**Density Relationships**

M10 I can describe the relationship between mass and volume as it relates to density.

**Review**

1. What is the formula to calculate the density of an object?

2. If an object has a mass of 32 grams and a volume of 8 cm3, what is its density? (show your work)

**Relating Mass, Volume and Density**

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| 1. Example 1 | | Increase the mass | |
| Mass = 24 grams | Density = | Mass = 42 grams | Density = |
| Volume = 15 cm3 | Volume = 15 cm3 |

2. What happened to the density when the volume was constant and the mass increased?

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| 3. Example 1 | | Decrease the mass | |
| Mass = 20 grams | Density = | Mass = 10 grams | Density = |
| Volume = 15 cm3 | Volume = 15 cm3 |

4. What happened to the density when the volume was contact and the mass decreased?

5. Give an example of two things that have the same volume, but different masses. Explain which would be more dense and why?

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| 6. Example 1 | | Increase the Volume | |
| Mass = 24 grams | Density = | Mass = 24 grams | Density = |
| Volume = 10 cm3 | Volume = 25 cm3 |

7. What happened to the density when the mass was constant and the volume increased?

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| 8. Example 1 | | Decrease the Volume | |
| Mass = 20 grams | Density = | Mass = 20 grams | Density = |
| Volume = 15 cm3 | Volume = 8 cm3 |

9. What happened to the density when the mass was contact and the volume decreased?

10. Give an example of two things that have the same mass, but different volumes. Explain which would be more dense and why?