Name: _____ Class: _____

Now that you have been trained on what to look for in drinking water, please apply that knowledge to the two scenarios below. Be thorough in your answers!

Scenario 1: You have found a bottle of water left on the lab table with a note stating “test me”. Curiosity gets the better of you and so you record your qualitative observations and then proceed to analyze chemical parameters. Lastly, you test to see if coliform bacteria is present. Next to each test result, please indicate if this meets the recommended levels.

	Results of Chemical Analysis:	Analysis (too low, meets, too high):
Alkalinity	50 mg/L	meets
Ammonia	1.0 mg/L	meets
Chloride	30 mg/L	meets
Chlorine	0.2 mg/L	meets
Chromium	0.3 mg/L	exceeds
Copper	3 mg/L	exceeds
Dissolved Oxygen	8 mg/L (recommended minimum)	meets
Hardness	80 mg/L	meets
Iron	0.4 mg/L	exceeds
Nitrate	12 mg/L	exceeds
pH	8.0	meets
Phosphate	0.2 mg/L	exceeds
Turbidity	2 NTU	exceeds
Coliform bacteria	1 CFU/ 100 mL	exceeds

Would you recommend drinking this water? Justify your answer with at least 4 specific reasons.
No as there are actually 6 factors that do not meet recommended standards.
STUDENTS MUST INCLUDE 4 OF THE BELOW ISSUES:

1. chromium level is too high
2. copper level is too high
3. iron level is too high
4. nitrate level is too high
5. Turbidity is too high
6. Coliform bacteria is too high

Scenario 2:
In a different sample you've recently collected you have determined several items are present. Please indicate below what the best method would be to remove these from the drinking water sample.

Substance:	Preferred Method:
Dog hair	Mechanical/ microfiltration
Coliform bacteria	Boiling/ heat
Leaf litter	Mechanical/ microfiltration
Fertilizer	Activated carbon
Chlorine	Activated carbon
Pesticide	Activated carbon
Sand	Mechanical/ microfiltration