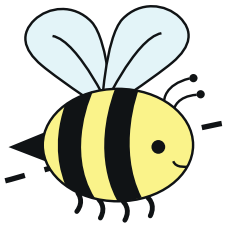
PARENT NOTES: DOPPLER EFFECT

BUZZING BEE

Today, we learned about sound frequency and the Doppler Effect, which is what makes sounds appear higher pitched when they move closer, like a car siren. We built a cardboard 'bee' which sounds like it's buzzing and used it to demonstrate the Doppler effect.



ASK YOUR CHILD

What did you make today?
(A buzzing bee)

Did you get a good buzzing sound?

Does the sound change as it gets closer to you, and why?
(The bee sounds higher as it swings closer to your head, because of the Doppler Effect. As the bee gets closer to you, more sound waves per second arrive at your ears, which makes it seem like the sound is getting higher in tone).

Does the sound change if you spin in slower or faster?
(Yes the sound should change slightly, this be because the elastic band will be vibrating at a different frequency (number of times it vibrates per second).

Lower frequencies produce lower sounds and weaker vibrations create quieter sounds.