

**VAN BUREN SCHOOL DISTRICT/VAN BUREN HIGH SCHOOL
EARTH SCIENCE METEOROLOGY CURRICULUM 2006-2007**

DAYS	CHAPTER	TOPIC	SUB-TOPICS	LABS	FRAMEWORKS	ACT
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10	23	Atmosphere	Composition, pressure, layers, pollution, radiation, Greenhouse effect, carbon cycle, oxygen cycle, nitrogen cycle, radiation, winds, Coriolis effect, trade winds, westerlies, easterlies	Draw/Label Oxygen, Carbon, and Nitrogen Cycles. Air Density and Temperature, p. 476-477	<p>PD.1.ES.1 Describe the structure, origin, and evolution of the Earth's components:</p> <ul style="list-style-type: none"> • atmosphere • biosphere • hydrosphere <p>lithosphere</p> <p>PD.1.ES.16 Explain heat transfer in the atmosphere and its relationship to meteorological processes: pressure, winds, evaporation, precipitation</p> <p>PD.1.ES.19 Describe the cycling of materials and energy: nitrogen, oxygen, carbon, phosphorous, hydrological, sulfur</p> <p>SP.3.ES.4 Explain problems related to air quality: automobiles, industry, natural emissions</p> <p>SP.3.ES.7 Investigate which federal and state agencies have responsibility for environmental monitoring and action</p> <p>NS.4.ES.1 Collect and analyze scientific data using appropriate mathematical calculations, figures and tables</p> <p>NS.4.ES.2 Use appropriate equipment and technology as tools for solving problems (e.g., microscopes, centrifuges, flexible arm cameras, computer software and hardware)</p> <p>NS.4.ES.3 Utilize technology to communicate research findings</p>	1, 2, 6
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10	13, 24	Water and Atmosphere	Water cycle, moisture, clouds, fog, precipitation	Relative Humidity, p. 482, 496-497	<p>PD.1.ES.17 Compare and contrast meteorological processes related to air masses, weather systems, and forecasting</p> <p>SP.3.ES.3 Explain common problems related to water quality: conservation, usage, supply, treatment, pollutants (point and nonpoint sources)</p> <p>NS.4.ES.1 Collect and analyze scientific data using appropriate mathematical calculations, figures and tables</p> <p>NS.4.ES.2 Use appropriate equipment and technology as tools for solving problems (e.g., microscopes, centrifuges, flexible arm cameras, computer software and hardware)</p> <p>NS.4.ES.3 Utilize technology to communicate research findings</p>	ACT 1, 2, 6
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10	25	Weather	Air masses, fronts, hurricanes, thunderstorms, tornadoes, thermometer, anemometer, wind vane, Doppler radar, forecasting	Construct a Weather Map. Weather Map Interpretation, p. 520	<p>PD.1.ES.17 Compare and contrast meteorological processes related to air masses, weather systems, and forecasting</p> <p>PD.1.ES.18 Construct and interpret weather maps</p> <p>SP.3.ES.1 Explain the reciprocal relationships between Earth's processes (natural disasters) and human activities</p> <p>SP.3.ES.6 Research how political systems influence environmental decisions</p> <p>NS.4.ES.1 Collect and analyze scientific data using appropriate mathematical calculations, figures and tables</p> <p>NS.4.ES.2 Use appropriate equipment and technology as tools for solving problems (e.g., microscopes, centrifuges, flexible arm cameras, computer software and hardware)</p>	ACT 1, 2, 3, 6
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10	26	Climate	Latitude, solar energy, ocean currents, winds, climate zones	Weather Log with Climate Summary	<p>PD.1.ES.16 Explain heat transfer in the atmosphere and its relationship to meteorological processes: pressure, winds, evaporation, precipitation</p> <p>PD.1.ES.17 Compare and contrast meteorological processes related to air masses, weather systems, and forecasting</p> <p>SP.3.ES.1 Explain the reciprocal relationships between Earth's processes (natural disasters) and human activities</p> <p>NS.4.ES.1 Collect and analyze scientific data using appropriate mathematical calculations, figures and tables</p>	ACT 1, 2, 3, 6
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