

Heat Islands & Trees

<https://lsintspl3.wgbh.org/en-us/lesson/heat-islands-and-trees/13>

Why do you think some areas of a city might be hotter than others?

How does extreme heat affect people living in cities?

What are some ways hot city areas can become cooler? List your ideas here.

What are urban heat islands?

What is the vicious cycle of heat and energy use?

What is the urban heat island effect?

- A. Too many cars on highways.
- B. Temperature increases caused by urban materials in a dense area.
- C. A type of storm that occurs only in cities.
- D. The cooling effect of cities on nearby rural areas.

Urban materials do all of the following to increase heat except _____.

- A.Absorb and store heat.
- B.Radiate heat.
- C.Increase evaporation.
- D.Reduce wind flow.

Heat that is reflected _____.

- A.Soaks up moisture.
- B.Leads to transpiration.
- C.Leaks onto green spaces.
- D.Decreases global temperatures.

Machines we use to keep ourselves cool _____.

- A.Decrease the urban heat island effect.
- B.Increase the amount of green spaces in neighborhoods.
- C.Decrease costs of living for millions of people.
- D.Increase the urban heat island effect.

Trees keep things cool by:

- A.Providing shade.
- B.Transpiration.
- C.Reducing surface temperatures.
- D.All of the above.

Trees improve air quality by doing all of the following except:

- A.Absorbing greenhouse gases
- B.Releasing oxygen
- C.Filtering the air of pollutants
- D.Absorbing clean air

When conditions are right, trees:

- A.Increase surface temperatures up to 12 degrees Celsius.
- B.Increase air quality up to 12 degrees Celsius.
- C.Decrease air quality up to 12 degrees Celsius.
- D.Decrease surface temperatures up to 12 degrees Celsius.

Trees provide surface area for the cooling effects of _____.

- A.evaporation
- B.radiation
- C.reflection
- D.impermeable materials

Urban forests are:

- A.Trees and vegetation in urban environments.
- B.Forests made of buildings and sidewalks.
- C.Easy to build and maintain.
- D.Environments that happen on their own.

_____ are responsible for preserving and expanding urban forests.

A.Citizens

B.Urban foresters

C.City leaders

D.All of the above.

Check the box that relates to the sentence provided

	Heat Islands	Tree Superpowers	Urban Forests
Can increase quality of life for urban communities			
Impermeable Materials			
Dense and compact areas			
Releases oxygen			
Absorbs greenhouse gasses			
Reduced air flow and stored heat			
Right tree, right place			
Trees and vegetation in urban environments			
Reduces surface temperatures			