

Correlation of MicroWorlds EX and the Texas Essential Knowledge and Skills

Grades 4 – 7 Science

Grade 4

Standards met with MicroWorlds EX Projects and Samples

Gas Atoms in a Jar

- 112.6 (b) 4.2 (A) plan and implement descriptive investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.6 (b) 4.2 (B) collect information by observing and measuring
- 112.6 (b) 4.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.6 (b) 4.2 (D) communicate valid conclusions
- 112.6 (b) 4.3 (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;
- 112.6 (b) 4.3 (C) represent the natural world using models and identify their limitations;
- 112.6 (b) 4.4 (B) demonstrate that repeated investigations may increase the reliability of results;

Drop Balls

- 112.6 (b) 4.2 (A) plan and implement descriptive investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.6 (b) 4.2 (B) collect information by observing and measuring
- 112.6 (b) 4.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.6 (b) 4.2 (D) communicate valid conclusions
- 112.6 (b) 4.2 (E) construct simple graphs, tables, maps and charts to organize, examine, and evaluate information
- 112.6 (b) 4.3 (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;
- 112.6 (b) 4.3 (C) represent the natural world using models and identify their limitations;
- 112.6 (b) 4.4 (B) demonstrate that repeated investigations may increase the reliability of results;

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Environmental Chaos - Prey Predator

- 112.6 (b) 4.2 (A) plan and implement descriptive investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.6 (b) 4.2 (B) collect information by observing and measuring
- 112.6 (b) 4.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.6 (b) 4.2 (D) communicate valid conclusions
- 112.6 (b) 4.3 (C) represent the natural world using models and identify their limitations;

Roll Dice

- 112.6 (b) 4.2 (A) plan and implement descriptive investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.6 (b) 4.2 (B) collect information by observing and measuring
- 112.6 (b) 4.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.6 (b) 4.2 (D) communicate valid conclusions
- 112.6 (b) 4.2 (E) construct simple graphs, tables, maps and charts to organize, examine, and evaluate information

Standards met with MicroWorlds EX Tutorial

Science Model – Gravity

- 112.6 (b) 4.2 (A) plan and implement descriptive investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.6 (b) 4.2 (B) collect information by observing and measuring
- 112.6 (b) 4.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.6 (b) 4.2 (D) communicate valid conclusions
- 112.6 (b) 4.2 (E) construct simple graphs, tables, maps and charts to organize, examine, and evaluate information
- 112.6 (b) 4.3 (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;
- 112.6 (b) 4.3 (C) represent the natural world using models and identify their limitations;

**MicroWorlds EX and MicroWorlds EX Robotics Edition
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In addition to the above standards, MicroWorlds EX Robotics Edition meets the following:

MicroWorlds EX Robotics Edition Projects and Samples

Measuring Wheel

- 112.6 (b) 4.2 (A) plan and implement descriptive investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.6 (b) 4.2 (B) collect information by observing and measuring
- 112.6 (b) 4.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.6 (b) 4.2 (D) communicate valid conclusions
- 112.6 (b) 4.2 (E) construct simple graphs, tables, maps and charts to organize, examine, and evaluate information
- 112.6 (b) 4.3 (C) represent the natural world using models and identify their limitations;
- 112.6 (b) 4.4 (A) collect and analyze information using tools including calculators, safety goggles, microscopes, cameras, sound recorders, computers, hand lenses, rulers, thermometers, meter sticks, timing devices, balances, and compasses

Zoetrap

- 112.6 (b) 4.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.6 (b) 4.3 (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;
- 112.6 (b) 4.3 (C) represent the natural world using models and identify their limitations;
- 112.6 (b) 4.3 (E) connect Grade 4 science concepts with the history of science and contributions of scientists;

Dancing on a String

- 112.6 (b) 4.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.6 (b) 4.3 (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;
- 112.6 (b) 4.3 (C) represent the natural world using models and identify their limitations;

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MicroWorlds EX Robotics Edition Tutorials

Measuring Wheel

- 112.6 (b) 4.2 (A) plan and implement descriptive investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.6 (b) 4.2 (B) collect information by observing and measuring
- 112.6 (b) 4.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.6 (b) 4.2 (D) communicate valid conclusions
- 112.6 (b) 4.2 (E) construct simple graphs, tables, maps and charts to organize, examine, and evaluate information
- 112.6 (b) 4.3 (C) represent the natural world using models and identify their limitations;
- 112.6 (b) 4.4 (A) collect and analyze information using tools including calculators, safety goggles, microscopes, cameras, sound recorders, computers, hand lenses, rulers, thermometers, meter sticks, timing devices, balances, and compasses

Grocery Conveyer

- 112.6 (b) 4.2 (A) plan and implement descriptive investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.6 (b) 4.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.6 (b) 4.2 (D) communicate valid conclusions
- 112.6 (b) 4.3 (C) represent the natural world using models and identify their limitations;

Test Your Reflexes

- 112.6 (b) 4.2 (A) plan and implement descriptive investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.6 (b) 4.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.6 (b) 4.2 (D) communicate valid conclusions
- 112.6 (b) 4.3 (C) represent the natural world using models and identify their limitations;

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Grade 5

Standards met with MicroWorlds EX Projects and Samples

Gas Atoms in a Jar

- 112.7 (b) 5.2 (A) plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.7 (b) 5.2 (B) collect information by observing and measuring
- 112.7 (b) 5.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.7 (b) 5.2 (D) communicate valid conclusions
- 112.7 (b) 5.3 (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;
- 112.7 (b) 5.3 (C) represent the natural world using models and identify their limitations;
- 112.7 (b) 5.4 (B) demonstrate that repeated investigations may increase the reliability of results;

Drop Balls

- 112.7 (b) 5.2 (A) plan and implement descriptive investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.7 (b) 5.2 (B) collect information by observing and measuring
- 112.7 (b) 5.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.7 (b) 5.2 (D) communicate valid conclusions
- 112.7 (b) 5.2 (E) construct simple graphs, tables, maps and charts to organize, examine, and evaluate information
- 112.7 (b) 5.3 (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;
- 112.7 (b) 5.3 (C) represent the natural world using models and identify their limitations;
- 112.7 (b) 5.4 (B) demonstrate that repeated investigations may increase the reliability of results;

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Environmental Chaos - Prey Predator

- 112.7 (b) 5.2 (A) plan and implement descriptive investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.7 (b) 5.2 (B) collect information by observing and measuring
- 112.7 (b) 5.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.7 (b) 5.2 (D) communicate valid conclusions
- 112.7 (b) 5.3 (C) represent the natural world using models and identify their limitations;

Roll Dice

- 112.7 (b) 5.2 (A) plan and implement descriptive investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.7 (b) 5.2 (B) collect information by observing and measuring
- 112.7 (b) 5.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.7 (b) 5.2 (D) communicate valid conclusions
- 112.7 (b) 5.2 (E) construct simple graphs, tables, maps and charts to organize, examine, and evaluate information

Standards met with MicroWorlds EX Tutorial

Science Model – Gravity

- 112.7 (b) 5.2 (A) plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.7 (b) 5.2 (B) collect information by observing and measuring
- 112.7 (b) 5.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.7 (b) 5.2 (D) communicate valid conclusions
- 112.7 (b) 5.2 (E) construct simple graphs, tables, maps and charts to organize, examine, and evaluate information
- 112.7 (b) 5.3 (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;
- 112.7 (b) 5.3 (C) represent the natural world using models and identify their limitations;

**MicroWorlds EX and MicroWorlds EX Robotics Edition
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In addition to the above standards, MicroWorlds EX Robotics Edition meets the following:

MicroWorlds EX Robotics Edition Projects and Samples

Measuring Wheel

- 112.7 (b) 5.2 (A) plan and implement descriptive investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.7 (b) 5.2 (B) collect information by observing and measuring
- 112.7 (b) 5.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.7 (b) 5.2 (D) communicate valid conclusions
- 112.7 (b) 5.2 (E) construct simple graphs, tables, maps and charts to organize, examine, and evaluate information
- 112.7 (b) 5.3 (C) represent the natural world using models and identify their limitations;
- 112.7 (b) 5.4 (A) collect and analyze information using tools including calculators, microscopes, cameras, sound recorders, computers, hand lenses, rulers, thermometers, compasses, balances, hot plates, meter sticks, timing devices, magnets, collecting nets, and safety goggles,

Zoetrap

- 112.7 (b) 5.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.7 (b) 5.3 (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;
- 112.7 (b) 5.3 (C) represent the natural world using models and identify their limitations;
- 112.7 (b) 5.3 (E) connect Grade 5 science concepts with the history of science and contributions of scientists;

Dancing on a String

- 112.7 (b) 5.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.7 (b) 5.3 (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;
- 112.7 (b) 5.3 (C) represent the natural world using models and identify their limitations;

**MicroWorlds EX and MicroWorlds EX Robotics Edition
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MicroWorlds EX Robotics Edition Tutorials

Measuring Wheel

- 112.7 (b) 5.2 (A) plan and implement descriptive investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.7 (b) 5.2 (B) collect information by observing and measuring
- 112.7 (b) 5.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.7 (b) 5.2 (D) communicate valid conclusions
- 112.7 (b) 5.2 (E) construct simple graphs, tables, maps and charts to organize, examine, and evaluate information
- 112.7 (b) 5.3 (C) represent the natural world using models and identify their limitations;
- 112.7 (b) 5.4 (A) collect and analyze information using tools including calculators, microscopes, cameras, sound recorders, computers, hand lenses, rulers, thermometers, compasses, balances, hot plates, meter sticks, timing devices, magnets, collecting nets, and safety goggles,

Conveyer Belt

- 112.7 (b) 5.2 (A) plan and implement descriptive investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.7 (b) 5.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.7 (b) 5.2 (D) communicate valid conclusions
- 112.7 (b) 5.3 (C) represent the natural world using models and identify their limitations;

Test Your Reflexes

- 112.7 (b) 5.2 (A) plan and implement descriptive investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.7 (b) 5.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.7 (b) 5.2 (D) communicate valid conclusions
- 112.7 (b) 5.3 (C) represent the natural world using models and identify their limitations;

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Grade 6

Standards met with MicroWorlds EX Projects and Samples

Gas Atoms in a Jar

- 112.22 (b) 6.2 (A) plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.22 (b) 6.2 (B) collect data by observing and measuring
- 112.22 (b) 6.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.22 (b) 6.2 (D) communicate valid conclusions
- 112.6 (b) 6.3 (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;
- 112.22 (b) 6.3 (C) represent the natural world using models and identify their limitations;
- 112.22 (b) 6.4 (B) identify patterns in collected information using percent, average, range, and frequency;

Drop Balls

- 112.22 (b) 6.2 (A) plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.22 (b) 6.2 (B) collect data by observing and measuring
- 112.6 (b) 6.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.22 (b) 6.2 (D) communicate valid conclusions
- 112.22 (b) 6.2 (E) construct graphs, tables, maps and charts using tools including computers to organize, examine, and evaluate data
- 112.22 (b) 6.3 (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;
- 112.22 (b) 6.3 (C) represent the natural world using models and identify their limitations;
- 112.22 (b) 6.4 (B) identify patterns in collected information using percent, average, range, and frequency;

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Environmental Chaos - Prey Predator

- 112.22 (b) 6.2 (A) plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.22 (b) 6.2 (B) collect data by observing and measuring
- 112.22 (b) 6.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.22 (b) 6.2 (D) communicate valid conclusions
- 112.22 (b) 6.3 (C) represent the natural world using models and identify their limitations;
- 112.22 (b) 6.12 (B) identify responses in organisms to internal stimuli such as hunger or thirst;
- 112.22 (b) 6.12 (C) identify components of an ecosystem to which organisms may respond;

Roll Dice

- 112.22 (b) 6.2 (A) plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.22 (b) 6.2 (B) collect data by observing and measuring
- 112.22 (b) 6.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.22 (b) 6.2 (D) communicate valid conclusions
- 112.22 (b) 6.2 (E) construct graphs, tables, maps and charts using tools including computers to organize, examine, and evaluate data

Standards met with MicroWorlds EX Tutorial

Science Model – Gravity

- 112.22 (b) 6.2 (A) plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.22 (b) 6.2 (B) collect data by observing and measuring
- 112.22 (b) 6.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.22 (b) 6.2 (D) communicate valid conclusions

**MicroWorlds EX and MicroWorlds EX Robotics Edition
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- 112.22 (b) 6.2 (E) construct graphs, tables, maps and charts using tools including computers to organize, examine, and evaluate data
- 112.22 (b) 6.3 (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;
- 112.22 (b) 6.3 (C) represent the natural world using models and identify their limitations;

In addition to the above standards, MicroWorlds EX Robotics Edition meets the following:

MicroWorlds EX Robotics Edition Projects and Samples

Measuring Wheel

- 112.21 (b) 6.2 (A) plan and implement descriptive investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.21 (b) 6.2 (B) collect information by observing and measuring
- 112.21 (b) 5.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.21 (b) 6.2 (D) communicate valid conclusions
- 112.21 (b) 6.2 (E) construct graphs, tables, maps and charts using tools including computers to organize, examine, and evaluate data;
- 112.21 (b) 6.3 (C) represent the natural world using models and identify their limitations;
- 112.21 (b) 6.4 (A) collect, analyze and record information using tools including beakers, Petri dishes, meter sticks, graduated cylinders, weather instruments, timing devices, hot plates, test tubes, safety goggles, spring scales, magnets, balances, microscopes, telescopes, thermometers, calculators, field equipment, compasses, computers, and computer probes;

Zoetrap

- 112.21 (b) 6.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.21 (b) 6.3 (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;
- 112.21 (b) 6.3 (C) represent the natural world using models and identify their limitations;
- 112.21 (b) 6.3 (E) connect Grade 6 science concepts with the history of science and contributions of scientists;

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Dancing on a String

- 112.21 (b) 6.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.21 (b) 6.3 (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;
- 112.21 (b) 6.3 (C) represent the natural world using models and identify their limitations;

MicroWorlds EX Robotics Edition Tutorials

Measuring Wheel

- 112.21 (b) 6.2 (A) plan and implement descriptive investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.21 (b) 6.2 (B) collect information by observing and measuring
- 112.21 (b) 5.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.21 (b) 6.2 (D) communicate valid conclusions
- 112.21 (b) 6.2 (E) construct graphs, tables, maps and charts using tools including computers to organize, examine, and evaluate data;
- 112.21 (b) 6.3 (C) represent the natural world using models and identify their limitations;
- 112.21 (b) 6.4 (A) collect, analyze and record information using tools including beakers, Petri dishes, meter sticks, graduated cylinders, weather instruments, timing devices, hot plates, test tubes, safety goggles, spring scales, magnets, balances, microscopes, telescopes, thermometers, calculators, field equipment, compasses, computers, and computer probes;

Conveyer Belt

- 112.21 (b) 6.2 (A) plan and implement descriptive investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.21 (b) 5.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.21 (b) 6.2 (D) communicate valid conclusions
- 112.21 (b) 6.3 (C) represent the natural world using models and identify their limitations;

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Test Your Reflexes

- 112.21 (b) 6.2 (A) plan and implement descriptive investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.21 (b) 5.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.21 (b) 6.2 (D) communicate valid conclusions
- 112.21 (b) 6.3 (C) represent the natural world using models and identify their limitations;

**MicroWorlds EX and MicroWorlds EX Robotics Edition
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Grade 7

Standards met with MicroWorlds EX Projects and Samples

Gas Atoms in a Jar

- 112.23 (b) 7.2 (A) plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.23 (b) 7.2 (B) collect data by observing and measuring
- 112.23 (b) 7.2 (C) organize, analyze make inferences, and predict trends from direct and indirect evidence
- 112.23 (b) 7.2 (D) communicate valid conclusions
- 112.23 (b) 7.4 (B) collect and analyze information to recognize patterns such as rates of change;

Drop Balls

- 112.23 (b) 7.2 (A) plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.23 (b) 7.2 (B) collect data by observing and measuring
- 112.23 (b) 7.2 (C) organize, analyze make inferences, and predict trends from direct and indirect evidence
- 112.23 (b) 7.2 (D) communicate valid conclusions
- 112.23 (b) 7.2 (E) construct graphs, tables, maps and charts using tools including computers to organize, examine, and evaluate data
- 112.23 (b) 7.3 (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;
- 112.23 (b) 7.3 (C) represent the natural world using models and identify their limitations;
- 112.23 (b) 7.4 (B) collect and analyze information to recognize patterns such as rates of change;

Environmental Chaos - Prey Predator

- 112.23 (b) 7.2 (A) plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.23 (b) 7.2 (B) collect data by observing and measuring
- 112.23 (b) 7.2 (C) organize, analyze make inferences, and predict trends from direct and indirect evidence
- 112.23 (b) 7.2 (D) communicate valid conclusions

**MicroWorlds EX and MicroWorlds EX Robotics Edition
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- 112.23 (b) 7.3 (C) represent the natural world using models and identify their limitations;
- 112.23 (b) 7.4 (B) collect and analyze information to recognize patterns such as rates of change;
- 112.23 (b) 7.5 (B) observe and describe the role of ecological succession in maintaining an equilibrium in an ecosystem;
- 112.23 (b) 7.12 (A) identify components of an ecosystem ;
- 112.23 (b) 7.12 (C) observe and describe how organisms including producers, consumers and decomposers live together in an environment and use existing resources;

Roll Dice

- 112.23 (b) 7.2 (A) plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.23 (b) 7.2 (B) collect data by observing and measuring
- 112.23 (b) 7.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.23 (b) 7.2 (D) communicate valid conclusions
- 112.23 (b) 7.2 (E) construct graphs, tables, maps and charts using tools including computers to organize, examine, and evaluate data

Standards met with MicroWorlds EX Tutorials

Science Model – Gravity

- 112.23 (b) 7.2 (A) plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.23 (b) 7.2 (B) collect data by observing and measuring
- 112.23 (b) 7.2 (C) organize, analyze make inferences, and predict trends from direct and indirect evidence
- 112.23 (b) 7.2 (D) communicate valid conclusions
- 112.23 (b) 7.2 (E) construct graphs, tables, maps and charts using tools including computers to organize, examine, and evaluate data
- 112.23 (b) 7.3 (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;
- 112.23 (b) 7.3 (C) represent the natural world using models and identify their limitations;

**MicroWorlds EX and MicroWorlds EX Robotics Edition
LCSI**

In addition to the above standards, MicroWorlds EX Robotics Edition meets the following:

MicroWorlds EX Robotics Edition Projects and Samples

Measuring Wheel

- 112.23 (b) 7.2 (A) plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.23 (b) 7.2 (B) collect data by observing and measuring
- 112.23 (b) 7.2 (C) organize, analyze, make inferences and predict trends from direct and indirect evidence
- 112.23 (b) 7.2 (D) communicate valid conclusions
- 112.23 (b) 7.2 (E) construct graphs, tables, maps and charts using tools including computers to organize, examine, and evaluate data;
- 112.23 (b) 7.3 (C) represent the natural world using models and identify their limitations;
- 112.23 (b) 7.4 (A) collect, analyze and record information to explain a phenomenon using tools including beakers, Petri dishes, meter sticks, graduated cylinders, weather instruments, timing devices, hot plates, dissecting equipment, test tubes, safety goggles, spring scales, balances, microscopes, telescopes, thermometers, calculators, field equipment, computers, computer probes, timing devices, magnets and compasses;

Zoetrap

- 112.23 (b) 7.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.23 (b) 7.3 (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;
- 112.23 (b) 7.3 (C) represent the natural world using models and identify their limitations;
- 112.23 (b) 7.3 (E) connect Grade 7 science concepts with the history of science and contributions of scientists;
- 112.23 (b) 7.6 (A) demonstrate basic relationships between force and motion using simple machines including pulleys and levers;

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Dancing on a String

- 112.23 (b) 7.2 (C) analyze and interpret information to construct reasonable explanations from direct and indirect evidence
- 112.23 (b) 7.3 (A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;
- 112.23 (b) 7.3 (C) represent the natural world using models and identify their limitations;
- 112.23 (b) 7.6 (A) demonstrate basic relationships between force and motion using simple machines including pulleys and levers;

MicroWorlds EX Robotics Edition Tutorials

Measuring Wheel

- 112.23 (b) 7.2 (A) plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.23 (b) 7.2 (B) collect data by observing and measuring
- 112.23 (b) 7.2 (C) organize, analyze, make inferences and predict trends from direct and indirect evidence
- 112.23 (b) 7.2 (D) communicate valid conclusions
- 112.23 (b) 7.2 (E) construct graphs, tables, maps and charts using tools including computers to organize, examine, and evaluate data;
- 112.23 (b) 7.3 (C) represent the natural world using models and identify their limitations;
- 112.23 (b) 7.4 (A) collect, analyze and record information to explain a phenomenon using tools including beakers, Petri dishes, meter sticks, graduated cylinders, weather instruments, timing devices, hot plates, dissecting equipment, test tubes, safety goggles, spring scales, balances, microscopes, telescopes, thermometers, calculators, field equipment, computers, computer probes, timing devices, magnets and compasses;

Conveyer Belt

- 112.23 (b) 7.2 (A) plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.23 (b) 7.2 (C) organize, analyze, make inferences and predict trends from direct and indirect evidence
- 112.23 (b) 7.2 (D) communicate valid conclusions
- 112.23 (b) 7.3 (C) represent the natural world using models and identify their limitations;

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Test Your Reflexes

- 112.23 (b) 7.2 (A) plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology;
- 112.23 (b) 7.2 (C) organize, analyze, make inferences and predict trends from direct and indirect evidence
- 112.23 (b) 7.2 (D) communicate valid conclusions
- 112.23 (b) 7.3 (C) represent the natural world using models and identify their limitations;