**Deserted Island Water Supply Scenario**

Name and date submitted (3 pts):

Instructions

Research and submit a 1-1/2 to 2 page report on the following scenario *–*

**“On the way home from delivering emergency food & medical supplies to a Remote Island Chain, your plane goes down and you & your friends parachute onto a deserted island. You quickly discover that your only source of drinking water is a large pond with smelly and suspicious-looking water. You suspect it contains 1) decaying organic matter - plants, leaves, dead things, etc., 2) dissolved copper from an abandoned copper smelter which operated for 50 years without a pollution control system, and 3) fecal waste and microbes from large numbers of sea birds which frequent the island. How can you purify the water enough to drink?**

Resources

Assume you have a fully-stocked chemistry lab - plus an assortment of tanks, pumps, piping, valves, duct tape, glue, wire, scrap metal & wood & plastic, and an electric generator which can be salvaged from your wrecked plane. You cannot use Reverse Osmosis or any off-the-shelf type of purifier. Start by doing Internet research on removing each of these contaminants. They're not difficult to treat; you just need to do some research. Then design and sketch a small treatment plant - using only the supplies listed - with a description of any chemicals used, the processes employed, and any equipment needed for the overall process. Include as many labelled sketches as needed to describe the treatment process.”