The main goal of this thesis is to connect the ideas surrounding the congruent number problem. At first we define congruent numbers and elliptic curves which naturally emerge from this problem. We then define the addition law on points lying on such curves and show that it actually defines an abelian group structure on the set of those points. We then focus on the study of elliptic curves and their groups over finite fields to give us new insight on the congruent number problem. With this we then later define Zeta-functions and L-functions. At the end we see a connection between the property of being a congruent number and the rank of the corresponding elliptic curve which is then used to classify first few congruent and non-congruent numbers.