wheel

**combust** (com•BUST) to burn

**cylinder** (SIH•lin•der) a tube

**drive shaft** a rod that connects a car's engine to its axles

**exhaust** (ig•ZAWST) what is left over after gas has burned up in a car engine

**exhaust pipe** a pipe through which exhaust leaves a car

**exhaust valve** (ig•ZAWST VALV) a hole through which exhaust leaves a cylinder

**ignite** (ig•NITE) to catch fire

**intake valve** (VALV) a hole through which a mix of gas and air enters an engine cylinder

**internal combustion engine**

(com•BUS•chen EN•jin) an engine that burns gas for power

**piston** (PIH•stun) a sliding piece that moves within a cylinder

**spark plug** a part at the top of an engine cylinder that creates a spark

**stroke** (STROHK) in a car engine, the movement of a piston up or down