



# Eco-Schools USA-Watersheds, Oceans and Wetlands

## PERMEABLE VERSUS IMPERMEABLE SURFACES

Surfaces can be categorized in many different ways. One such category is whether the surface is permeable or impermeable.

- **PERMEABLE**  
Allowing liquids, such as water, to pass through a surface. Example-most soils.
- **IMPERMEABLE**  
The inability of liquids, such as water, to pass through a surface and otherwise run over or around it. Example-most concrete.

**TASK.** Check the box under each picture that correctly identifies the surface as permeable, impermeable, or both, then answer the questions that follow.



**BIOSWALE**

permeable  impermeable



**SIDEWALK**

permeable  impermeable



**GREEN ROOF**

permeable  impermeable



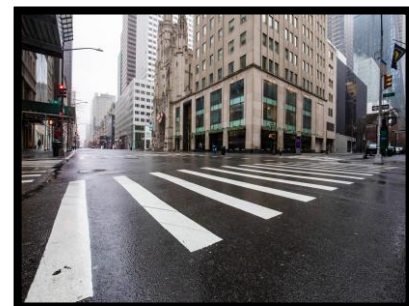
**SOIL**

permeable  impermeable



**COMMUNITY GARDEN**

permeable  impermeable



**STREET**

permeable  impermeable

ANSWERS: bioswale-permeable | sidewalk-impermeable | green roof-permeable and impermeable | soil-permeable | community garden-permeable | street-impermeable



1. What do you think the benefits are to each type of surface?

2. During a hurricane or flood, which types of surfaces would absorb more water? Explain.

3. Which surface type helps wildlife meet their habitat needs (food, water, shelter and a place to raise young).

4. Choose one surface, permeable or impermeable. Draw a picture that shows a street, a neighborhood or a city, before and after a flood.

\_\_\_ permeable example \_\_\_ impermeable example

BEFORE THE FLOOD	AFTER THE FLOOD

Explain. What could solutions or designs could be implemented to minimize or prevent the impacts of future flooding?