

Waves

3. Wave Effects

CONCEPT 2

TEST YOURSELF

MAKING AND RECORDING SOUND

KNOW

- Q1 Which part of the microphone picks up the vibrations from sound pressure waves?
- Q2 What will happen to the electrical signal output when the noise it is picking up gets louder?
- Q3 Why does the microphone need to be fairly close to the source of the sound?

APPLY

- Q4 Why does the loudspeaker cone need to be made from a light material?
- Q5 Which component do the microphone and loudspeaker have in common?
- Q6 What kind of musical note will the loudspeaker make if it oscillates slowly but travels in and out quite a long way?

EXTEND

- Q7 In a sound system in a concert hall, the microphones pick up sounds made by musical instruments or a singer's voice. The microphones are connected to the loudspeaker using amplifiers.
What do you think the amplifiers do to the electrical signal and why?
- Q8 Headphones are small loudspeakers that sit inside the ear. Why is it dangerous to have earphones turned up too loud?
- Q9 Headphones can be connected to the microphone input of signal mixers. It is found that headphones can be used as a microphone. Why?