Buoyancy Worksheet

Name:_____
Per:_____ Date:_____

1. This force keeps an object floating _____
2. When the force of gravity is stronger then the buoyant force an object will _____
3. When the buoyant force is the same as the force of gravity an object will _____
4. When the buoyant force is greater than the force of gravity an object will _____
5. Why does an aircraft carrier float?

6. How could you sink an aircraft carrier?

7. How does a life jacket keep you a float?

Using a block that is 12cm wide, 7cm long and 9 cm tall answer the following questions.

1. If the block weights 500 grams how much of the block will be below the surface of the water?
2. How much would the block have to weight so that it floats half way under water?
3. If the block floated with 3 cm above water, how much would it weigh?
4. If I pushed the whole block under water how much water would it displace?
5. If the block weighted 375 grams, how much extra weight could the block hold before it sank

6. If I placed three cubes each with 5cm on each side that each weigh 61 grams into a beaker that is clear full of water. How much water will overflow out of the beaker?

Challenge question:

An empty box is 11 cm per side. It will slowly be filled with sand. Sand has a density of 3.5 g/cm3. What volume of sand will cause the box to sink?