Several of the ENSI lessons contain elements appropriate for STEM teaching (Science, Technology, Engineering and Math), as well as NGSS and Common Core Standards. They deal with scientific argumentation, scientific creativity, functional design, applications of math, and some with the potential for reverse engineering and competitive engineering. Others use molecular data obtained from online data banks; one of these is actually a tutorial so students can find and download desired online data, and use online tools for processing data. For desired lessons, go to ENSI home page www.indiana.edu/~ensiweb and select the NOS (Nature of Science) index, or Evolution index.

ENSI NOS lessons that illustrate scientific creativity (mostly for hypothesizing reasonable, testable explanations, designing tests of those hypotheses, and using argumentation):
- Flat Earth
- Magic Hooey Stick (reverse engineering)
- Perception Not Always Reality (T-illusion, other illusions)
- The Great Volume Exchanger (reverse engineering)
- Mystery Boxes (reverse engineering)
- Sketch a Scientist (or sketch an engineer, or sketch a mathematician)
- Checks Lab (proposing plausible scenarios based on evidence)

ENSI lessons that illustrate scientific creativity in natural selection:
- Blocks & Screws (creative solutions: re-purposing previous structures/processes)
- Origami Birds (competitive engineering and natural selection)

ENSI lessons that use and apply math in science:
- (NOS) Oat Seed Lab (statistical analysis, growth measurements, graphing)
- (NOS) Perception is not always reality (rotational degrees, measurement, % error)
- (NOS) How’s Your Horoscope? (calculate likely results due to chance).
- Patterns in Time (scale)
- Lengthy Relationships (measuring stride, etc., finding body size)
- Footsteps in Time (measure foot length, graphic extrapolation for body size)
- Laetoli Trackway Puzzle (observations/inferences, measurements)
- Virtual Age-Dating (online tutorial: calculating isochron ratios for geological ages)
- Varve Dating (counting varves per cm, extrapolating to many meters)
- Origami Birds (measure, data collection, presentation and analysis; engineering?)

ENSI lessons using molecular sequences obtained from online data banks & tools:
- Tutorial: Investigating Evolutionary Questions Using Online Molecular Databases
- Molecular Sequences & Primate Evolution
- Molecular Biology and Phylogeny
- Chromosome Fusion
- Whale Ankles and DNA
- Pseudogene Suite (part A or part B)

For Use of Natural Selection in Technology, see ENSI lesson: Natural Selection: a Cumulative Process, and Scroll down to “STEM Applications.”

Common Core-related lessons in the ENSI NOS collection that require reading and interpreting scientific material (besides the math-using and argumentation lessons mentioned above): Flat Earth, CONPTT, Women’s Brains, and Contrivances...