

***SciGirls* – Super Sleuths**

Introducing Meteorites to Students:

Meteorites are space rocks that impact Earth’s surface. They can be found in all different sizes – some small as pebbles and some as large as a car (60,000 kg)!

Meteorites have different chemical compositions, which aid “meteorite hunters”. The majority of meteorites are made up of iron, giving them a very dark color. This is advantageous because not a lot of Earth rocks look completely black. Can you imagine how easy it would be to search snowy Antarctica for iron meteorites?



This scientist found an iron meteorite in Antarctica.

Drawing Conclusions

When scientists at NASA find meteorites, they are able to analyze the rock’s chemical makeup and match the properties to a “parent body”. This parent body is where the meteor originated, and can be a larger asteroid, comet, or even planet! In space, collisions are common. If a large meteorite impacts Mars, it could send Martian rocks into space. These rocks could fly on a trajectory path right to Earth – landing in someone’s backyard!

It is possible to track where the meteorite came from, and easiest when its parent body still exists! For example, we know the chemical makeup of the Moon and Mars, because astronauts studied the Moon and various rovers have studied Mars.

For the *SciGirls* Super Sleuths Investigation, students will determine if their meteorite sample came from parent body 6 Hebe, 4 Vesta, 3103 Eger, or even the planet Mars through identifying the problem, collecting evidence, preparing slides, observing and analyzing data, and drawing conclusions.