

Science and Technology Education Standards Addresses by SENSE IT Lessons

Module 1				
Lesson	NSES	21st	ISTE NETS	NYS Science
Sensors and the environment	A, E, F, G	GA, SL		S2D, S4A
Introduction to electricity	B	IL, SL		S1D, S1F
Temperature vs. resistance characteristics of a thermistor	B	IL		S1F, S6C
Potential dividers	B	IL		S1F, S6C
Building a linear temperature sensor	B	IL	1D	S1F, S6C, S6A
Add-on math lesson: Simultaneous equations				S6C
Add-on environmental science lesson: Water quality and temperature	F	GA, SL		S2D
Add-on lesson: Soldering practice				
Module 2				
Lesson	NSES	ISTE NETS	21st	NYS
Connecting a Thermistor to the NXT computer		IL		
Programming the NXT to measure and display sensor signals		IL		
Performing mathematical operations on sensor data		IL		S6C
Linear approximation and calibration of the temperature sensor		IL		S6C
Programming a calibrated temperature sensor	E	IL	1D	S6A
Add-on math lesson: Programming an NXT				
Add-on lesson: Datalogging		IL, SL		
Add-on lesson: NXT cable making				
Add-on lesson: Resistors	B	IL, SL		S1F, S6A
Add-on lesson: Conductivity Sensor	E	IL, SL	1D, 6C	S1F, S6A
Add-on lesson: Turbidity Sensor	E	IL, SL	1D, 6C	S6A
Add-on lesson: Depth Sensor	E	IL, SL	1D, 6C	S1F, S6A
Module 3				
Lesson	NSES	ISTE NETS	21st	NYS
Water as a resource	F	GA, SL		
Water quality	F	GA, SL		S2D, S2E
Environmental justice	F	GA, SL		S4C
Environmental engineering	F	GA, SL		
Sensor development	E	GA, IL, SL	6B	
Sensor networks	E, F	GA, IL, SL	6B	S8C
Math				
Module 4				
Lesson	NSES	ISTE NETS	21st	NYS
Wireless sensor networks	E	IL, SL, VL	2D, 4ABCD	S6A, S7A, S8C
Connecting two NXTs via Bluetooth	E	IL, SL, VL	2D, 4ABCD	S6A, S7A
Building a distributed sensor network	A, E, F	IL, SL, VL	2D, 3D, 4ABCD, 6C	S6A, S7A, S8B