

**Maturitní téma pro školní rok 2024/2025****gymnázium čtyřleté – Inspirace a poznání v souvislostech****Předmět:** **Chemie****Třída:** **4. Aj**

1. Stoichiometric relationships – particulate nature of matter and chemical change
2. Stoichiometric relationships – the mole concept, reacting masses and volumes
3. Measurement and data processing – uncertainties and errors in measurements and results
4. Measurement and data processing – spectroscopic identification of organic compound
5. Atomic structure – the nuclear atom
6. Atomic structure – electron configuration
7. Periodic table & periodic trends
8. Chemical bonding and structure – ionic bonding and structure
9. Chemical bonding and structure – covalent bonding and structures
10. Chemical bonding and structure – intermolecular forces
11. Chemical bonding and structure – metallic bonding
12. Energetics/thermochemistry – measuring energy changes, Hess's law, bond enthalpies
13. Chemical kinetics – collision theory and rates of reaction
14. Equilibrium
15. Acids and bases – theories of acids and bases
16. Acids and bases – properties of acids and bases
17. Acids and bases – the pH scale
18. Acids and bases – strong and weak acids and bases
19. Redox processes – oxidation & reduction
20. Redox processes – electrochemical cells
21. Organic chemistry – fundamentals of organic chemistry
22. Organic chemistry – functional group chemistry
23. Biochemistry – proteins & enzymes
24. Biochemistry – lipids
25. Biochemistry – carbohydrates
26. Biochemistry – vitamins
27. Biochemistry – biochemistry and the environment

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