**Warmup: Periodic Trends**

1. What does a high ionization energy mean?
2. What does a high electron affinity mean?
3. What are the trends for reactivity and explain?
4. Rank Si, Cl, Br by AR and explain.

**Warmup: Periodic Trends**

1. What does a high ionization energy mean?

*Requires a lot of energy to remove an electron  
- Hard to do  
- Small AR*

1. What does a high electron affinity mean?

*A lot of energy is released when gaining an electron*

* *Easy to do*
* *Small AR*

1. What are the trends for reactivity and explain?

*Metals react more the larger they are – metals want to lose electrons and it is easier to lose electrons the further away they are from the nucleus (large AR)*

*Nonmetals react more the smaller they are – nonmetals want to gain electrons and it is easier to attract in an electron the closer the outer shell is to the nucleus (small AR)*

1. Rank Si, Cl, Br by AR and explain.

*Cl, Si, Br (smallest to biggest)*

*Br is the largest because it has an extra energy level.*

*Si is larger than Cl because it has less protons in the nucleus (smaller nuclear charge) and can’t attract in is electrons as well, therefore it is larger than Cl.*