

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period:\_\_\_

Targets

Students will evaluate and identify an unknown substance in terms of its physical and chemical properties

Students will develop a model that illustrates the arrangement of electrons using the Bohr Model and the Lewis Dot Diagram

Bohr Model Notes

* Used to show arrangement of electrons
* Electrons are placed on the \_\_\_\_\_\_\_\_\_\_\_\_ shell first
* Once full, extra electrons are placed in the next shells
* Maximum number of electrons on shells
	+ 1st = \_\_\_\_\_\_ electrons
	+ 2nd – \_\_\_\_\_\_ electrons
	+ 3rd – \_\_\_\_\_\_ electrons
		- After element 18, shells fill differently so you might hear 2, 8, 18 in higher level chemistry classes
		- After element 18 the shells fill differently
* Periodic Table Tips
	+ The periodic table can help you quickly complete the Bohr model
		- The number of periods shows you the number of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		- The number of groups shows you the number of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the outer shell
* Bohr Model Practice
	+ Fill in the blanks below.
		- Phosphorus
		- Symbol: \_\_\_\_\_\_\_\_\_
		- Atomic Number: \_\_\_\_\_\_\_\_\_
		- Atomic Mass: \_\_\_\_\_\_\_\_\_
		- Protons: \_\_\_\_\_\_\_\_\_
		- Neutrons: \_\_\_\_\_\_\_\_\_
		- Electrons: \_\_\_\_\_\_\_\_\_

Bohr Model Worksheet

Use the description sheet and the periodic table to help you complete the following Bohr models.

1. How many electrons can each shell hold?
	1. 1st = \_\_\_\_\_\_\_\_\_
	2. 2nd = \_\_\_\_\_\_\_\_\_
	3. 3rd = \_\_\_\_\_\_\_\_\_

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Element** | **Atomic #** | **Atomic Mass** | **Protons** | **Neutrons** | **Electrons** | **Bohr Model** |
| Carbon | 6 | 12 | 6 | 6 | 6 |  |
| Hydrogen | 1 | 1 |  |  |  |  |
| Lithium | 3 |  | 3 |  | 3 |  |
| Magnesium | 12 | 24 |  |  |  |  |
| Boron | 5 | 11 |  |  |  |  |