Trick for writing electron configurations so you don’t have to use an orbital diagram.
The periodic table orders elements for you!

Energy level

s

1 1s\(^1\)
2 2s\(^1\) 2s\(^2\)
3 3s\(^1\) 3s\(^2\)
4 4s\(^1\) 4s\(^2\)
5 5s\(^1\) 5s\(^2\)
6 6s\(^1\) 6s\(^2\)
7 7s\(^1\) 7s\(^2\)

d

3 3d\(^1\) 3d\(^2\) 3d\(^3\) 3d\(^4\) 3d\(^5\) 3d\(^6\) 3d\(^7\) 3d\(^8\) 3d\(^9\) 3d\(^{10}\)
4 4d\(^1\) 4d\(^2\) 4d\(^3\) 4d\(^4\) 4d\(^5\) 4d\(^6\) 4d\(^7\) 4d\(^8\) 4d\(^9\) 4d\(^{10}\)
5 5d\(^1\) 5d\(^2\) 5d\(^3\) 5d\(^4\) 5d\(^5\) 5d\(^6\) 5d\(^7\) 5d\(^8\) 5d\(^9\) 5d\(^{10}\)
6 6d\(^1\) 6d\(^2\) 6d\(^3\) 6d\(^4\) 6d\(^5\) 6d\(^6\) 6d\(^7\) 6d\(^8\) 6d\(^9\) 6d\(^{10}\)

p

2 2p\(^1\) 2p\(^2\) 2p\(^3\) 2p\(^4\) 2p\(^5\) 2p\(^6\)
3 3p\(^1\) 3p\(^2\) 3p\(^3\) 3p\(^4\) 3p\(^5\) 3p\(^6\)
4 4p\(^1\) 4p\(^2\) 4p\(^3\) 4p\(^4\) 4p\(^5\) 4p\(^6\)
5 5p\(^1\) 5p\(^2\) 5p\(^3\) 5p\(^4\) 5p\(^5\) 5p\(^6\)
6 6p\(^1\) 6p\(^2\) 6p\(^3\) 6p\(^4\) 6p\(^5\) 6p\(^6\)

f

4 4f\(^1\) 4f\(^2\) 4f\(^3\) 4f\(^4\) 4f\(^5\) 4f\(^6\) 4f\(^7\) 4f\(^8\) 4f\(^9\) 4f\(^{10}\) 4f\(^{11}\) 4f\(^{12}\) 4f\(^{13}\) 4f\(^{14}\)
5 5f\(^1\) 5f\(^2\) 5f\(^3\) 5f\(^4\) 5f\(^5\) 5f\(^6\) 5f\(^7\) 5f\(^8\) 5f\(^9\) 5f\(^{10}\) 5f\(^{11}\) 5f\(^{12}\) 5f\(^{13}\) 5f\(^{14}\)
**CLASS COPY!**

DO NOT TAKE!  **p-block**

**s-block**

1. Energy level
2. Orbital type
3. # of $e^-$ in the orbital set

**d-block**

*Multiple charges possible*

Atom wants to look like a "noble gas". It wants a "full shell". It will make an ion to fill its shell!

**IONs**

- Cations
- Anions
- $p > e^-$
- $p < e^-$
- + Charge - charge

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**f-block**

go back to **d-block**!
See classmate or Mrs. Farmer for how to do this periodic table trick! Here is a video if you need a refresher

Good video on setting up your periodic table
https://www.youtube.com/watch?v=qb0hia__crM

Good video on using your periodic table to write configs.
https://www.youtube.com/watch?v=ououF9nHUhk