

# METEORITE IDENTIFICATION CHART

## How do you identify a meteorite from a "meteowrong"?

*Well, it can be tricky, but here are some easy ways of testing whether your "strange" rock in the back garden is a meteorite:*

### 1) Is it magnetic?

99% of all meteorites are attracted to a strong magnet BUT so are also metal artefacts, slag and iron ore



### 2) Streak test

If your rock is magnetic, but is in fact iron ore (magnetite or hematite) rather than a meteorite, it will usually leave a grey-black or red-brown streak when you scratch it on the back of a ceramic tile



### 3) Window test

Use a file to grind flat a corner of your rock. Look at the cut surface from different angles and if you can see shiny metal flakes, it could be a meteorite. If plain inside, probably a "meteowrong".

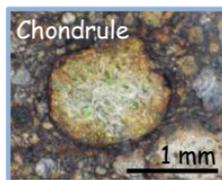


### 4) Density

If you have a scale, water and a beaker with graduations, you can calculate the density of your sample and then compare with densities of various meteorites on this webpage from Washington University, St. Louis: <http://meteorites.wustl.edu/id/density.htm>

### 5) Chondrules

Chondrites are meteorites derived from primitive asteroids and contain mm-sized round globules called chondrules.



### 6) Fusion crust

A fresh meteorite has a fusion crust, which forms when the surface of the meteorite melts due to frictional heat as it enters through the Earth's atmosphere. Fresh meteorites may also have an aerodynamic shape and "thumbprints" (regmaglypts).



### 7) Weathering

The condition of a meteorite can range from fresh to very weathered. Weathered meteorites may be more difficult to recognise. Weathering of a meteorite can change its colour; it may rust to appear red, or re-distribute gypsum to give a white crust. Meteorites can weather in the desert, in the Antarctic ice sheet, and even in a museum environment.

**Good luck hunting for meteorites!**