**LEWISBURG AREA SCHOOL DISTRICT**

**LESSON PLAN**

**Teacher Name: \_\_\_\_\_Van Wagner\_\_\_\_\_\_ Class: \_\_\_\_\_\_\_\_\_AP Enviro**

**Topic: \_\_\_Tap Water tour Date of Lesson: \_\_Class #53**

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| **LESSON ESSENTIAL QUESTION**: | Big Idea:  Water continuously moves through the water cycle. Water is essential to living things.  Liquid water makes earth a unique planet.  Fresh water is finite.  Essential Questions:  -Where does pollution come from?  -Is quantitative data/testing more useful that qualitative data/testing?  -What are the advantages of collecting both qualitative and quantitative data?  -Should science be restricted to quantitative research? |
| **STANDARD / LEARNING TARGET:** | **Core standards addressed with this lesson:**  **7.4.9.A:**  Compare and contrast the effect of the physical systems on people across **regions** of the United States.  **7.4.9.B:**  Compare and contrast the effect of people on the physical region across **regions** of the United States.  **7.4.12.A:** Analyze the global effects of changes in the physical systems.  **7.4.12.B:** Analyze the global effects of human activity on the physical systems.  **S11.D.1.3.3:** Explain factors (e.g., nutrient loading, turbidity, rate of flow, rate of deposition, biological diversity) that affect water quality and flow through a water system.  **4.8.10.C.** Analyze how human activities may cause changes in an ecosystem.  \* Analyze and evaluate changes in the environment that are the result of human activities.  \* Compare and contrast the environmental effects of different industrial strategies (e.g., energy generation, transportation, logging, mining, agriculture). |
| **ACTIVATING STRATEGIES**:  (Anticipatory Set) | Bell Ringer: If your stream has a pH of 5.5, is this acidic, alkaline, or neutral?  Answer: acidic |
| **KEY VOCABULARY**: | Atmosphere, troposphere, stratosphere, ozone, radiation, |
| **RESOURCES:** | Teacher slide show, demonstration, and lecture. |
| **TEACHING STRATEGIES**: | Students MUST wear goggles entire class.  Complete tap water tour (do not do straw activity)  Discuss results.  Begin writing lab reports on stream results. |
| **EXTENDED THINKING ACTIVITY / ASSIGNMENT:** | Lab report to be written on your research |
| **SUMMARIZATION/ CLOSURE:** | Exit bell ringer- Of the 11 test we did in this lab only 1 was quantitative. Which one?  pH |