



Oxford City Schools

Proficiency Scale

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GRADE LEVEL: 10-12 COURSE NAME: Physical Science
MEASUREMENT TOPIC: Explain the Structure and Properties of Matter

4	In addition to Score 3, the student makes in-depth inferences and applications.
3	The student can: <ul style="list-style-type: none">• Evaluate the effects of using ions or isotopes of elements as a solution to a complex real-world problems including:<ul style="list-style-type: none">• trade-offs• environmental impact• Use mathematics and computational thinking to determine the charge of an ion and the mass number of an isotope based on the number of subatomic particles.• Analyze and interpret data to predict properties of ionic and covalent compounds.
2	The student can: <ul style="list-style-type: none">• Predict the properties of an element based on the element's number of protons and valence electrons.• Use the periodic table to determine patterns of valence electrons.• Communicate information about the periodic table concerning the structure of an atom and the arrangement of subatomic particles.

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With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.

Key Vocabulary: