FLINN SCIENTIFIC

Name_____

Sound Wave Interference Tube Worksheet

Data Table

Room temperature: _____

Speed of sound at room temperature: _____

Tuning fork frequency: _____

Tuning fork wavelength: _____

Half-wavelength: _____

Total path length (for destructive interference): _____

Observations

Describe your observations about the sound of the tuning fork when the tube was pinched and also when it was released.

	Observations
Pinched tube	
Released tube	

Post-Lab Questions

1. What happens when the pinched tube is released? Explain.

2. Why is it important to take air temperature into account when calculating the tube length?

3. How would the set-up used in this activity have to be modified in order to demonstrate destructive interference using a 384-Hz tuning fork?

4. Speculate on how a noise canceling device might work.