

West Linn–Wilsonville School District
Science Department – Course Statement

<u>Course Title: Environmental Science/Ecology Field Study</u>	
Length of Course:	Semester
Number of Credits:	1
Grade Level:	10, 11, 12
Prerequisites:	Biology or Teacher Approval
CIM Work Samples	
Offered in Course:	Science work sample
Date of Description/Revision: June 2004	
Course Overview	
<p>In this course, major environmental concepts and current issues will be explored from a problem-solving approach. A study of natural history will serve as an environmental backdrop from which to critically analyze current environmental problems. Field sampling techniques and applications will be emphasized so students will gain some practical knowledge of how data is collected and how decisions are put forth by the science community with regard to the environment.</p>	
Essential Questions	Concepts providing focus for student learning
<ul style="list-style-type: none"> • How are biotic and abiotic factors interconnected in nature? • What are the major current environmental issues? • How does science collect information about the environment? • How has study of the environment changed over time? • What can be done on a large scale and on an individual level to solve environmental problems? 	
Proficiency Statements	
<p>Upon completion of course, students will be able to:</p> <ul style="list-style-type: none"> • Identify major components of the environment. • Describe major ecosystems of the world. • Describe how the scientific method is used to ask and answer questions about the environment. • Illustrate major biogeochemical cycles in nature. • Describe different types of ecological succession. • Describe historical changes of human uses of natural resources and the results of those changes on the environment. • List the greatest environmental issues facing the planet today. • Identify governmental and non-governmental organizations involved in dealing with environmental issues. • Identify major national and international legislation that deals with the environment. 	

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- Present points of view of various stakeholder groups for a given environmental issue.
- Collect and Analyze environmental data.
- Complete and individual or small group research project.
- Develop a service oriented project that positively affects the environmental community.
- Present the findings of a field study.

General Course Topics/Units & Timeframes	
<ul style="list-style-type: none"> A. Scientific method in environmental research B. Interactions in the environment C. Cycles in ecosystems D. Kinds of ecosystems E. Population ecology F. Resources – water, air, land, food, energy G. Environmental careers 	
Resources	
<ul style="list-style-type: none"> • Text: <i>Environmental Science</i>, Holt, 1996 	