

Lesson Title: What is Sustainability?	
Grade Level: 7 th	Subject Area: Life Science
Alexandria Suchy-Mabrouk, Depoali Middle School	Lesson Length: a week/ a week and half

The Teaching Process

Lesson Overview Student will read and research sustainability and how it affects their daily lives.
Unit Objectives: Students will understand what sustainability is and what the different components of sustainability are.
Standards addressed MS-ESS3-1, MS-ESS3-d
List of Materials 1) Computers with internet 2) Articles

Instructional Sequence

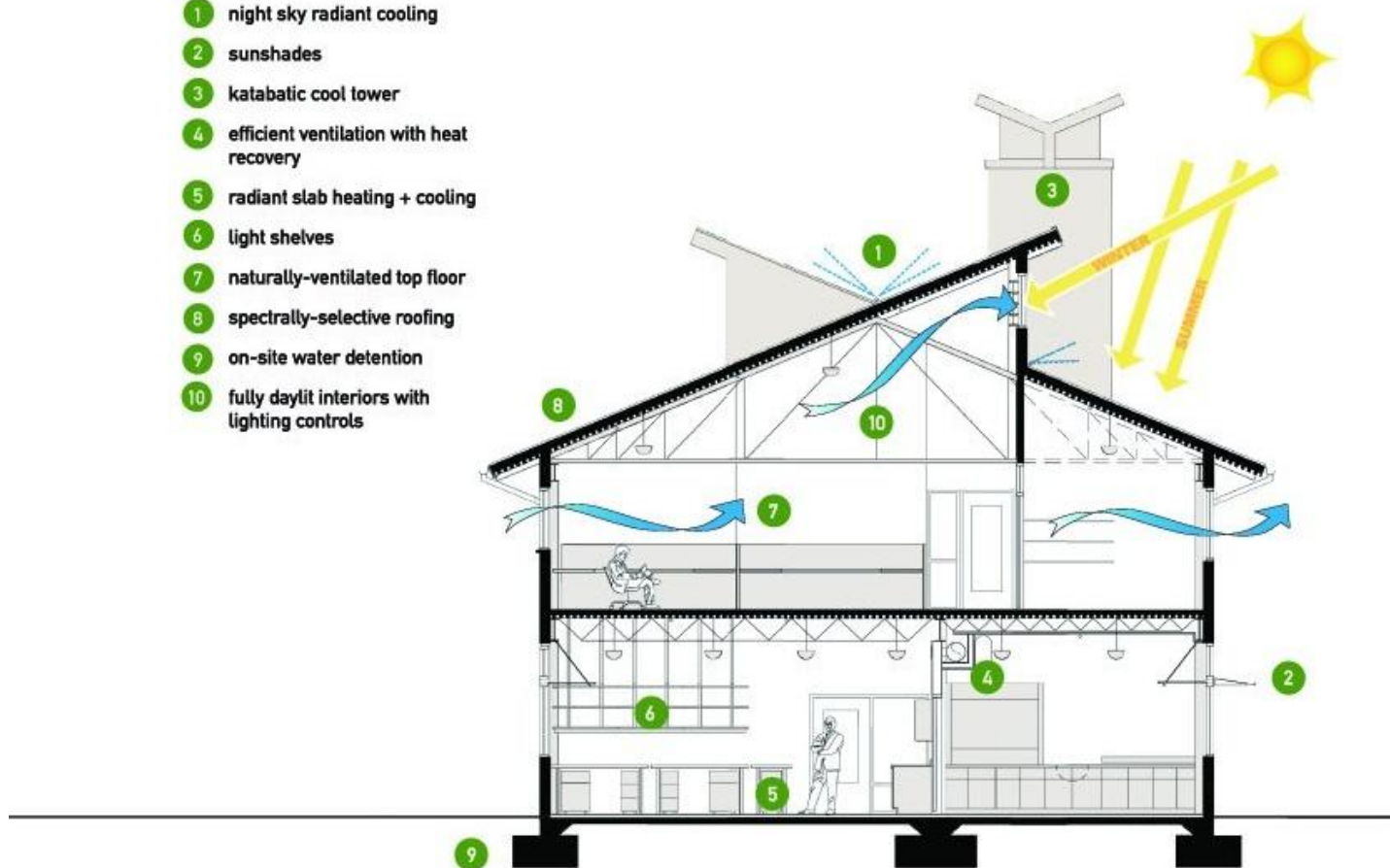
Phase One: Engage the Learner
Students will take a carbon footprint quiz such as the one at: (http://www.cooltheworld.com/kidscarboncalculator.php?PHPSESSID=0nfse3b38r7vmi86d0iffn68m4). Then have students line up from greatest amount of emissions to least. Students will then be paired (one high emissions student with one low emissions student) and they will talk about ways they can reduce their emissions.
Phase Two: Explore the Concept
Students will do a close read of the article found at: http://www.cooltheworld.com/kidscarboncalculator.php?PHPSESSID=0nfse3b38r7vmi86d0iffn68m4 . During this part of the lesson students will be asked to write down questions they have or vocabulary that they don't know on post it notes and then these will be posted in the classroom.
Phase Three: Explain the concept and define terms
The post it notes that students create during phase two of the lesson will guide which concepts and terms you need to define for them during this phase.



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- 1 night sky radiant cooling
- 2 sunshades
- 3 katabatic cool tower
- 4 efficient ventilation with heat recovery
- 5 radiant slab heating + cooling
- 6 light shelves
- 7 naturally-ventilated top floor
- 8 spectrally-selective roofing
- 9 on-site water detention
- 10 fully daylight interiors with lighting controls



Phase Four: Elaborate the Concept

Students will investigate and put together a presentation on different green building from around the world. They will be asked to answer questions such as: "What green technology does this building use?" and "How does this technology help the environment?"

Phase Five: Evaluate Students' Understanding of Concept

Students will write a short response about which of the technologies that were presented during phase four would best benefit Depoali Middle school if they were implemented, why they believe they are the best, and what would the benefits for our school be if they were used here.

Please share your comments about successes with this method with Alexandria Suchy-Mabrouk, c/o Depoali Middle School, 9300 Wilbur May Parkway, Reno, Nevada 89521, 775-852-6700 or by e-mail: Alexandria Suchy-Mabrouk <asuchymabrouk@washoeschools.net>



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