Urbana School District #116
FOURTH GRADE CORE EXPECTATIONS

SCIENCE

Illinois State Goal 11: Understand the processes of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems.

State Standard	District Core Expectations
11A: Know and apply the concepts, principles, and processes of scientific inquiry.	• Use equipment and materials in science activities safely • Describe why accuracy and detail are important when recording data • Write down observations during a scientific investigation • Describe why similar experiments can result in different findings
11B: Know and apply the concepts, principles and processes of technological design.	• Describe how technology is used in scientific investigations

Illinois State Goal 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.

State Standard	District Core Expectations
12A: Know and apply concepts that explain how living things function, adapt and change.	• Describe the process of photosynthesis • Describe plant and animal reproduction • Describe the relationship among producers, consumers, and decomposers in food chains • Describe the different relationships among living things, such as predator/prey, parasite/host, and producer/consumer/decomposer
12B: Know and apply concepts that describe how living things interact with each other and with their environment.	• Recognize different factors in the physical environment that contribute to changes in populations • Interpret how local, regional, and global ecosystems are impacted by personal and societal choices
12C: Know and apply concepts that describe properties of matter and energy and the interactions between them.	• State the names of electrical units • Describe the difference between static and current electricity • Describes basic properties of magnets • Explain how an electromagnet works
12D: Know and apply concepts that describe force and motion and the principles that explain them.	• Define “gravitational force” • Identify the relationship between friction and movement • Describe how forces produce actions and reactions • Identify simple machines and their functions • Define constant, variable, and periodic motions
12E: Know and apply concepts that describe the features and processes of the Earth and its resources.	• Describe how cloud type and weather patterns relate • Identify the symbols used on a weather map • Describe the instruments and scales that are utilized by scientists to make weather related measurements

	• Explain weather patterns based on atmospheric conditions, and be able to record and discuss local daily conditions • Identify the causes and effects of erosion • Tell the difference between slow-change processes and rapid-change processes • Describe what the ozone layer is and why it is important
12F: Know and apply concepts that explain the composition and structure of the universe and Earth's place in it.	• N/A

Illinois State Goal 13: Understand the relationships among science, technology and society in historical and contemporary contexts.

State Standard	District Core Expectations
13A: Know and apply the accepted practices of science.	• Identify and use units of measurement used in the metric system • Use observation and measurement to collect data • Collect scientific data from experiments • Make graphs and charts using scientific data
13B: Know and apply concepts that describe the interaction between science, technology and society.	• Describe how technology is used for various purposes in science • Describe the effects on society of scientific and technological discoveries

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