Name _____

What Happens When an Object Falls into a Black Hole?

Open-Ended Response Questions

1. Consider the consequences of time dilation as an object approaches a black hole. How does this effect challenge our understanding of the nature of time and gravity?

2. Reflect on the limitations of our current scientific knowledge when it comes to understanding the singularity at the core of a black hole. Discuss the questions and mysteries surrounding this enigmatic region.

3. Imagine you are a science communicator tasked with explaining the concept of spaghettification to a younger audience. How would you describe it in a simple and engaging way to make it understandable to children?

4. Explore the significance of black holes in the broader context of astrophysics and our understanding of the universe. How do they push the boundaries of our knowledge and challenge our existing theories of physics?