

Curriculum Alignment of Skinner Elementary Montessori and Washington State EALRs

Physical, Life and Social Sciences: Grade 4– Age 9

Using manipulatives/ equipment, your child will be introduced to:

EALRs	Skinner Elementary Montessori
<p>EALR 1 – SYSTEMS: The student knows and applies scientific concepts and principles to understand the properties, structures, and changes in physical, earth/space, and living systems.</p> <p>Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.</p> <p>Physical Systems-Properties of Substances 1.1.2 Understand the relative position and motion of objects. W</p> <p>Wave Behaviors 1.1.3 Understand the behavior of sound in terms of vibrations and pitch and the behavior of light in terms of bouncing off, passing through, and changes in direction. W</p> <p>Earth and Space Systems-Nature and Properties of Earth Materials 1.1.5 Understand physical properties of Earth materials including rocks, soil, water, and air.</p> <p>Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.</p> <p>Systems Structure-Structure of Physical Earth/Space and Living Systems 1.2.1 Analyze how the parts of a system go together and how these parts depend on each other. W</p> <p>Earth and Space Systems-Components and Patterns of Earth Systems 1.2.4 Understand that Earth’s system includes a mostly solid interior, landforms, bodies of water, and an atmosphere. W</p> <p>Living Systems-Structure and Organization of Living Systems 1.2.6 Understand that organisms can be a single cell or many cells that form parts with different functions. W</p> <p>Molecular Basis of Heredity 1.2.7 Understand the. Life cycles of plants and animals and the differences between inherited and acquired characteristics. W</p> <p>Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.</p> <p>Physical Systems-Nature of Force 1.3.1 Understand forces in terms of strength and direction. W</p> <p>Forces to Explain Motion 1.3.2 Understand that forces can change the motion of common objects. W</p> <p>Earth and Space Systems-Hydrosphere and Atmosphere 1.3.6 Understand weather indicators and understand how water cycles through the atmosphere. W</p>	<p>Physical Science</p> <ul style="list-style-type: none"> • Creation story <p>Examining the Nature of Elements</p> <ul style="list-style-type: none"> • Composition of the earth • Further details of the composition of the earth • Formation of mountains • Geography nomenclature • States of matter • Attraction and gravity • Different ways of combining • Saturation and super saturation <p>The Sun and the Earth</p> <ul style="list-style-type: none"> • Rotation of the earth • A.M. and P.M. • The time zone chart • Earth as a sphere and its result • Tilt of the axis • Zones • Zones work chart • Seasons work chart • Seasons and the two tropics • Protractor chart • Protection of the atmosphere and the rains <p>Work of Air</p> <ul style="list-style-type: none"> • Qualities of air • The winds • Land and sea breezes • Changes in the wind caused by the seasons <p>Work of Water</p> <ul style="list-style-type: none"> • Erosion • River model • Rains • Currents • Ocean waves • Wind as a sculptor • Summary on work of water • Spread of Vegetation • People of Different Zones <p>Economic Geography</p> <ul style="list-style-type: none"> • Interdependencies • Economic geography

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<p>Living Systems-Life Process and the Flow of Matter and Energy 1.3.8 Understand that living things need constant energy and matter. W Interdependence of Life 1.3.10 Understand that an organism’s ability to survive is influenced by the organism’s behavior and the ecosystem in which it lives. W</p> <p>EALR 2 – INQUIRY: The student knows and applies the skills, processes, and nature of scientific discovery.</p> <p>Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry. Investigating Systems</p> <p>Questioning 2.1.1 Understand how to ask a question about objects, organisms, and events in the environment. W</p> <p>Explaining 2.1.3 Understand how to construct a reasonable explanation using evidence. W</p> <p>Modeling 2.1.4 Understand how to use simple models to represent objects, events, systems, and processes. W</p> <p>Communicating 2.1.5 Understand how to record investigations and explanations of objects, events, systems, and processes. W</p> <p>Component 2.2 Nature of Science: Understand the nature of scientific inquiry.</p> <p>Nature of Science-Intellectual Honesty 2.2.1 Understand that all scientific observations are reported accurately and honestly even when the observations contradict expectations. W</p> <p>Limitations of Science and Technology 2.2.2 Understand that scientific facts are measurements and observations of phenomena in the natural world that are repeatable and/or verified by expert scientists. W</p> <p>Evaluating Inconsistent Results 2.2.3 Understand why similar investigations may not produce similar results. W</p> <p>Evaluating methods of Investigation 2.2.4 Understand how to make the results of scientific investigations reliable. W</p> <p>Evolution of Scientific Ideas 2.2.5 Understand that scientific comprehension of systems increases through inquiry. W</p> <p>EALR 3 – APPLICATION: The student knows and applies science concepts and skills to develop solutions to human problems in societal contexts</p> <p>Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems or meet challenges.</p> <p>Designing Solutions-Identifying Problems 3.1.1 Understand problems found in ordinary situations in which scientific design can be or has been used to design solutions. W</p>	<p>Life Science</p> <p>Plant</p> <ul style="list-style-type: none"> • Needs of a plant • Plants grow to light <p>Leaf</p> <ul style="list-style-type: none"> • Main function of the leaf • Stomata and evaporation • Plants give off oxygen • Parts of a leaf • Different kinds of veins • Simple classification <p>Roots</p> <ul style="list-style-type: none"> • Main function • Parts of the root • Collaboration between leaves and roots • Other functions of roots: <ul style="list-style-type: none"> -Holding the plant to the ground -Roots prevent erosion • Other sensitivities of roots <ul style="list-style-type: none"> -Roots dislike light -Roots grow towards the ground • Varieties of roots <p>Stem</p> <ul style="list-style-type: none"> • Main function • Two main kinds of stem • Parts of a woody stem • Other parts of a woody stem • How water is moved up the stem • Varieties <p>Flowers</p> <ul style="list-style-type: none"> • Main function • Parts of the flower • Varieties in the parts • Flowers which invite one and all to come • Specialization of flowers to ensure pollination <p>Fruits</p> <ul style="list-style-type: none"> • Main function • Two kinds of fruits • Parts of a succulent fruit • Kinds of succulent fruits based on parts/flowers • Kinds of dry fruits <p>Seeds</p> <ul style="list-style-type: none"> • Main function • Parts of the seeds • Two main kinds • Simple classification • Seed dispersal

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<p>Designing and Testing Solutions 3.1.2 Understand how the scientific design process is used to develop and implement solutions to human problems. W</p> <p>Evaluating Potential Solutions 3.1.3 Analyze how well a design or a product solves a problem. W</p> <p>Component 3.2 Science, Technology, and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.</p> <p>Science, Technology, and Society — All People Contribute to Science and Technology 3.2.1 Understand that science and technology have been practiced by all peoples throughout history. W</p> <p>Relationship of Science and Technology 3.2.2 Understand that people have invented tools for everyday life and for scientific investigations. W</p> <p>Careers and Occupations Using Science, Mathematics, and Technology 3.2.3 Understand how knowledge and skills of science, mathematics, and technology are used in common occupations.</p> <p>Environmental and Resources Issues 3.2.4 Understand how humans depend on the natural environment and can cause changes in the environment that affect humans' ability to survive. W</p>	<p>Zoology</p> <ul style="list-style-type: none"> • Body function material <p>Introduction to Scientific Classification</p> <ul style="list-style-type: none"> • Kingdom Vegetalia • Kingdom Animalia <p>Life Science</p> <ul style="list-style-type: none"> • Interdependencies • Ecosystems <p>Social Studies/ Sciences</p> <ul style="list-style-type: none"> • Coming of life • Black strip • Coming of human beings • Fundamental needs of human beings • Hand timeline • The clock of eras • First timeline • History question charts • Three phases of history