PROJECT LEARNING TREE
Forest Ecology
Language Arts
Correlation to the Texas Essential Knowledge and Skills

Correlation/TEKS Language Arts Students are expected to:	Activity
ENG I	
15D produce a multimedia presentation (e.g., documentary, class newspaper, docudrama, infomercial, visual or textual parodies, theatrical production) with graphics, images, and sound that conveys a distinctive point of view and appeals to a specific audience	1
26A participate productively in teams, building on the ideas of others, contributing relevant information, developing a plan for consensus-building, and setting ground rules for decision-making	1-5
ENG II	
15D produce a multimedia presentation (e.g., documentary, class newspaper, docudrama, infomercial, visual or textual parodies, theatrical production) with graphics, images, and sound that conveys a distinctive point of view and appeals to a specific audience	1
26A participate productively in teams, building on the ideas of others, contributing relevant information, developing a plan for consensus-building, and setting ground rules for decision-making	1-5
ENG III	
15D produce a multimedia presentation (e.g., documentary, class newspaper, docudrama, infomercial, visual or textual parodies, theatrical production) with graphics, images, and sound that appeals to a specific audience and synthesizes information from multiple points of view	1
26A participate productively in teams, offering ideas or judgments that are purposeful in moving the team towards goals, asking relevant and insightful questions, tolerating a range of positions and ambiguity in decision-making, and evaluating the work of the group based on agreed-upon criteria	1-5
ENG IV	
15D produce a multimedia presentation (e.g., documentary, class newspaper, docudrama, infomercial, visual or textual parodies, theatrical production) with graphics, images, and sound that appeals to a specific audience and synthesizes information from multiple points of view	1
26A participate productively in teams, offering ideas or judgments that are purposeful in moving the team towards goals, asking relevant and insightful questions, tolerating a range of positions and ambiguity in decision-making, and evaluating the work of the group based on agreed-upon criteria	1-5

PROJECT LEARNING TREE
Forest Ecology
Math
Correlation to the Texas Essential Knowledge and Skills

Correlation/TEKS Math Students are expected to:	Activity
Geometry	
5D identify and apply patterns from right triangles to solve meaningful problems, including special right triangles (45-45-90 and 30-60-90) and triangles whose sides are Pythagorean triples	2
8C derive, extend, and use the Pythagorean Theorem	2

PROJECT LEARNING TREE
Forest Ecology
Science
Correlation to the Texas Essential Knowledge and Skills

Correlation/TEKS Science Students are expected to:	Activity
Biology	
2E plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology	3
2F collect and organize qualitative and quantitative data and make measurements with accuracy and precision using tools such as calculators, spreadsheet software, data-collecting probes, computers, standard laboratory glassware, microscopes, various prepared slides, stereoscopes, metric rulers, electronic balances, gel electrophoresis apparatuses, micropipettors, hand lenses, Celsius thermometers, hot plates, lab notebooks or journals, timing devices, cameras, Petri dishes, lab incubators, dissection equipment, meter sticks, and models, diagrams, or samples of biological specimens or structures	1, 2
2G analyze, evaluate, make inferences, and predict trends from data	3, 6
2H communicate valid conclusions supported by the data through methods such as lab reports, labeled drawings, graphic organizers, journals, summaries, oral reports, and technology-based reports	1-3
9B compare the reactants and products of photosynthesis and cellular respiration in terms of energy and matter	3
10B describe the interactions that occur among systems that perform the functions of transport, reproduction, and response in plants	3
11B investigate and analyze how organisms, populations, and communities respond to external factors	7
11D describe how events and processes that occur during ecological succession can change populations and species diversity	6
12A interpret relationships, including predation, parasitism, commensalism, mutualism, and competition among organisms	1, 2
12B compare variations and adaptations of organisms in different ecosystems	2
12C analyze the flow of matter and energy through trophic levels using various models, including food chains, food webs, and ecological pyramids	1
Chemistry	
2F collect data and make measurements with accuracy and precision	3
2H organize, analyze, evaluate, make inferences, and predict trends from data	3
2I communicate valid conclusions supported by the data through methods such as lab reports, labeled drawings, graphs, journals, summaries, oral reports, and technology-based report	3

Environmental Science	
2F collect data individually or collaboratively, make measurements with precision and accuracy, record values using appropriate units, and calculate statistically relevant quantities to describe data, including mean, median, and range	2, 3
2G demonstrate the use of course apparatuses, equipment, techniques, and procedures, including meter sticks, rulers, pipettes, graduated cylinders, triple beam balances, timing devices, pH meters or probes, thermometers, calculators, computers, Internet access, turbidity testing devices, hand magnifiers, work and disposable gloves, compasses, first aid kits, binoculars, field guides, water quality test kits or probes, soil test kits or probes, 100-foot appraiser's tapes, tarps, shovels, trowels, screens, buckets, and rock and mineral samples	1
2I organize, analyze, evaluate, build models, make inferences, and predict trends from data	3, 6
2K communicate valid conclusions supported by the data through methods such as lab reports, labeled drawings, graphic organizers, journals, summaries, oral reports, and technology-based reports	1-3
3E describe the connection between environmental science and future careers	2
4A identify native plants and animals using a dichotomous key	1
4B assess the role of native plants and animals within a local ecosystem and compare them to plants and animals in ecosystems within four other biomes	4
4C diagram abiotic cycles, including the rock, hydrologic, carbon, and nitrogen cycles	2
4F predict how the introduction or removal of an invasive species may alter the food chain and affect existing populations in an ecosystem	4, 5
4G predict how species extinction may alter the food chain and affect existing populations in an ecosystem	5
4H research and explain the causes of species diversity and predict changes that may occur in an ecosystem if species and genetic diversity is increased or reduced	4, 5
8A analyze and describe the effects on areas impacted by natural events such as tectonic movement, volcanic events, fires, tornadoes, hurricanes, flooding, tsunamis, and population growth	2, 3, 6, 7
8C examine how natural processes such as succession and feedback loops restore habitats and ecosystems	2, 6
9A identify causes of air, soil, and water pollution, including point and nonpoint sources	3
9B investigate the types of air, soil, and water pollution such as chlorofluorocarbons, carbon dioxide, pH, pesticide runoff, thermal variations, metallic ions, heavy metals, and nuclear waste	3
9C examine the concentrations of air, soil, and water pollutants using appropriate units	2, 3
9E evaluate the effect of human activities, including habitat restoration projects, species preservation efforts, nature conservancy groups, hunting, fishing, ecotourism, all terrain vehicles, and small personal watercraft, on the environment	3, 6
9J research the advantages and disadvantages of "going green" such as organic gardening and farming, natural methods of pest control, hydroponics, xeriscaping, energy-efficient homes and appliances, and hybrid cars	5
9K analyze past and present local, state, and national legislation, including Texas automobile emissions regulations, the National Park Service Act, the Clean Air Act, the Clean Water Act, the Soil and Water Resources Conservation Act, and the Endangered Species Act	8

PROJECT LEARNING TREE
Forest Ecology
Social Studies
Correlation to the Texas Essential Knowledge and Skills

Correlation/TEKS Social Studies Students are expected to:	Activity
Geography	
15A identify and give examples of different points of view that influence the development of public policies and decision-making processes on local, state, national, and international levels	8
History	
30A create written, oral, and visual presentations of social studies information	5
30C use different forms of media to convey information, including written to visual and statistical to written or visual, using available computer software as appropriate	4
31A create thematic maps, graphs, and charts representing various aspects of the United States	1, 7, 8