Chapter 1

Articulation and acoustics
1. Vocal Organs

- Vocal folds/cords /p/ /b/
  - Voice
  - Voiceless

- The oral tract
- the nasal tract
1.1 Vocal Organs (detailed info)
1.2 Vocal Organs (detailed info)

Hard palate
Soft palate
Tongue
Oral part of pharynx
Epiglottis
Vocal fold
Larynx
Trachea
Esophagus
2. The articulators (the upper surface)
3. The articulators (the lower surface)
4. Places of articulation

- Labial: using the lips
- Coronal: using the tip or blade of the tongue
- Dorsal: using the back of the tongue
2.2 The manners and positions of English consonants

The X-ray video
(The X-ray video is provided by Ladefoged, UCLA)

Why did Ken put the soggy net on top of his desk?
I have put blood on her two clean yellow shoes.
5. Bilabial

/m/ /b/
6. Labiodental

/t/  /n/
7. Dental/interdental

/e/ and /ð/
8. Alveolar

/ə/ and /n/ and /d/
9. Retroflex

/r/
10. Palato-Alveolar/post-alveolar

/ʃ/ and /ʒ/
11. Palatal

Consider this chart
12. Velar

/k/ and /g/

[Diagram of the velar area]
13. The oro-nasal process

- Velar in “hang” -- /ŋ/
- Alveolar in “ran” -- /n/
- Bilabial in “ram” -- /m/
14. Stops

- Oral stop: /t/ /d/
- Nasal:/-n/ /n-//m/
15. Fricatives

- Labiodental -- /f/ /v/
- Dental -- /θ/ /ð/ 
- Alveolar -- /s/ /z/
- Palato-alveolar -- /ʃ/ /ʒ/

- What are “sibilants”? 
16. Approximants

- Approximation toward the palatal area -- /j/
- Approximation between the lips and the velar region -- /w-/
- Approximation in the alveolar region -- /-w/
17. Lateral (Approximant)

- Incomplete closure between one or both sides of the tongue and the roof of the mouth -- /l/ /r/
18. Additional terms

• Trill (or roll) and tap (or flap)
  – Rye
  – Pity, better, etc.

• Affricate
  – Church, judge, etc.
19. Articulation of vowel sounds

The positions of the vocal organs for the vowels in the words 1 heed, 2 hid, 3 head, 4 had, 5 father, 6 good, 7 food. The lip positions for vowels 2, 3, and 4 are in between those shown for 1 and 5. The lip position for vowel 6 is between those shown for 1 and 7.
1.4 The classical contrasts of vowel space

How to locate the “vowel space” and get the basic qualities of the vowel of American English
20. Practice the following items (Ex)

Example:
mat
21. Practice the following items (1)
22. Practice the following items (2)
23. Practice the following items (3)
24. Practice the following items (4)