Waves: Light and Sound

Name: _____ Date: _____ Grade: Grade 4

Part A: Fill in the Blank

Write the missing word or number on each line.

1. A whisper is quieter than a shout because the whisper's sound wave has a smaller _____ .
2. A tiny mouse squeak has a _____ pitch than a big lion roar.
3. A bright flashlight sends out light waves with a larger _____ than a dim flashlight.
4. Red light has a longer wavelength than blue light, so red has a _____ frequency.
5. When you shake a jump rope slowly, you make _____ wavelengths than when you shake it fast.
6. A sound wave with the same amplitude but a shorter wavelength will sound _____ in pitch.
7. Drumming your fingers gently on the desk makes a sound with a small _____ and a soft volume.
8. Light waves and sound waves both have wavelength, amplitude, and _____ .
9. A tuning fork that is hit harder vibrates with a bigger amplitude and makes a _____ sound.

Part B: Matching

Match each item on the left to the correct answer on the right.

1. Match each item to its correct answer.

Big amplitude in a sound wave	→ _____	Loud sound
Big amplitude in a light wave	→ _____	Bright light
Short wavelength of light	→ _____	Bluer color
Short wavelength of sound	→ _____	Higher pitch

Answer Key · Waves: Light and Sound · Grade: Grade 4

Part A: Fill in the Blank

Write the missing word or number on each line.

1. A whisper is quieter than a shout because the whisper's sound wave has a smaller **amplitude** .
2. A tiny mouse squeak has a **higher** pitch than a big lion roar.
3. A bright flashlight sends out light waves with a larger **amplitude** than a dim flashlight.
4. Red light has a longer wavelength than blue light, so red has a **lower** frequency.
5. When you shake a jump rope slowly, you make **longer** wavelengths than when you shake it fast.
6. A sound wave with the same amplitude but a shorter wavelength will sound **higher** in pitch.
7. Drumming your fingers gently on the desk makes a sound with a small **amplitude** and a soft volume.
8. Light waves and sound waves both have wavelength, amplitude, and **frequency** .
9. A tuning fork that is hit harder vibrates with a bigger amplitude and makes a **louder** sound.

Part B: Matching

Match each item on the left to the correct answer on the right.

1. Match each item to its correct answer.

Big amplitude in a sound wave	→ **Loud sound**	Loud sound
Big amplitude in a light wave	→ **Bright light**	Bright light
Short wavelength of light	→ **Bluer color**	Bluer color
Short wavelength of sound	→ **Higher pitch**	Higher pitch