

Baseball Game on Exploring Water Quality

Directions:

Look through the following choices and decide how you want to score a run! In baseball you can score a run by the following combinations:

- 4 singles
- 2 singles and 1 double
- 2 doubles
- 1 single and 1 triple
- 1 homerun

Choose any of the combinations above that you want! Place a **check mark** next to each choice you are going to complete. Any student caught **stealing a base** (copying off of a classmate) will be thrown out.

Record your work on the attached paper in the order of your checked choices. Be sure to complete each of your chosen tasks in its entirety for full credit!

This in-class project is a **quiz grade**. Therefore, please use your time wisely and ask questions if you are having trouble.



Singles

- (A) List three heavy metals that could be harmful to you if found in your drinking water. (B) Describe two health risks associated with heavy metals in drinking water.
- (A) What is bioremediation? (B) How is bioremediation used to clean up gasoline and oil spills?
- Bottled water does not contain fluorine or chlorine. (A) Why is fluorine added to tap water at water treatment plants? (B) Why is chlorine added to tap water?
- (A) What minerals are present in "hard water"? (B) How do water softeners work?



Doubles

- (A) Describe the causes of arsenic poisoning (B) What are the signs and symptoms of arsenic poisoning [pictures may be disturbing] (C) Where in the world is arsenic poisoning the most common? (D) What is being done to treat and prevent arsenic poisoning?
- (A) What is eutrophication? (B) What causes it? (C) What are the dangers? (D) What is one method for water treatment (making the water cleaner)?



Triple

- (A) What is North Carolina's maximum contaminant levels (MCLs) for mercury in drinking water? [include units in your answer] (B) What is bioaccumulation? (C) What is the difference between bioaccumulation and biomagnification? (D) Draw a diagram to illustrate how we may get mercury in our diet from fish. (E) *Scenario:* You are a doctor and need to explain to your patient, a woman who is pregnant, why she shouldn't eat swordfish. Write out how you would explain to her the dangers of this type of fish to her unborn child.



Homerun

- About 269,000 metric tons of plastic pollutes the world's oceans. (A) Describe a few of the ways in which plastic ends up in the ocean. (B) Describe the Great Pacific Garbage Patch. (C) How do currents influence the Great Pacific Garbage Patch? (D) How is plastic in the ocean harmful to marine life? Give a minimum of three examples. (E) What are the difficulties associated with cleaning up plastic in the ocean? (F) Because the Great Pacific Garbage Patch is so far from any countries coastal line, no nation will take responsibility or provide funding to clean it up! How can the neglect of this pollutant endanger the world as a whole? (G) *Design:* Create a mini poster (one page) highlighting the problems of plastics in the ocean to summarize your findings.

Which Combination Did You Choose?

- I chose: _____ 4 singles
_____ 2 singles and 1 double
_____ 2 doubles
_____ 1 single and 1 triple
_____ 1 homerun

Finished Early?

Ask Mrs. Feldmann for a water quality puzzle to test out your knowledge!

