Vision Learning Ion Simulation Activity Date_____ Name_____

http://web.visionlearning.com/custom/chemistry/animations/CHE1.3-an-atoms.shtml

1. Go to the website above (you can get to it on the useful links page). Click on Display all 11 elements on one page. Freeze each picture and draw the ATOM Bohr Models on your paper in the left columns.

Hydrogen Atom	Hydrogen Ion	
Helium Atom	Helium Ion	
Lithium Atom	Lithium Ion	
Beryllium Atom	Beryllium Ion	
Boron Atom	Boron Ion	

Carbon Atom	Carbon Ion
Nitrogen Atom	Nitrogen Ion
Oxygen Atom	Oxygen Ion
Fluorine Atom	Fluorine Ion
Neon Atom	Neon Ion
Sodium Atom	Sodium Ion

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2. Go back to the home screen with the periodic table and click on each individual atom in the periodic table. Click on the link that says "Form Ion". Watch what happens to make the atom turn into an ion. In your table on the right side, draw the Ion Bohr Model of each element.

3. How many ions can hydrogen form?_____
   What is the charge on each hydrogen ion that can form? _____ or _____
   What happened for hydrogen to form each ion?_____

4. How many ions can helium form?_____
   This means helium cannot become p_____ or n_____.

5. How many ions can lithium form?_____
   What is the charge on a lithium ion? _____
   What did lithium do to form an ion?_____

6. How many ions can beryllium form?_____
   What is the charge on a beryllium ion? _____
   What did beryllium do to form an ion?_____

7. How many ions can boron form?_____
   What is the charge on a boron ion? _____
   What didboron do to form an ion?_____

8. How many ions can carbon form?_____
   What is the charge on a carbon ion? _____
   What did carbon do to form an ion?_____

9. How many ions can nitrogen form?_____
   What is the charge on a nitrogen ion? _____
   What did nitrogen do to form an ion?_____

10. How many ions can oxygen form?_____
What is the charge on a oxygen ion? _____
What did oxygen do to form an ion?_____
_____
_____

11. How many ions can fluorine form?_____
What is the charge on a fluorine ion? _____
What did fluorine do to form an ion?_____
_____
_____

12. How many ions can neon form?_____
This means neon cannot become p_ _ _ _ _ _ _ _ or n_ _ _ _ _ _ _ _.
Which other element did you observe to behave this way? _____
Make a prediction: Which other four elements will also behave this way?_____
_____

13. How many ions can sodium form?_____
What is the charge on a sodium ion? _____
What did sodium do to form an ion?_____
_____
_____
Which other element did you observe to behave this way? _____
Make a prediction: Which other four elements will also behave this way? _____
_____

14. Which five other elements will behave the same way as beryllium?_____
_____

15. Which four other elements will behave the same way as boron?_____
_____

16. Which two other elements will behave the same as nitrogen?_____
_____

17. Which three other elements will behave the same was oxygen?_____
_____

18. Which three other elements will behave the same as fluorine?_____
_____

19. Draw the Bohr Models for the atoms and ions for the remaining elements on period 3.

20. What happened to the size of the atom when it changed into a positive ion?

What happened to the size of the atom when it changed into a negative ion?