**Rock Candy Worksheet**

Rock candy is simply large sugar crystals, but can you make different shapes and/or sizes of crystals by incorporating different additives?

***Day 1 Predictions***: What do you think will happen to the sugar crystals when the following additives are included when making the candy?

|  |  |  |  |
| --- | --- | --- | --- |
| **Additive** | **More Growth** | **Less Growth** | **Same** |
| Food coloring |  |  |  |
| JELL-O |  |  |  |
| Kool-Aid powder |  |  |  |
| Cinnamon extract |  |  |  |
| Iodized salt |  |  |  |
| Powdered sugar |  |  |  |
| Brown sugar |  |  |  |
| Milk |  |  |  |
| Apple juice |  |  |  |

***Day 2 Data/Comparison Observations***: Record how each additive affected the growth of the sugar crystals compared to one with no additive.

|  |  |  |  |
| --- | --- | --- | --- |
| **Additive** | **More Growth** | **Less Growth** | **Same** |
| Food coloring |  |  |  |
| JELL-O |  |  |  |
| Kool-Aid powder |  |  |  |
| Cinnamon extract |  |  |  |
| Iodized salt |  |  |  |
| Powdered sugar |  |  |  |
| Brown sugar |  |  |  |
| Milk |  |  |  |
| Apple juice |  |  |  |

***Days 1 and 2 Measurements and Calculations***

**Our group’s additive: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |
| --- | --- | --- | --- |
| **Dowel Rod Mass (g)** | **Dowel Rod w/ Crystals (g)** | **Mason Jar Mass (g)** | **Mason Jar w/ Crystals (g)** |
|  |  |  |  |
| **Mass Crystals on Dowel Rod (g)** | | **Mass Crystals in Mason Jar (g)** | |
|  | |  | |
| **Total Mass of Crystals (g)** | | | |
|  | | | |

***Day 2 Summary of Class Data***

|  |  |
| --- | --- |
| **Additive** | **Mass of Crystals (g)** |
| Food coloring |  |
| JELL-O |  |
| Kool-Aid powder |  |
| Cinnamon extract |  |
| Iodized salt |  |
| Powdered sugar |  |
| Brown sugar |  |
| Milk |  |
| Apple juice |  |

***Day 2: Research and Analysis:*** Explain why each additive affected crystallization the way it did.

|  |  |
| --- | --- |
| **Additive** | **Reason for crystallization effects** |
| Food coloring |  |
| JELL-O |  |
| Kool-Aid powder |  |
| Cinnamon extract |  |
| Iodized salt |  |
| Powdered sugar |  |
| Brown sugar |  |
| Milk |  |
| Apple juice |  |