West Linn–Wilsonville School District
Middle School (Grades 6-8) Science Curriculum

Content Areas & Units (Modules)			**Revision Date: Summer 2005**
	Grade 6	**Grade 7**	**Grade 8**
Nature of Science			
➢ Scientific Methodologies ◆	X		
Earth Science			
➢ Weather/Climate/Atmosphere	X +		
➢ Astronomy	X		
➢ Inside the Restless Earth			X
➢ Earth's Changing Surface			X
Life Science			
➢ Animals	X		
➢ Microorganisms		X	
➢ Plants		X +	
➢ Human Body		X +	
➢ Cells/Heredity/Evolution		X +	
➢ Environmental Science ☐			X +
Physical Science			
➢ Sound & Light	X		
➢ Matter			X
➢ Motion, Force & Energy			X

NOTES:

◆ *Scientific Methodologies* – stand-alone unit at 6th grade; however, concepts reviewed and integrated into content at 7th & 8th grades

\+ *Water* – previously a stand-alone unit, now integrated into other units and taught in all 3 grades:
- 6th: part of *Weather/Climate/Atmosphere* unit
- 7th: part of Life Science units (plants, cells, human body, etc.)
- 8th: part of *Environmental Science* unit

☐ *Environmental Science* – stand-alone unit at 8th grade; however, environmental issues/perspectives interwoven whenever possible at all 3 grades

These are the science content areas/units for the West Linn-Wilsonville School District science curriculum renewal and adoption in grades 6, 7 and 8 for the years 2002 - 2008. This curriculum was defined through a full participation process of study and consensus with the science adoption team and middle school science faculty. It is designed to lead to a coherent curriculum supporting science literacy for all students.

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Science Curriculum – Grade 6	**Revision Date: Summer 2005**
Nature of Science	
Scientific Methodologies	• Data tables, observation, measurement, inference, prediction, etc.
Earth Science	
Weather/Climate/Atmosphere	• What are the basic characteristics of our atmosphere? • How are humans impacting our atmosphere, and what effect does it have on us and our world? • How do air, water, heat, and land interact to create our weather? • What are the basic tools and factors used to assess and predict weather? • What factors determine the climate of a certain area, and how does the climate influence the plants and animals that live in that area? • How does weather and climate impact humans and their lifestyles? • What affects climate changes?
Astronomy	• What is Earth's place in the solar system, and how are all the bodies of the solar system moving and interacting? How do we perceive these bodies and their movements from Earth? • What role does gravity play in the universe? • How are other planets different from Earth and each other, and what makes Earth a unique place for supporting life? • How does Earth's movement and tilt create seasons, the day-and-night cycle, and the length of our year? • How do the relative movements of the sun, moon, and Earth create the phases of the moon, eclipses, and tides? • What are the relative sizes and distances in our universe? • How do stars produce light and energy? What is the source of energy and life on Earth? • What is the historical significance of mankind's understanding and discovery of space? • How do we collect information about space, and how do we form our understanding based on limited information?
Life Science	
Animals	• What makes an animal an animal? • How are animals classified, and how do they fit into the greater taxonomic system? • What types of adaptations do animals have, and how do these help an animal or species survive in a particular environment? • What role do animals have in the food webs, habitats, ecosystems, and biomes they live in?

Science Curriculum – Grade 6	**Revision Date: Summer 2005**
	• How do humans and animals interact, and how do they depend on each other for survival?
Physical Science	
Sound & Light	• What are the types of waves, and what are their properties? • What are the properties of electromagnetic waves, and how is the electromagnetic spectrum a part of our lives? • What is light, and what are its characteristics? • What causes sound, and what are its characteristics? • How do we see and hear things?

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Science Curriculum – Grade 7	**Revision Date: January 2006**
Life Science	
Microorganisms Plants	• Symbolic relationships? • How does nature evolve and change itself? • How do humans affect the symbolic relationships within nature? • How does nature adapt to the interference of humans? • Why/how are plants important? • What are the differences between different types of life, and what is their role in the environment?
Human Body *Function & Interdependence; Complexity; Owner's Manual*	• How does my body work? • What does my body do? • How do I keep my body healthy?
Cells *Every living thing is made of cells; how cells work*	• What is a cell? • How does a cell work? • What roles do cells play in living things?
Genetics/Heredity *Traits are determined by DNA and are passed from one generation to another*	• How are traits determined? • How are traits passed from one generation to another? • How am I different/the same as my ancestors?
Evolution *Living things are changed over geologic time*	• What is evolution? • Under what conditions do species evolve? (the role of environment, mutation, etc.) • What is the difference between adaptation, natural selection, and evolution?

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Science Curriculum – Grade 8	**Revision Date: Summer 2005**
Earth Science	
Inside the Restless Earth	• How are rocks and minerals formed? • How will our use of them affect the future? • How should humans make resource decisions based on the supply of the Earth's materials? • How are rocks and minerals formed, and what are the implications for future sustainability and low impact consumption of resources?
Earth's Changing Surface	• Are there factors that continually shape and re-shape the Earth's surface? • What are the factors that continually shape and re-shape the Earth's surface? • How does it impact humans? • Is the Earth's surface unchanging? • What are the constructive and destructive forces that shape the Earth's surface?
Life Science	
Environmental Science	• What are the connections between all living things and the environment? What is the impact on human civilization? • What is the human impact on the environment? • Why does the quality of Earth's waters determine the quality of life on the planet?
Physical Science	
Matter	• How does the structure and movement of atoms determine the form and interactions of all matter? • Explain atomic structure, basic bonding, and the periodic table. • What are the different kinds of matter and how do they interact with each other? • What are some basic chemical reactions, and how are our everyday lives impacted by them?
Motion, Force, & Energy	• How do you measure motion, force, and energy? • What do all forms of energy have in common? • Use simple machines to do work, and apply mathematical equations to concepts of speed, force, acceleration, etc.