

- Albedo
  - Interview, Teacher Toolbox, Images: The Albedo Effect, Urban Heat Islands, and Cooling Down Your Playground, Science Friday, October 2016  
<https://www.sciencefriday.com/educational-resources/the-albedo-effect-urban-heat-islands-and-cooling-down-your-playground/>
- Chesapeake Bay Outdoor Education Resources
  - Bay Backpack, MWEE Resources, Lessons, Projects by NOAA  
<http://baybackpack.com/>
- Climate Change & Historical Weather Data
  - Climate Change Website: <https://www.epa.gov/climatechange>
  - NOAA State Annual Temperature and Rainfall Changes  
<https://www.ncdc.noaa.gov/temp-and-precip/state-temps/>
- Excessive\Extreme Heat Events
  - NRDC Interactive map <https://www.nrdc.org/climate-change-and-health-extreme-heat#/map/detail/MD>
  - Excessive Heat Events Guidebook. <https://www.epa.gov/heat-islands/excessive-heat-events-guidebook>
  - Climate Change and Extreme Heat: What you can do to prepare. USEPA & CDC, October 2016. <https://www.epa.gov/sites/production/files/2016-10/documents/extreme-heat-guidebook.pdf>
  - National Centers for Environmental Information – NOAA  
(<https://www.ncdc.noaa.gov/climate-information/extreme-events>)
  - NOAA Releases New Tool to Help Prepare and Protect Vulnerable Populations from Extreme Heat, 2017. Interactive map. <https://www.nesdis.noaa.gov/content/noaa-releases-new-tool-help-prepare-and-protect-vulnerable-populations-extreme-heat>
  - NOAA Weather ([www.noaa.gov/weather](http://www.noaa.gov/weather))
  - Department of Homeland Security ([www.ready.gov/heat](http://www.ready.gov/heat))
  - Center for Disease Control ([www.cdc.gov/disasters/extremeheat/heat\\_guide.html](http://www.cdc.gov/disasters/extremeheat/heat_guide.html))
    - NYT Number of Days over 90 degrees in your hometown since you were born.  
<https://www.nytimes.com/interactive/2018/08/30/climate/how-much-hotter-is-your-hometown.html>
  - Ready.gov <https://www.ready.gov/heat>
- Green Infrastructure\Low Impact Development
  - Video: “Introduction to Low Impact Development in Florida” (5:16 min)  
<https://www.youtube.com/watch?v=-56Q0jlhGVY>
- Green Schoolyards
  - Green Schoolyards America: Schoolyard activities and resources for projects  
<http://www.greenschoolyards.org/>

- Heat Islands and Mitigation
  - Climate Bits – videos on Urban Heat Islands and Albedo <http://climatebits.umd.edu/>
  - Fact Sheet: [Keeping Your Cool: How Communities Can Reduce the Heat Island Effect](#) (PDF)(4 pp, 814 K)
  - Document: U.S. Environmental Protection Agency. 2008. *Reducing urban heat islands: Compendium of strategies*. Draft. <https://www.epa.gov/heat-islands/heat-island-compendium>.
    - [Chapter 1: Urban Heat Island Basics \(PDF\)](#)(22 pp, 2 MB)
    - [Chapter 2: Trees and Vegetation \(PDF\)](#)(32 pp, 5 MB)
    - [Chapter 3: Green Roofs \(PDF\)](#)(29 pp, 4 MB)
    - [Chapter 4: Cool Roofs \(PDF\)](#)(31 pp, 3 MB)
    - [Chapter 5: Cool Pavements \(PDF\)](#)(40 pp, 6 MB) *Updated in 2012*
    - [Chapter 6: Heat Island Reduction Activities \(PDF\)](#)(26 pp, 3 MB)
  - Website: Measuring Heat Islands <https://www.epa.gov/heat-islands/measuring-heat-islands>
  - Website: U.S. EPA “What You Can do to reduce Heat Islands” <https://www.epa.gov/heat-islands/what-you-can-do-reduce-heat-islands>
  - Website: U.S. EPA “Using Trees and Vegetation to reduce Heat Islands” <https://www.epa.gov/heat-islands/using-trees-and-vegetation-reduce-heat-islands>
  - General Info: Heat Island Group at Lawrence Berkeley Laboratory <https://heatisland.lbl.gov/>
  - Hands-on Activity: Rooftop Gardens, by: Integrated Teaching and Learning Program, College of Engineering and Applied Science, University of Colorado Boulder [https://www.teachengineering.org/activities/view/cub\\_rooftop\\_lesson01\\_activity1](https://www.teachengineering.org/activities/view/cub_rooftop_lesson01_activity1)
- Human Health Impacts (from Heat)
  - Maryland Environmental Public Health Tracking <https://phpa.health.maryland.gov/oehfp/eh/tracking/Pages/home.aspx>
- Impervious Surface
  - How IS Impacts Stream Health <http://dnr.maryland.gov/streams/Pages/streamhealth/How-Impervious-Surface-Impacts-Stream-Health.aspx>
- Permeable Pavers
  - Video of demonstration project of permeable surfaces at EPA facility: <https://www.youtube.com/watch?v=MuoJXJtF-90> (EPA, 2011)
- Soils
  - ICPRB Soils, Permeability, Percolation Presentation and Investigations (<https://www.potomacriver.org/resources/educator-resources/score-four/score-four-materials/>)

- Stormwater runoff
  - Stormwater Runoff simulator by Stroud Water Research Center  
<https://runoff.modelmywatershed.org/>
- Trees
  - [The Urban Forests of Frederick, Maryland in a Changing Climate](#). By Jenny Willoughby, Sustainability Manager, City of Frederick. October 2018
  - Tree Canopy Reports of Frederick County, MD and City of Frederick.
  - Nature Conservancy Report October 2016: How Urban Trees Can Save Lives  
<https://global.nature.org/content/healthyair>
- Water Data
  - CBIBS: <https://buoybay.noaa.gov/>
  - USGS Water Level: <https://maps.waterdata.usgs.gov/mapper/index.html>
  - EyesOnTheBay: <http://eyesonthebay.dnr.maryland.gov/>
- Watersheds
  - WikiWatershed: <https://wikiwatershed.org/>
- Watersheds and Runoff & Stormwater Pollution
  - Runoff Simulator by WikiWatershed <https://runoff.modelmywatershed.org/>
  - USEPA “After the Storm” (21 min). Watershed concepts and stormwater pollution in CA, Gulf of Mexico, and NY with homeowner mitigation solutions. All pertinent to Chesapeake Bay. Does not specifically mention thermal pollution though.  
<https://www.youtube.com/watch?v=0fIXhs6DzIE>
- Weather Data
  - NOAA’s National Centers for Environmental Information  
<https://www.ncdc.noaa.gov/>
  - Community Collaborative Rain, Hail and Snow Network (CoCoRaHS)  
<https://www.cocorahs.org/>