

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Sound Waves and Resonance

### Part 1

1. What do you think sound is?
  
  
  
  
  
  
  
  
  
  
2. What is the amplitude of a sound wave? Circle one: loudness or pitch
3. What is the frequency of a sound wave? Circle one: loudness or pitch

### Quiz 1

1. First pair of sounds: which sound has a higher amplitude?
2. Second pair of sounds: which sound has a higher amplitude?

### Quiz 2:

1. First pair of sounds: which sound has a higher frequency?
2. Second pair of sounds: which sound has a higher frequency?

### Part 2: Wine Glass

1. Why do you think the wine glass shattered?
  
  
  
  
  
  
  
  
  
  
2. What is the role of amplitude and frequency in the shattering?

### Part 3: Demonstration

1. What do you think will happen when I play a sound that matches the bottle's natural frequency?

2. What if I decreased the amplitude? What if I changed the frequency?

3. Could the bottles spin in the opposite direction?

Part 4: Reflection

Write down one thing that you learned today: