**6th Grade Literacy Fusion Article: “Does It Really Rain Diamonds On Saturn and Jupiter? These Scientists Certainly Seem To Think So”**

We have heard of the occasional fish, tadpole and even spider raining down from the skies, but diamonds? That is definitely a first! Unfortunately, this miracle is not happening anywhere on earth but over 830 million miles (1.2 billion km) away, on Saturn and Jupiter. At least that is what planetary scientists from NASA's Jet Propulsion Lab in Southern California seem to think after conducting extensive research.

According to Dr. Kevin Baines, the lead researcher on the project, over 1,000 tons of diamonds are being created every year on Saturn. It is a well-known fact that about half of a percent of Saturn's atmosphere comprises of methane. Also, thanks to images sent in by NASA spacecraft Cassini, which has been orbiting the ringed planet since 2004, researchers know that Saturn is susceptible to giant lightning storms and even, hurricanes.

Using this information, Kevin and the study's co-author - planetary scientist Mona Delitsky, deduced that the lightning burns up the methane that is present in the atmosphere and transforms the odorless, colorless gas into something we are all familiar with - soot or carbon. As clouds of the black carbon are 'raining' down on the planet, they clump together and form graphite which gets subjected to intense pressure from the atmosphere as it gets closer to the planet's core and transforms into the shiny precious stones that we lovingly call diamonds. While Jupiter's atmosphere comprises of only 0.2% methane the scientists believe that a similar phenomenon occurs there too.

But before you try get the next shuttle out there, you should know that thanks to the extremely hot core of both these planets, the diamonds do not stay in solid form too long. Baines believes that they melt when they closer to the planet's surface, where temperatures exceed 8,000 Kelvin (13,940°F) and are most likely, transformed into other materials. Not all scientists are convinced about this new study. University of Arizona planetary scientist William Hubbard thinks that due to the relatively low amount of methane in the atmosphere of the two planets, not enough soot is produced for diamond production.

This is not the first time scientists have speculated about diamond rain. Uranus and Neptune are long known to be diamond treasure troves. Not only does their atmosphere comprise of 15% methane, but also, the temperature does not get to over 3,820 Kelvin (6,416°F), the melting point of diamonds. This means that the precious stones that fall are most likely strewn all over the planets just waiting to be picked up!

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