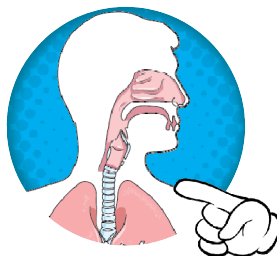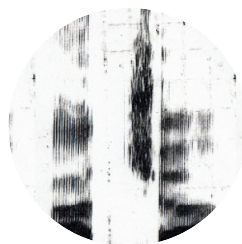# Introduction to fənɛɹɪks

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Phonetics: The Study of Speech Sounds

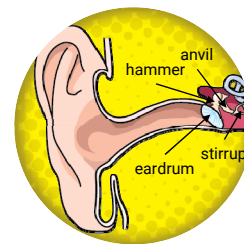Studying the raw materials of language

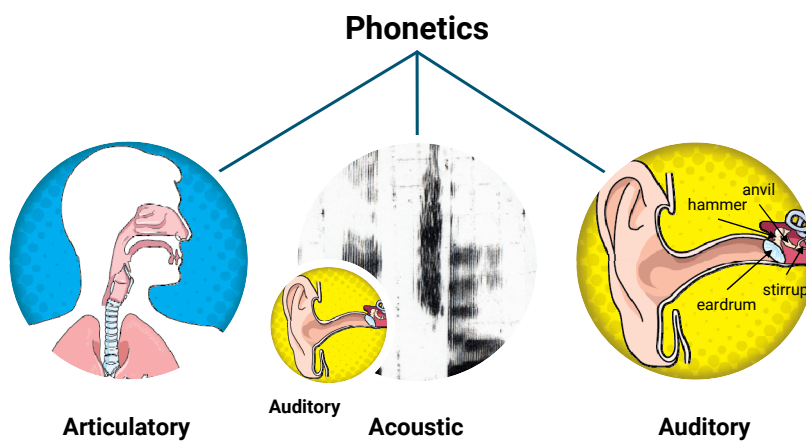### *Phones* (sound)

Articulatory production (source)　　**Acoustic waveform**　　**Sound reception**
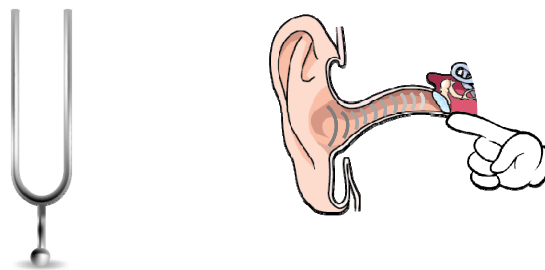
Head, ear: LifeArt Super Anatomy Collections 1-9. Williams & Wilkins 1998; Sound waves: Randy Harris; Finger: Noedelhap/iStock/Thinkstock
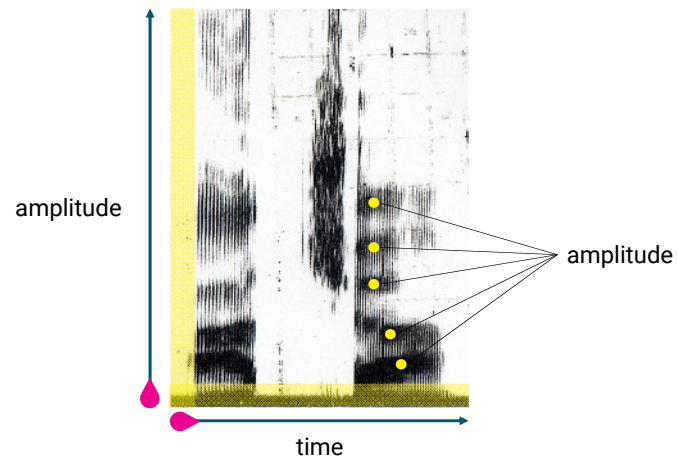

Modes of Phonetic Analysis

Phonetics

Articulatory | Auditory | Acoustic | Auditory

anvil
hammer
stirrup
eardrum

Acoustic Phonetics

Acoustic Phonetics

Sonogram

amplitude

amplitude

time

Randy Harris

Acoustic Phonetics

(a) (s) (a)　　(a) (z) (a)

Sound waves: Randy Harris; Finger: Noedelhap/iStock/Thinkstock

Acoustic Phonetics

a s a   a z a

Sound waves: Randy Harris; Finger: Noedelhap/iStock/Thinkstock

Auditory Phonetics

Ear drum

Ear: LifeArt Super Anatomy Collections 1-9. Williams & Wilkins 1998; Finger: Noedelhap/iStock/Thinkstock

Articulatory Phonetics

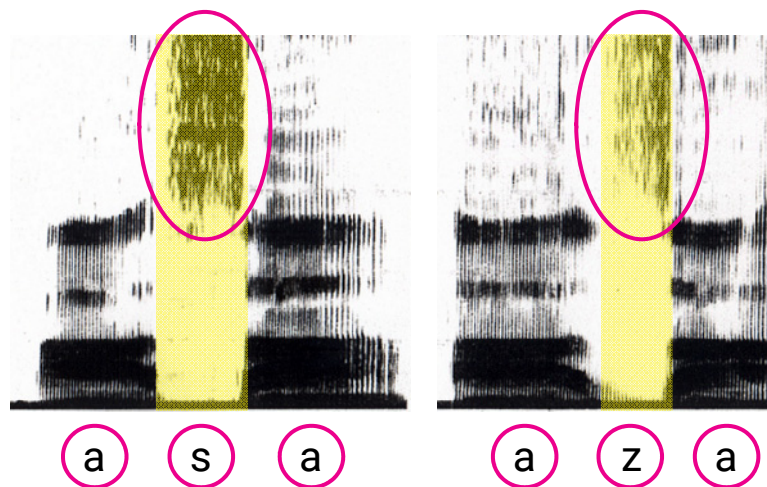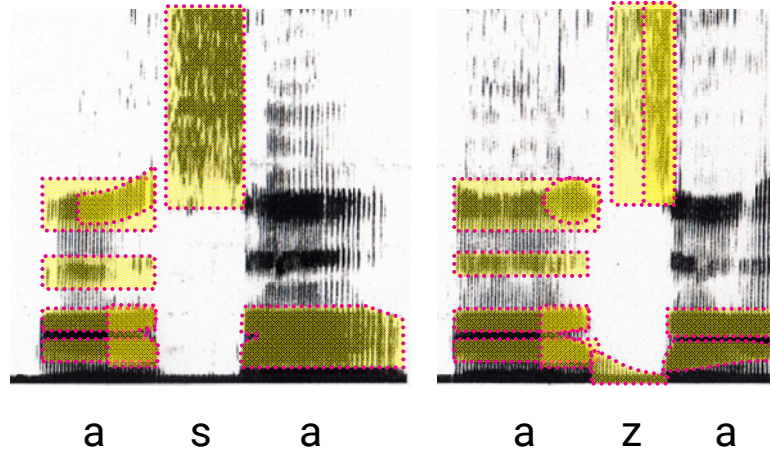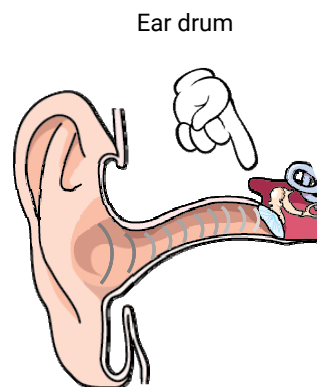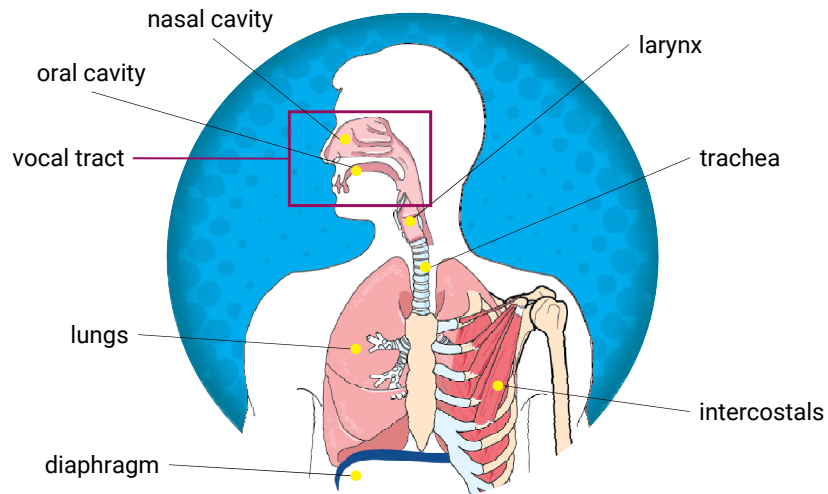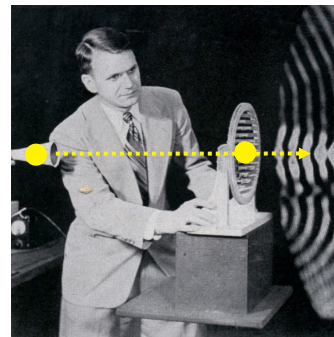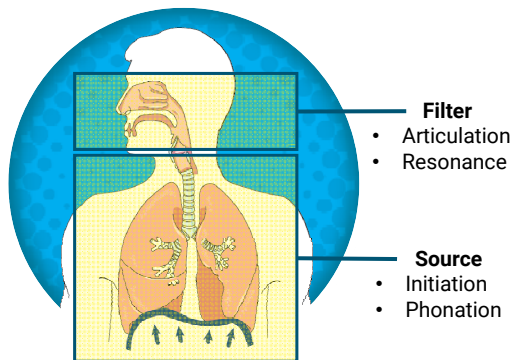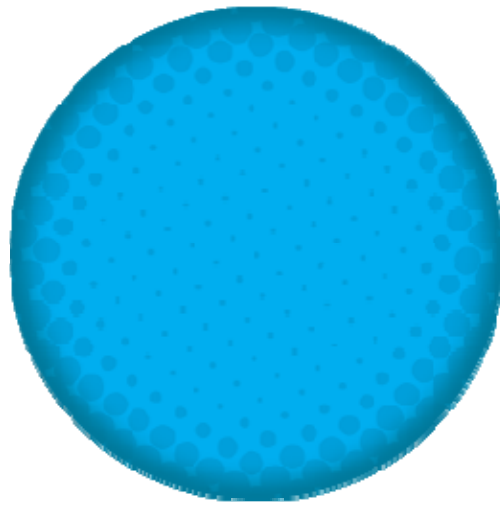nasal cavity

oral cavity

larynx

vocal tract

trachea

lungs

intercostals

diaphragm

LifeArt Super Anatomy Collections 1-9. Williams & Wilkins 1998.

Articulatory Phonetics

Filter
- Articulation
- Resonance

Source
- Initiation
- Phonation

Body: LifeArt Super Anatomy Collections 1-9. Williams & Wilkins 1998; Sound wave picture: Popular Science (1950). "Neon Lamp Traces Sound Wave's Picture". Retrieved from http://blog.modernmechanix.com/neon-lamp-traces-sound-waves-picture/.

Body: LifeArt Super Anatomy Collections 1-9. Williams & Wilkins 1998; Glottis, Vocal cords: University of Waterloo; Hand: Noedelhap/iStock/Thinkstock