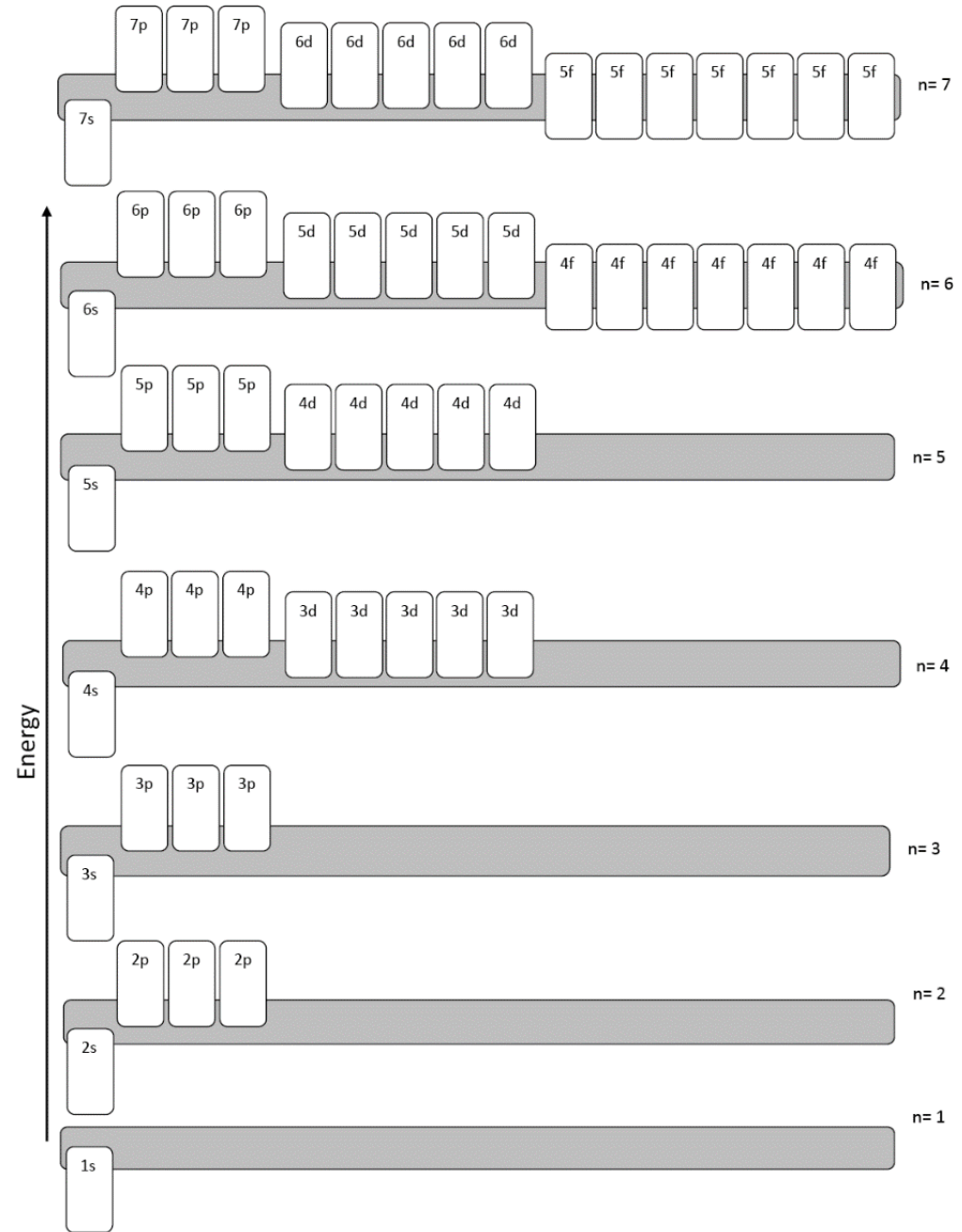


N-11 Orbital Diagrams

**How do you know what
order the electrons and
orbitals go in???**

Orbital Diagram

A chart that shows you the order that the orbitals go in.

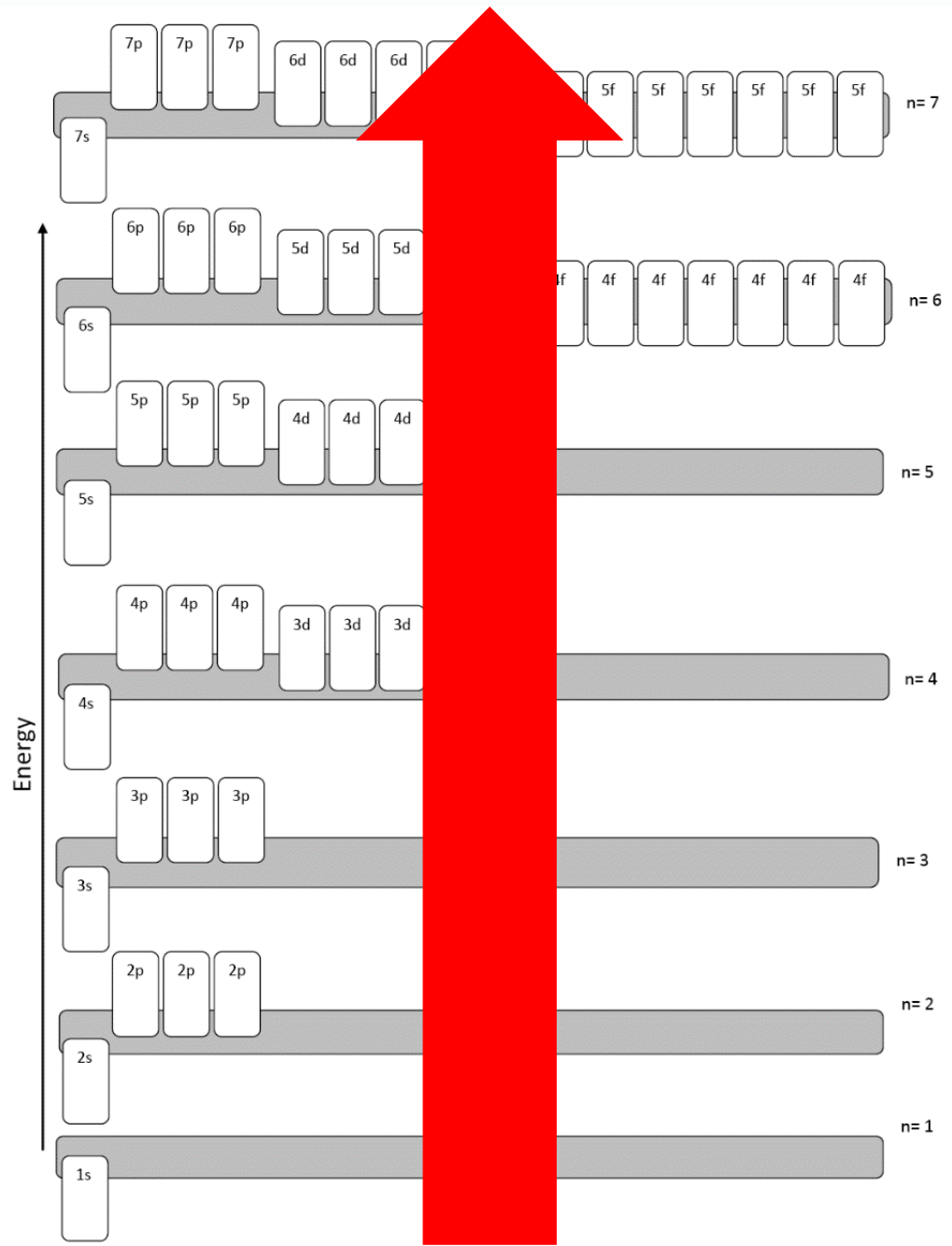


Electron Configuration Rules...

Aufbau Principle:

Electrons fill lowest possible energy level first.

➤ *They are lazy!*

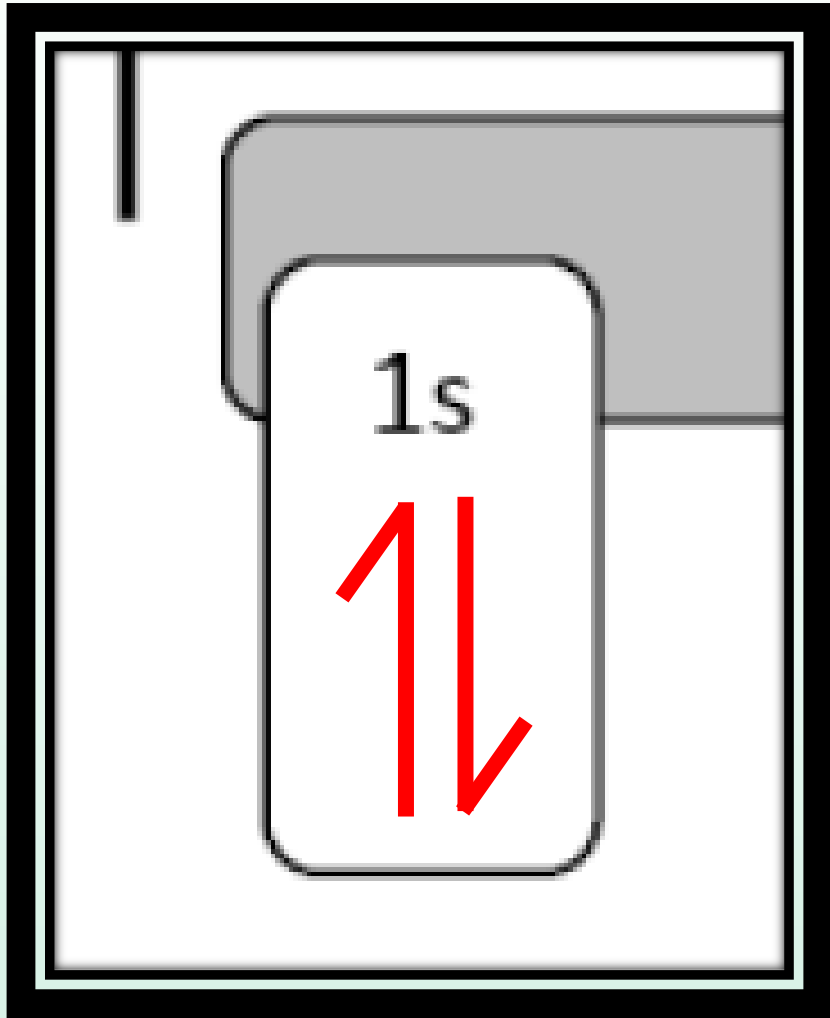
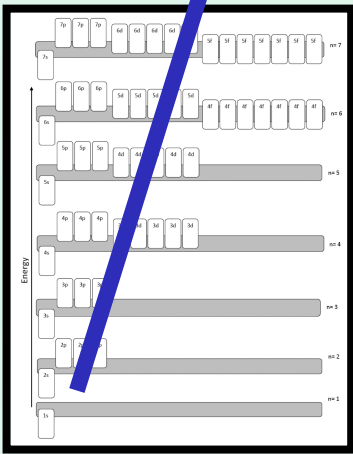


Electron Configuration Rules...

Pauli Exclusion Principle:

No two electrons may have the same set of four quantum numbers.

- *Any single orbital may only contain two electrons, **BUT** one has to be spin up, and one has to be spin down.*



Electron Configuration Rules...

Hund's Rule:

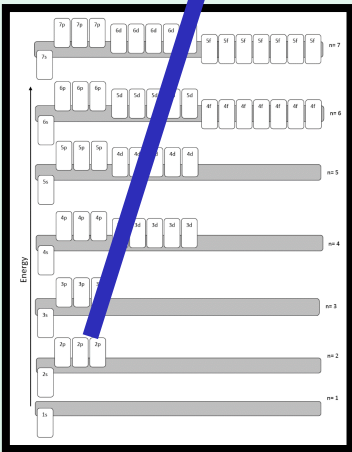
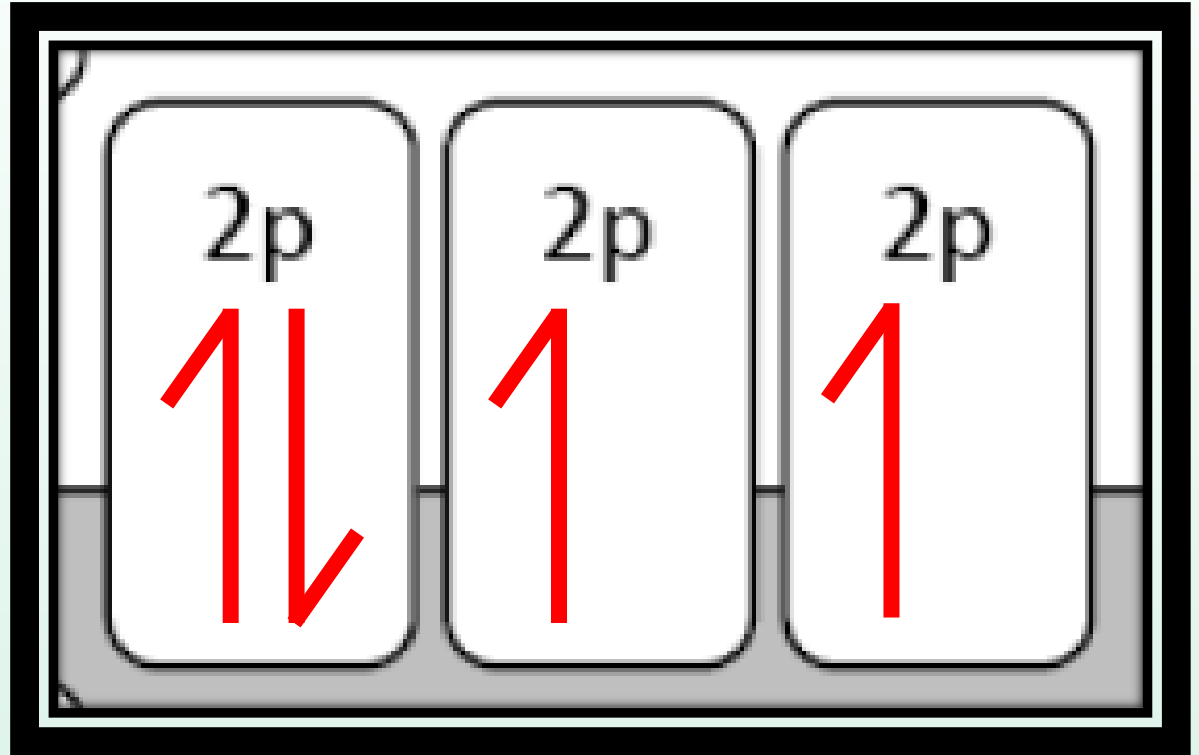
Electrons will fill each equal energy orbital before pairing up

- *Spread them out before you pair them up*
- *“You don't want to share a bedroom with your sibling unless you really have to!”*
- *Electrons want elbow room!*

p_x

p_y

p_z



Steps to finding all the electrons

- 1) Pick an **atom**
- 2) Find the number of **electrons it has**
- 3) Start putting electrons into the **orbitals**
Use an **ORBITAL CHART/DIAGRAM**
- 4) List which **orbitals** you used and **how many** electrons in each one

Let's practice together...