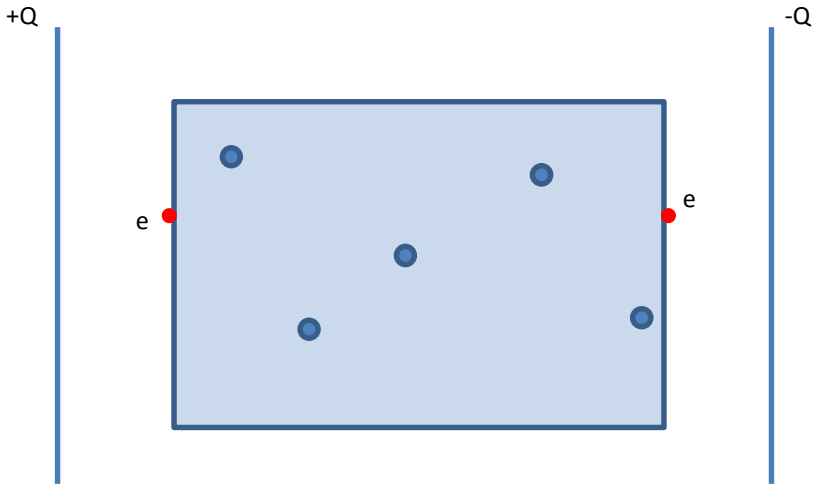
CONCEPT: DIELECTRIC BREAKDOWN

- Dielectric is an insulator → charges can't move … IDEALLY
  - In REALITY, charges can move if voltage across insulator is large enough
  - This is known as DIELECTRIC BREAKDOWN

- DIELECTRIC STRENGTH = _____

- Electrons "jump" from atom to atom:



- Lightning is a common example of dielectric breakdown

EXAMPLE: A parallel plate capacitor is filled with air and connected to a power source of 100 V. What is the closest you can put the plates together if dielectric breakdown of air occurs at an electric field of 3×10^6 V/m?