

Parts of a Hydroponic System – Answer Key

Below is a diagram of a typical hydroponic system, fill in the information on what each part is and its importance of growing plant life.

Lights:

- Sunlight contains all colors of the full spectrum of light
- Plants use little light that is from the green and yellow parts of the light spectrum
- Grow lights can be full spectrum lighting but the light most used by plants are the red and blue coloration of the light spectrum

Plants:

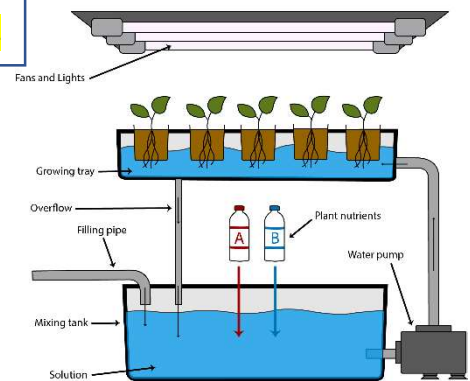
Best plants to grow: lettuce, tomatoes, radishes, kale, cucumbers, spinach, beans, chives, basil, mint, strawberries, blueberries, peppers

Grow Medium:

- Commonly used to grow plants in for stability to create a foundation for the plant
- Some examples are:

Rockwool	Coconut Fiber
Expanded Clay Pellets	Vermiculite
Perlite	

Hydroponic System



Water and Nutrients:

- Nutrients definition: the mineral qualities plants need to obtain optimum growth
- Nutrient solution: the replacement of solid in a hydroponic solution that supplies the plant with nutrients, water, and oxygenation
- Primary nutrients needed within hydroponics are Nitrogen (N), Potassium (K), and Phosphorus (P)

Water Movement and Oxygenation:

- Water Movement
 - Creates oxygenation
 - The amount of flow affects the amount of oxygen in the water
 - The more flow (faster moving) the more diffusion of oxygen into the water
- Oxygenation
 - Helps the plants grow
 - Keeps algae and other growths from being as dominate

Wind and Air Flow:

- Wind or air flow allows for plants, especially seedlings to grow sturdy.
- Air Flow is important to strengthen the plants as well for gas exchange, moving the carbon dioxide to the leaves and transporting away water (transpiration)