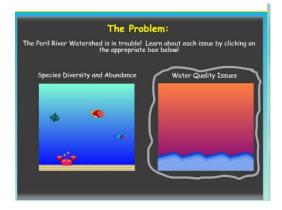
/36

NAME: ______ HR ____

https://biomanbio.com/HTML5GamesandLabs/EcoGames/ecodetectiveshtml5page.html



Click "start a new game" Click on "water quality issues"



The Problem

Read through each page thoroughly / carefully before moving on. Be careful not to click the "back arrow" because you will be forced to restart at the very beginning. Answer the following questions:

2. The clear sample of water is from where?

3. The green sample of water is from where?

4. Which sample contains more algae and bacteria?

5. What is making the water green?

| 6. Oxygen found dissolved in water is called? | · | Oxygen is important to |
|---|---|------------------------|
| aquatic organisms. | | |

WARNING: If you click the "Back Arrow" you will have to re-start at the very beginning.

| Test Site 1 is winstream an | the upstream d has greener | test site with clearer water. Dissolved oxyg unples from each site. | blue water. en data is she | Test site 6 i own for seve | |
|--------------------------------|-------------------------------|---|-------------------------------|-------------------------------|--|
| | | | | | |
| Sample Number | Dissolved Oxygen (mg/L) | | Sample Number | Dissolved Oxygen (mg/L) | |
| 1 | 8 | Study the datal Then click the arrow below to move onl | 1 | 2 | |
| 2 | 8 | | 2 | 4 | |
| 3 | 11 | | 3 | 2 | |
| 4 | 8 | | 4 | 4 | |
| 5 | 9 | | 5 | 3 | |
| 6 | 10 | | 6 | 3 | |
| Average | | | Average | | |

7. These charts show the amount of ______ in the water.

8. (Circle the correct answer) Where is "Test Site 1" from? Upriver or Downriver

9. (Circle the correct answer) Where is "Test Site 6" from? Upriver or Downriver

To find the average for Test Site 1 you add all the Dissolved Oxygen (mg/L) data from Test Site 1 and then divide by 6. Do the same for Test Site 6.

10. (Circle the correct answer) Where in the stream is there more dissolved oxygen? Upriver or Downriver

11. (Circle the correct answer) Where is the best place to go fishing? Upriver or Downriver

Investigate and Experiment! Again, if you click the "Back Arrow" you will restart.



You already know the problem, so click the second box, "Investigate and Experiment!" You will be investigating all three hypotheses and answering questions.

Hypothesis 1: Nitrates

12. Where are 3 places nitrates can be found? ______, ____, & _____, (3

pts.)

13. Excess nitrates can cause _______ to bloom and grow too much, eventually leading to excessive growth of

_ and _____ oxygen levels in the water. (3 pts)

14. Nitrate levels where highest after? (Circle the correct letter)

- A. The Factory
- B. Paradise Organic Farm
- C. Big Sky Ranch
- D. The Power Plant

WARNING: If you click the "Back Arrow" you will have to re-start at the very beginning.

Hypothesis 2: Acids

15. Acids ______ the pH and can be harmful to living things.

Click "yes" and continue the investigation.

16. Neutral water has a pH of _____.

Hypothesis 3: Pesticides

17. Pesticides are used to ______ pests that can damage ______ or other property. (2 pts)

18. Pesticide concentrations where highest after? (Circle the correct letter)

- A. The Factory
- B. Paradise Organic Farm
- C. Big Sky Ranch
- D. The Power Plant
- 19. Which animal has the highest concentration of DDT in their tissue sample?
- 20. This is an example of Biomagnification. The DDT moves up the food chain. Complete the food chain: (2pts)

 \rightarrow fish \rightarrow _____

Restoration



Complete the restoration of the Peril River, and at the end you will receive a score sheet. Type your first and last name. Show your score to your teacher and have them sign on the line below. The signature and score needs to be written in ink. (10) pts

| 1000 | | | | | | | | Bead aloud |
|-----------------------|----------------------------|---------------------|--------------|----------------------------|----------|---|--------------------|-----------------------|
| ntes abat | EcoDetectives: Peril River | | | | | | | |
| ierns zzl | | App Store | | | | | | View source |
| | | | • | C App Store | | | | Inspect elem |
| | | EcoD | etectives: P | eril River Pro | blem Sco | re Sheet | | Low price |
| | First Na | me: Brad | | | | | _ | |
| . | | | | | | Click here wit NAME is en correct | nen your ntered | |
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| & Mainzie | | | | erall Percents | ige. | | | |
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| istry Ising. etc.) | | | 1 | scores by Level | | | | \$1.88 |
| | | The Problem | | Investigate and Experiment | | Restoration | | Fresh Ground Chuck |
| nă Nosis | 100 | | | 0 | | 75 | | |
| Methods | | | Scor | es by Skill Breal | kdown | | | Chick |
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My score

Teacher signature

Congratulations on successfully restoring the Peril River!