Stories take all forms and lengths

Legend has it that Hemingway was once challenged to write a story in only six words.

His response?

“For sale: baby shoes, never worn.”
In 2006, SMITH Magazine began asking readers for their own six-word memoirs.

They sent in short life stories in droves
the bittersweet (“Cursed with cancer, blessed with friends”)
opignant (“I still make coffee for two”)
inspirational (“Business school? Bah! Pop music? Hurrah”)
hilarious (“I like big butts, can’t lie”).
Six Word Stories
http://www.smithmag.net/sixwords/

Before Kids, when I was alive.

Still in love with that shitweasel.

Disliking philosophy and TA isn't hot.

Formerly Purchasing, now chase escaped llamas.

Wasn't supposed to survive. Joyfully did.
Sound

- we tend to ignore it, or be marginally aware of it
- news reports
- TV, film, games, web:
  - visual media--Story, actors, performances, images first
  - but sound can be the defining factor
Its importance

- segment(s) w/out sound
  - lifeless
  - not understandable
- Soundscape
- Usually weakest link in student film/video
Kill Bill --no sound
Kill Bill w/sound
Commercial no sound

courtesy Bobby Schimmel
Commercial with sound
Thai Communication Provider True Move
To use sound properly, and fully realize its power, we need to do the following:

◆ (1) listen
◆ (2) understand basics of sound and hearing
◆ (3) understand sound's fundamental effects on human communication
◆ (4) understand the recording/playback process
◆ (5) know what is good sound
I. LISTENING

- For most people, sound is background only.
- To the sound designer/producer, sound is everything.
What is good listening

◆ a. paying attention to all sounds
◆ b. perceiving the sounds
Pay Attention To

◆ Foreground
◆ Background
◆ characteristics
  ◆ pitch, loudness, timbre, attack, decay, duration, tempo, rhythm.
  ◆ location
◆ source
◆ [https://www.msu.edu/course/tc/243/Listening%20exercise.html](https://www.msu.edu/course/tc/243/Listening%20exercise.html)
II. WHAT IS SOUND

- Sound Wave
- vibration of air molecules
- compression + rarefaction = one cycle
- travels 1,075 feet per second in air
- cycles = frequency
Sound Waves

- A = air at equilibrium -- no sound
- B = compressions + rarefactions --- sound wave
- C = sine wave representation of sound
  - A -- amplitude
  - $\lambda$ -- wavelength
Sound Waves

Sound frequency + amplitude

sounds higher frequency (more waves/sec)

sounds Louder amplitude (bigger waves)
Sound and Hearing

- Human hearing is binaural
- Mono emanates from a single point source
- Stereo emanates from two point sources
- Surround emanates from multiple sources
Stereo

◆ Provides
  ● sense of space, openness
  ● positioning
  ● sound movement

◆ Requires
  ● 2 different channels R + L
  ● more than one mic in field (or stereo mic)
Mono Example

Mono mix L + R
Stereo example

Stereo Mix
L & R Different spatial sense reverberation
Frequency/Pitch--high and low

- hertz (Hz)
- Kilohertz
- 20-20,000 hertz human range
- 20-16,000 hertz for most people
Frequency

- Sound is rarely single tone
- Fundamental
  - main frequency of the note
- Overtones (partials, harmonics)
  - source of timbre
- [http://www.acoustics.salford.ac.uk/feschools/waves/standing_waves.php](http://www.acoustics.salford.ac.uk/feschools/waves/standing_waves.php)
Timbre

- most sound is not pure
- harmonic structure is combination of sounds which produces timbre.
- no objective scale--subjective
- created by overtones
- We describe with non-technical terms
  - Sound metaphors
    - metallic, sweet, wood-like, buzzing, rushing
Octaves

- tonal ratio of 2:1
- ie, 20 to 40 hz = one octave
- human range about ten octaves
FREQUENCY RANGES

◆ 1. Low Bass 20-80 hz--1st 2 octaves
◆ lowest notes--power and fullness
◆ too much-- muddy sound
FREQUENCY RANGES

2. Upper Bass 80-320 hz--3rd and 4th octaves
   - most rhythm and support instruments (drums, piano, etc)
   - provide balance in music
   - too much -- boomy
   - too little-- thin
FREQUENCY RANGES

◆ 3. Mid range 320--2560 hz--5, 6, 7 th octaves
◆ intensity--contains fundamental and rich lower harmonics of most sources
◆ too much mid can be annoying and fatiguing
FREQUENCY RANGES

4. Upper Midrange 2560-5120--8th octave--our most sensitive range
2560-3500--intelligibility of speech
above 3500--definition, clarity, realism
presence range--5,000 hz
FREQUENCY RANGES

◆ 5. Treble 5120-20,000 hz--9 and 10th octaves
◆ 2% total output of sound, many can't hear above 16,000
◆ brilliance and sparkle
Sound Envelope

◆ changes in loudness over time
  ● attack (the beginning of the sound)
  ● internal dynamics (change in volume)
  ● decay (how the sound dies away)
  ● duration (how long is the sound)
 Tempo and Rhythm

◆ sounds of varied tempo and rhythm
  ◆ rhythm--the groupings of individual notes
    ❖ 1-2-3, 1-2-3, 1,2-3
    ❖ 1-2-3-4, 1-2-3-4, 1-2-3-4
    ❖ accent on the first sound
  ◆ tempo
    ◆ speed of the sound(s)
  ◆ tempo and rhythm are not the same