FRAMEWORK FOR ENVIRONMENTAL LITERACY

In 1999 the North American Association for Environmental Education (NAAEE) developed a set of COMMON guidelines for what students in 4th, 8th and 12th grades should know to be environmentally literate. 12th Grade outcomes are below.

1) Questioning, Analysis and Interpretation Skills
   A. Questioning – develop, modify, clarify, and explain? that guide env investigations, factors that influence?
   B. Designing Investigations – develop approaches for investigating env?, even unfamiliar ones
   C. Collecting Information – locate, collect reliable info, using technology to access, gather, store, display data
   D. Evaluating Accuracy, Reliability – use basic logic, reasoning to evaluate completeness and reliability of info
   E. Organizing Information – organize and display info in ways appropriate to purpose
   F. Working With Models and Simulations – create, use, evaluate models for understanding
   G. Drawing Conclusions and Developing Explanations – use evidence, logic to develop explanations

2) Knowledge of Environmental Processes and Systems
   2.1 The Earth as a Physical System
       A. Processes that Shape Earth - major physical processes that shape the earth, relations to earth characteristics
       B. Changes in Matter - application of chemical reactions to environmental characteristics, everyday phenomena
       C. Energy –application of energy and matter concepts to phenomena in the world
   2.2 The Living Environment
       A. Organisms, Populations and Communities - basic population dynamics, importance of diversity
       B. Heredity and Evolution - basic ideas and genetic mechanisms behind biological evolution
       C. Systems and Connections – living environment is comprised of interrelated, dynamic systems
       D. Flow of Matter, Energy - accounting for env characteristics based on interaction of matter and energy
   2.3 Humans and Their Societies
       A. Individuals, Groups – influence of individual, group actions on environment, how groups can work to promote and balance interests
       B. Culture – cultural perspectives and dynamics, apply these in context
       C. Political and Economic Systems – how different P and E systems account for, manage, affect environment
       D. Global Connections – analyze global, social , cultural, political, economic, environmental linkages
       E. Change and Conflict – functions of public processes for promoting, managing change, conflict, effects on env
   2.4 Environment and Society
       A. Human/Environment Interaction – humans alter environment to meet needs, limits to environment
       B. Places – humans endow “places” with meaning through their interactions with its environment
       C. Resources – importance, use of resources changes over time and with different econ systems and tech
       D. Technology – social, environmental impacts of technology
       E. Environmental Issues – range of env issues at scales local to global, linkages of issue and scale

3) Skills for Understanding and Addressing Environmental Issues
   3.1 Skills for Analyzing and Investigating Environmental Issues
       A. Identifying and Investigating Issues – local to global
       B. Sorting Out Consequences of Issues – evaluate consequences of env change, conditions for humans, env
       C. Identifying and Evaluating Alternative Solutions, Courses of Action
       D. Working With Flexibility, Creativity, Openness – engage in peer review in spirit of open inquiry
   3.2 Decision Making and Citizenship Skills
       A. Forming, Evaluating Personal Views – communicate, evaluate, justify own views on env issues, solutions
       B. Evaluating Need for Citizen Action – is citizen action needed, should they be involved
       C. Planning and Taking Action – planning for action based on research, analysis, within scope of their rights, consistent with abilities and responsibilities as citizens
       D. Evaluating Results of Actions

4) Personal and Civic Responsibility
   A. Understanding Societal Values, Principles – analyze influence of shared and conflicting societal values
   B. Recognizing Citizens’ Rights and Responsibilities – importance of exercising citizen rights and responsibilities
   C. Recognizing Efficacy – realistic self-confidence in their effectiveness as citizens
   D. Accepting Personal Responsibility – recognition, acceptance that actions can have broad consequences, changing actions when necessary

To download a free set of the complete guidelines, visit http://eelinked.naaee.net/n/guidelines/topics/Excellence-in-EE-Guidelines-for-Learning-K-12 (scroll down to the middle of the page). Bound copies available for a small fee.