A PEBBLE CURIOSITY

A glass filled with large marbles seems to have more empty spaces inside it than a glass filled with small marbles. Which glass has the larger volume of empty space?

For this experiment you can use a supply of marbles of two different sizes, but any small spheres will do also, such as round balls of bubble gum and other kinds of candy.

You need:
Marbles of two different sizes
2 plastic glasses of the same size

What To Do
Assuming you are using marbles, fill a glass to the brim with the small marbles and fill another glass to the brim with the larger marbles. Next, fill one of the glasses with water. Now pour the water from that glass into the second glass. You will find that both glasses hold the same amount of water.

Why does it work?
A full explanation would involve complicated solid geometry. The large marbles have bigger spaces between them. The glass with the smaller marbles has smaller spaces, but a lot more of them