Finding the Mass of an Object

How do we find the mass of an object?

Finding the mass of something *always involves a comparison.* We use a pan balance with the object we want to measure on one side and gram massing units on the other side. We add massing units to the other side of the balance until the pans are even. Then the masses in the pans are even. We are comparing some standard gram mass units to the object.

Another definition of mass is the amount of matter it takes to make an object move. On the pan balance, if it takes 5 gram masses on one side of the balance to make the other pan move until both pans balance, we say the object has a mass of 5 grams.

We can see that we find the mass of an object by *making a comparison* to a known mass. Mass is actually a measurement of what it takes to move an object that isn't moving. The pan balance demonstrates this nicely because the object that is being "massed" is put on one side of the pan balance and it doesn't move until an equivalent mass is placed on the other side.