



# Unit 4: Chemical Reactions

Lesson 7: Connect the dots

# Guiding Question: Explain how to create Lewis dot structures and structural formulas.

## Do Now:

- HONC 1234 Rule: H forms 1 bond, O forms 2 bonds, N forms 3 bonds, C forms 4 bonds

These diagrams are called Lewis dot symbols.



1. What is the relationship between the number of dots, the number of valence electrons, and the HONC 1234 rule?
2. Create a Lewis dot symbol for fluorine, F. How many bonds will fluorine make?

# Notes

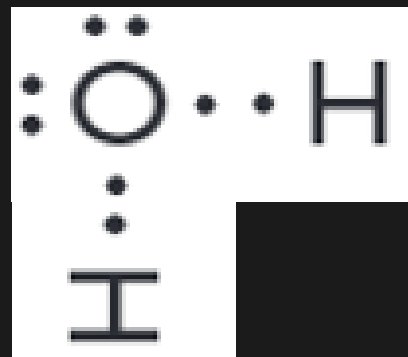
- HONC 1234 Rule: H forms 1 bond, O forms 2 bonds, N forms 3 bonds, C forms 4 bonds
- Lewis dot symbols are diagrams that use dots to show the valence electrons of a single atom.
  - Ex.



# Notes

- Lewis dot structures are diagrams to show how valence electrons are arranged in a molecule.
- We can use Lewis dot structures to draw structural formulas. Any electrons that are shared between two nonmetals form a bonded pair. Any electrons that are not shared remain as dots called lone pairs.

• Ex.  $\text{H}_2\text{O}$



Lewis Dot Structure



Structural Formula

# Closure

---

- Answer Guiding Question on page 2
- Homework #4 due Friday, 3/2
- Achieve 3000: The Car that Runs on Chocolate due Friday, 3/9 at 11:59pm

# Ticket to go!

---

- In your notes, draw the Lewis dot structure and structural formula for  $\text{OF}_2$