

Hydroponics – Past Present and Future

What is Hydroponics?

- Hydroponics is the process of growing plants in _____
- There is no _____ used in hydroponics systems
- _____ are added to the water to replace what plants normally get from soil
- There are many different types of Hydroponics systems
 - We have _____ of hydroponics systems in the school
 - These five types make up our _____ different hydroponic _____

Our Systems

Vertical Garden

- Can have up to _____ different plants
- Nutrient water is pumped from the _____ of the tower and drains down through each section.

Nutrient Film

- Can have up to _____ different plants
- Nutrient water is pumped from a _____ near the bottom and flows through the pipes
- Flow of the water is controlled by a _____ at each bend of the pipes

Flood Table

- Also called a _____ or an “_____”
- Nutrient water is pumped from a reservoir _____ the flood table
- The pump only runs for a _____ each day to maintain the water _____ on the table

Airponics

- Nutrient water is pumped to _____ located near the _____ of the plants
- The _____ water drains back into the reservoir

Aquaponics

- This is the only system that we _____ use nutrient water in.
- Nutrients are introduced to the plants by the _____, located underneath the flood table.
- Water is _____ from the fish tank to the plants and _____ back into the tank.

The History of Hydroponics

The Hanging Garden of Babylon

- The Hanging Garden of Babylon are believed to the _____ hydroponic garden
- The Hanging Gardens were built in approximately _____
- They are considered to be one of the seven _____

The Floating Gardens of the Aztecs

- The Aztecs of Central America practiced hydroponics out of _____
- They built _____ out of rushes and reeds, then piled soil on these rafts
- Some of the rafts were as long as _____
- This occurred in the _____

Dr William F Gericke

- In the late 1920s/early 1930s, Dr Gericke focused on growing _____ crops for large scale commercial purposes
- He is the first to suggest the term hydroponics.
- He combined two Greek words
 - _____

- _____

World War II

- During WWII, _____ food in Europe or _____ fresh food across the Atlantic was nearly _____
- In 1945, the USAF built a hydroponic farm in the _____
- These hydroponic farms provided _____ for the U.S. troops

Mainstream 1970s-80s

- The introduction of _____ in the late 1970s made hydroponic systems _____

Hydroponics and Submarines

- Currently, the USA has hydroponic farms that cover as many _____.
- The US Navy is growing fresh vegetables on _____ in specialized hydroponics systems to supply fresh vegetable for the crews

The Future of Hydroponics

- Currently, plans are being drawn for using hydroponics on _____ and on the surfaces of other _____
- Hydroponics will be used in areas such as _____, where it is difficult to grow plants using traditional methods