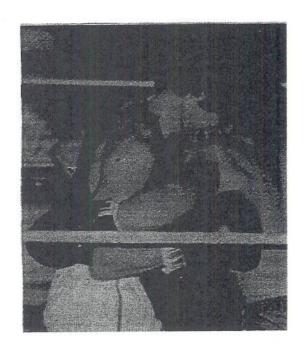8.1.P.1 Determine physical and chemical properties of elements & compounds.
8.2P.1 Compare & contrast physical and chemical changes and describe how the law of conservation of mass applies... V 1.0 2012

Density & Physical Science Packet
"Science With a Punch!"

NAME_____ PERIOD____

DUE_____

8.1P.3 Explain how the motion and spacing of particles determines states of matter.
Density Work Sheet 2011

1. What state of matter would you expect a pure substance with the densities below to be: (Solid, Liquid, Gas)

   A. 9.34 g/cm3 _____
   B. 0.0017g/cm3 _____.
   C. 1.0 g/cm3 _____
   D. 1.11 g/cm3 _____

2. What would the density of the water be in a mud puddle with a mass 10000 g and a volume of 10000 cm3?

3. Please find the density of a cube .46cm on a side and with a mass of 10 g:

4. What would the density of a substance with a mass of 5.64 g and a volume of 2.8 cm3 be?

5. Write the formula for calculating density:
   (Impress your parents and teacher and show them the secret sign of science!)

2

Name_____ Date_____ Period_____ Due_____

Density of Solids
Version 2.0

Framing the Question
Question: How would you calculate the densities of solid regularly shaped objects?

Hypothesis:_____

_____

Design the Investigation
1. Feel the "heft or weight" of the objects. Estimate their densities and record their estimated densities below on the data table.

2. Find the volume of each object, using the volume formula ($V = L \times W \times H$) for the regularly shaped objects. Use water displacement to calculate the volume of the rock and record data.

3. Find mass of each object using balance and record data on the data table below.

4. Calculate the density of each object using the density formula (Density= Mass/ Volume) and record the data on the data table below.

Collect and Present Data:

Object	Slab	Cube	Rock
Estimated Densities			
Mass of Objects Gm			
Volume of Objects cm3			*This one is tricky
Density of Objects gm/cm3			

Analyzing and Interpreting Data
1. What is the formula for density?(Literal)

2. If you cut an object in half how do you affect its density?(Inferential)

3

Density

```
M  A  S  S  D  I  V  I  E  M  D  E  D  B  Y
E  V  A  P  O  R  A  T  E  M  A  V  O  L  U
A  L  C  A  M  E  D  E  S  M  U  S  E  E  Q
U  A  L  S  D  E  N  S  I  T  Y  L  S  G  N
F  O  I  B  O  C  X  V  Z  D  G  X  O  V  O
H  L  W  V  G  J  N  U  W  J  L  H  T  V  S
W  S  U  L  N  W  U  F  O  F  T  P  S  A  R
U  L  N  I  M  U  I  N  Y  L  O  S  B  H  E
R  O  I  J  D  B  X  Y  R  L  S  J  B  F  Y
K  T  A  K  D  S  W  V  M  I  E  O  O  N  A
M  D  W  W  B  V  Q  S  L  I  Q  U  I  D  L
J  I  W  F  R  E  T  T  A  M  W  J  J  I  A
S  D  I  L  O  S  W  L  R  G  L  K  P  V  I
D  E  N  S  I  T  Y  Z  K  E  G  M  H  K  B
W  W  H  G  B  U  M  H  Z  U  F  E  T  T  U
```

ALCAMEDES	DENSITY	EVAPORATE
FLUIDS	GAS	LAYERS
LIQUID	MASS	MATTER
SOLIDS	VOLUME	

___ ____ ____ ____ ____ ___ ___ ____ ____

___ ____ ___