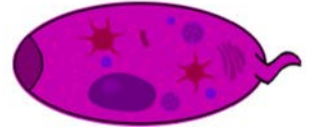


The Evolution of Zoe the Protozoa

Abstracting away the nuances of natural selection to find food and fend off foes!

Name: _____



DIRECTIONS: As you read in Zoe's intro, Zoe is a single-celled organism with various components. Read about the purpose of each of Zoe's components and record them in the table below. DO NOT copy word for word. Summarize each organelle's purpose in one sentence or less!

ORGANELLE	PURPOSE
Mitochondria	
Flagellum	
Cell Wall	
Cytosome	

STOP AFTER ROUND 1 AND ANSWER THE FOLLOWING QUESTIONS

How many pieces of food did you collect in Round 1? _____

In your opinion, how well did you collect food?

What was easy or hard during round 1?

DIRECTIONS: Complete the table on the next page based on your progress through Zoe's evolution.

Year	Population Size	Mutation
1	100	
50,000		
100,000		
150,000		
200,000		
250,000		
300,000		
350,000		
400,000		
450,000		
500,000		
550,000		
600,000		
650,000		

Which of Zoe's organelle's do you think is the most useful? Explain your answer using specific examples from your experience playing the game.

DIRECTIONS: After many, many years, Zoe's species has evolved! Read about the purpose of each of Berta's new components and record them in the table below. DO NOT copy word for word. Summarize each organelle's purpose in one sentence or less!

ORGANELLE	PURPOSE
Wings	
Tail	
Beak	
Feather Colors	
Eyes	

DIRECTIONS: Complete this table based on your progress through Berta's evolution.

Year	Population Size	Mutation
1,000,050,000		
1,000,100,000		
1,000,150,000		
1,000,200,000		
1,000,250,000		
1,000,300,000		
1,000,350,000		
1,000,400,000		
1,000,450,000		
1,000,500,000		
1,000,550,000		
1,000,600,000		
1,000,650,000		

DIRECTIONS: Answer the following questions based on your experience with Zoe's Evolution.

How did the environments of both Zoe and Berta influence the changes with their bodies? Explain your answer using specific examples from your experience playing the game.

What body parts/organelles were similar between Zoe and Berta? Describe at least two.

How do beneficial mutations (longer tail, larger mitochondria, etc) help the populations like Zoe's and Berta's survive?
