

LS-HHMI Outreach Curriculum Project Information			
Title	Polar Bears: Endangered		
Resource Type	Lesson Plan <input checked="" type="checkbox"/> Classroom Activity <input type="checkbox"/> Laboratory Activity <input type="checkbox"/> Homework Assignment <input type="checkbox"/> Bioinformatics <input type="checkbox"/> Other <input checked="" type="checkbox"/> discussion		
Description	<Write a 50-word description of your resource for publication on the Web.>		
Author(s)	Peter K. Spiers		
Author Institution(s)	Classical High School		
Objective	The objective is to engage students in discussion and become aware of possible species extinction.		
Key Concepts	The loss of habitat due to global warming and connection with loss of ice pack flows.		
Student Prep	No prior knowledge is required.		
Materials	National Geographic video on Polar Bears is very helpful but essential.		
Grade and Level(s)	This is appropriate for grades 8-12 dependent upon the depth of lesson desired by instructor.		
Teacher Prep Time	One period is adequate.	Class Time	Time varies from 2 period upward dependent upon the depth of discussions. A period is 45 min.
National Standards	12CLS4 Interdependence of Organisms. 12CLS4.3 Interdependence of organisms/ecosystems. 12CLS4.5 Human effects on the ecosystems.SSS		
State Standards	Mass. 6.1 Explain how birth, death, immigration, and emigration influence population size.		
Sources	Amstrup,S.C. 2003. Polar bear, Ursus maritimus. Chapter 27 In Wild Mamals of North America: biology, management and conservation. Edited by GS.A. Feldhamer, B.C. Thompson, and J.A. Chapman. John Hopkins University Press, Baltimore. PP. 587-610.		
References	Ahrens, Donald, C., 2007, Meteorology Today; An Introduction to Weather, Climate, and the Environment. 8 th Edition. Thompson-Brooks/Cole Publishers. (esp. pgs. 430-51). Chivian, frank; Bernstein, Aaron (edited by). 2008. Sustaining Life: How Human Health Depends on Biodiversity. Oxford University Press (esp. pgs. 223-251.)		
Assessment	After showing the movie Polar Bears by National Geographic, show the slide show; generate class discussion and either have a writing assignment on any of the aspects of the material covered. The nice part of this presentation is that it allows for teachers to keep things very generic or modify it such that it can be used for other items as well. An example would be that all of the data is given in metrics- the teacher may want to convert the data to English units. The possibilities are limited only by the imagination.		