

NATIONAL EDUCATION STANDARDS AND BENCHMARKS



STANDARD OR BENCHMARK

LESSON 1

LESSON 2

LESSON 3

ENERGY

Benchmark 4, E1:	Energy cannot be created or destroyed, but only changed from one form into another.	X		
Benchmark 4, E4:	Energy appears in many different forms.	X	X	
Benchmark 8, B2:	Manufacturing usually involves a series of steps, such as designing a product, obtaining and preparing raw materials, processing the materials mechanically or chemically, and assembling, testing, inspecting, and packaging.			X
Benchmark 8, C4:	Electrical energy can be produced from a variety of energy sources and transformed into almost any other form of energy.	X	X	
Benchmark 8, C6:	Different parts of the world have different amounts and kinds of energy resources to use and use them for different purposes.		X	
NSES Standard B, Concept:	Energy is a property of many substances and is associated with light, heat, electricity, mechanical motion, sound, nuclei, and the nature of a chemical.	X		
NSES Standard B, Concept:	Energy is transferred in many ways.	X		
NSES Standard B, Concept:	In most chemical or nuclear reactions, energy is transferred into or out of a system. Heat, light, mechanical motion, or electricity might all be involved in such transfers.	X		



TECHNOLOGY

Benchmark 3, A3:	Engineers, architects, and others who engage in design and technology use scientific knowledge to solve practical problems.			X
Benchmark 3, C6:	Rarely are technology issues simple and one sided.		X	
Benchmark 3, C7:	Societies influence what aspects of technology are developed and how these are used.		X	
NSES Standard E, Concept:	Perfectly designed [technological] solutions do not exist. All technological solutions have trade-offs.			X
NSES Standard F, Concept:	Technology influences society through its products and processes... Social needs, attitudes, and values influence the direction of technological development.		X	



ENVIRONMENT

Benchmark 7, G5:	The global environment is affected by national policies and practices relating to energy use, waste disposal, ecological management, manufacturing, and population.	X		
Benchmark 8, C2:	Different ways of obtaining, transforming, and distributing energy have different environmental consequences.	X		