

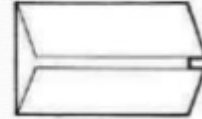
Name \_\_\_\_\_ Date \_\_\_\_\_ Block \_\_\_\_\_

### Water Treatment Foldable

You will be constructing a water treatment foldable that we will use for note taking.

Wastewater treatment is utilized for purification of ground and surface water supplies prior to human consumption. Following the note taking session, you will complete some questions to aid in your understanding.

#### Shutter Fold



1. Using 11 x 14" paper, create a "shutter" style foldable
2. Glue "Wastewater Treatment" diagram to front, (You will need to split diagram vertically so that foldable will open.) (2 points)
3. Cut "doors" between different stages (2 points)
4. Color all initial wastewater and all sludge **dark brown**. (2 points)
5. Color grit tank **medium brown** (1 points)
6. Color water in settling tank (Primary treatment) and beginning of secondary treatment **tan (light brown)** (2 points)
7. Color water in late secondary treatment and nitrogen removal tank **light green**. (2 points)
8. Color phosphorus removal tank **light purple**. (1 points)
9. Color disinfection tank **yellow** (1 points)
10. Color stream **blue**. (1 point)
11. Color anaerobic digestion and heat centrifuge gravity **reddish brown** (2 points)
12. Complete the notes on the inside using the Google slides presentation in class! (10 points)
13. Attach Critical thinking questions (with answers) to the back of your foldable! (6 points)

Total: \_\_\_\_\_ / 31 points

#### Critical Thinking Questions

1. A study is planned to investigate the potential environmental impact of storing animal wastes in large, open lagoons on commercially owned farms. These lagoons sometimes rupture or overflow, spilling their contents into local lakes and waterways. Identify two negative consequences of increased animal waste in lakes and waterways and describe how the increased animal waste cause these problems. (4 points)
2. Compare wastewater treatment utilizing septic tanks to urban wastewater treatment programs. How do the systems differ? Why do municipalities not utilize septic systems more often? (2 points)