

Source: [KBhPHYS201QuantumWorldBookNotesIndex](#)

## 1 | Meet the Leptons

- There are three families of subatomic particles
  - Flavor 1: the electron and it's neutrino
  - Flavor 2: the Muon and it's neutrino
  - Flavor 3: the the tau lepton and it's neutrino
- Leptons carry one-half unit of spin and are either neutral or have 1 negative charge
- For every lepton there's an anti-lepton with an opposite unit of charge and the same mass
- Leptons have no known size and in all theories describing them are point particles

### 1.1 | Electrons

- Electrons are Leptons
- Has an opposite which is the positron
- Effectively launched particle physics as we know it
- Is beta radiation
- Equations to bridge relativity and quantum mechanics in order to describe the electron predicted 1/2 spin and also anti-matter
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