Intensive and Extensive Green Roofs

The New School

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A fun and interactive way to introduce green roofs to 5th and 6th graders!

What are intensive and extensive Green Roofs?

The two most common green roofs are **intensive** and **extensive**. An intensive green roof system is characterized by its variety of vegetation, deeper soil depth, and requires more maintenance. While extensive roofs typically have a soil depth of less then 6 inches, are limited in plant species options, are lightweight, and are low maintenance. Intensive green roofs offer a great potential for design and biodiversity. Green roofs are made up of 5 different layers that each serve a different purpose. The layers are the **waterproof/root repellant layer**, **drainage layer**, **filter membrane**, **growing medium**, and **vegetation**.

Draw your favorite flower/plant: (Show it to your classmate when your done)

Fill in each of the vocabulary words with the correct letters: (Practice spelling the word below it)



What you are going to grow such as: flowers, vegetables, grass, seedum.

Growing Medium

Supplies water and nutrients to plant roots. Provides gas exchange to roots and support to keep plants anchored down.

Filter Membrane

Prevents any plant matter or soil particles from falling into the drainage layer.

Drainage Layer

Ensures large amounts of water aren't retained on the roof, which could cause structure damage to the building and waterlog the plants.

Waterproof/Root Repellent

Bottom layer that prevents roots and water from passing through it and causing potential damage to the roof.

Multiple Choice Questions

In the picture below:



1. Green roofs are harmful for the environment

- a. true
- b. false

2. What does the drainage layer do in a green roof?

- a. true
- b. makes sure water does not retain on the roof
- c. collects rain water

Reflection Questions:

1. What is the difference between an intensive and extensive green roof?

2. What are some of the different uses for green roofs?

3. What are the different layers of a green roof?

4. Do you think you would like to visit a green roof in the future?