



Science teachers will be able to choose one or more modules from the following list. The first three modules are an introduction to nanotechnologies. Modules 4 and 5 discuss ELSA aspects of nanotechnologies. Modules 1, 2 and 4 require the use of computers, while 3 and 5 do not. Each module is designed to last 90 minutes, with two lessons of 45 minutes each, which is considered a necessary amount of time for significant learning to take place.

Module 1: (90minutes) – What are NTs?

Time	The activity	Equipment and instructions
15 minutes	Video – NTs – The future is here	Video
20 minutes	Discussion: Based on the video, how are NTs used? What do we want to know about NTs in the future?	Teacher instructions
30 minutes	Information gathering group session – answers to our questions from virtual experiments	

Computers – virtual experiments

20 minutes	Workshop: What are NTs?	Teacher instructions
5 minutes	Summary	

Module 2: (90minutes) – What are NTs?

Time	The activity	Equipment and instructions
15 minutes	Video – NTs – The future is here	Video
40 minutes	Virtual Game – Time machine	Computers + E- portfolio

20 minutes	Workshop: what are NTs?	Teacher instructions
15 minutes	Summary: what are NTs?	Teacher instructions

Module 3: (90minutes) – What are NTs?

Time	The activity	Equipment and instructions
15 minutes	Video – NTs – The future is here	Video
50 minutes	Workshop: what are NTs?	Teacher instructions
15 minutes	Group presentations	Teacher instructions
10 minutes	Summary: what are NTs?	Teacher instructions

Module 4: (90minutes) – ELSA aspects of NTs

Time	The activity	Equipment and instructions
5 minutes	Q&A what are NTs?	Teacher instructions
30 minutes	NTs virtual dialogue between students in a classroom virtual based decision-making activity	Computers – virtual experiments
20 minutes	Presentations of different solutions	Teacher instructions
20 minutes		

Information gathering group session – answers to our questions from virtual experiments

Computers – virtual experiments

15 minutes Summary: do we change our decision based on the NT knowledge we have acquired? Teacher instructions

Module 5: (90minutes) – ELSA aspects of NTs

Time	The activity	Equipment and instructions
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5 minutes	Q&A what are NTs?	Teacher instructions
50 minutes	Workshop: Role Play (cards)	Teacher instructions
20 minutes	Group Presentations and classroom discussion on raising dilemmas	Teacher instructions
15 minutes	Summary	Teacher instructions