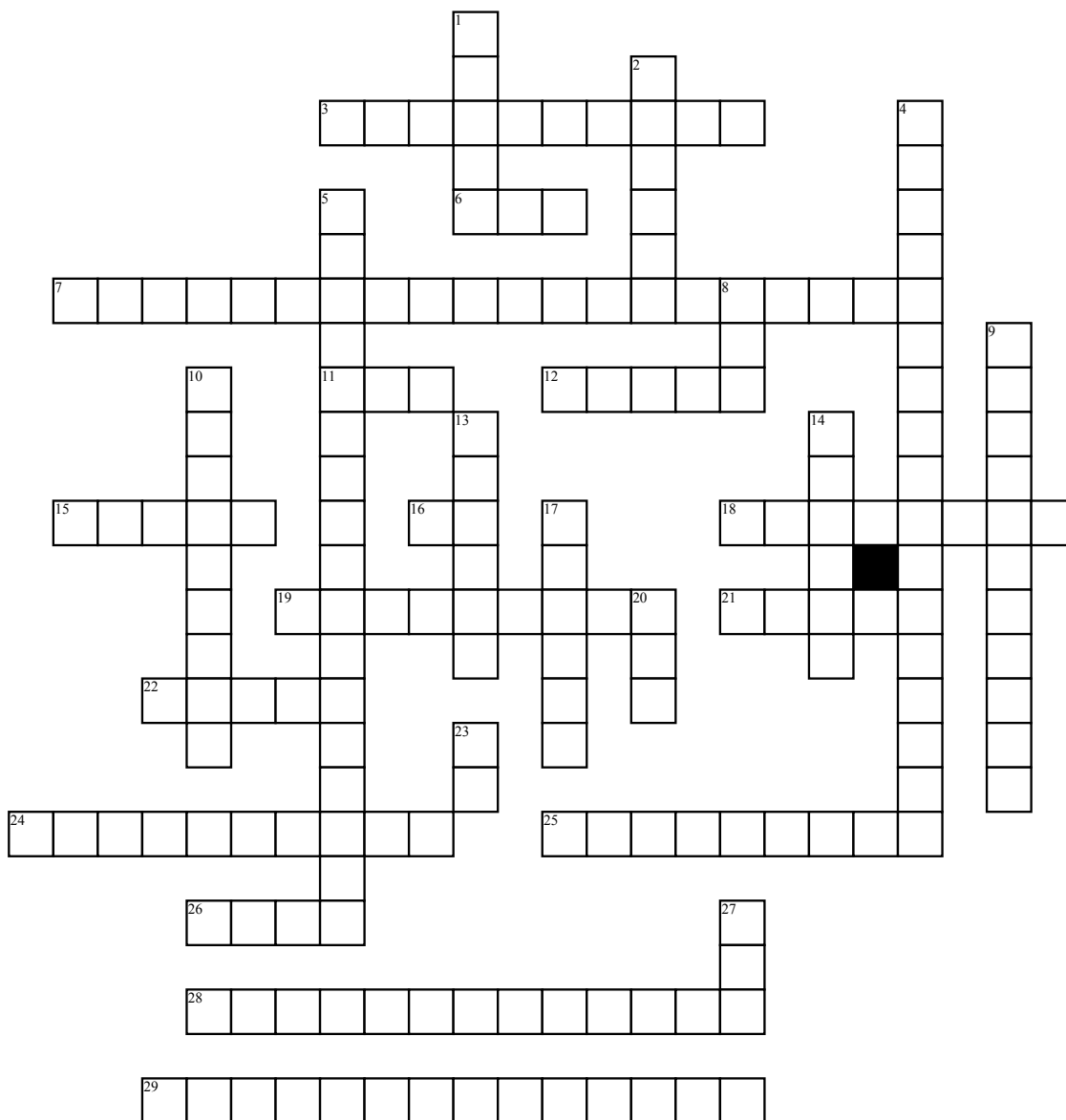


# Organic Chemistry Creative Project



## Across

3. What is the conjugate base of Acetic acid, CH3COOH?
6. How many resonance structures does benzene have?
7. Weak attractions between separate molecules
11. What is the hybridization of a carbon atom in CH4?
12. How many total electron domains does a trigonal planar shaped molecule have?
15. Calculate the electronegativity difference between the B (2.0) and F (4.0) bond in a BF3 molecule. What type of bond does it exhibit?
16. A \_\_\_\_\_ bond places electron density above and below the nuclei
18. Bonding electrons that are shared equally, electronegativity difference of less than 0.4
19. Pi bonds are formed by two \_\_\_\_\_ overlapping
21. What type of molecules do dipole-dipole forces exist within?
22. What theory states that electrons domains repel one another?
24. Releases a large amount of energy when making a bond to a H+, molecule whose conjugate acid has a  $pK_a$  of  $>14$ .
25. Electron pair acceptor
26. What type of electrons do not participate in bonding?
28. Strong attractions between atoms
29. What is the molecular shape of a benzene ring at each carbon?

## Down

1. A legitimate lewis structure must follow the \_\_\_\_\_ rule
2. The longer the carbon chain, the \_\_\_\_\_ the boiling point
4. Easily donates an H+

5. Easily accepts an H+
8. How many sigma bonds does a double bond have?
9. What is the molecular shape of the second carbon in a molecule of ethanol, CH3CH2OH?
10. Electron pair donor
13. The most \_\_\_\_\_ H on a molecule requires the least amount of energy to move.
14. Bonds that are able to rotate freely
17. At equilibrium, the \_\_\_\_\_ base and/or acid are the favored products in an acid-base reaction.
20. In a carbon with one double bond \_\_\_\_\_ hybridization occurs
23. Calculate the formal charge of the nitrogen atom in a nitrate ion.
27. Does BeCl2 exhibit a dipole moment?