Introductions
1.5 -nminute elevator hello

- Your name
- A little bit of your background
- Why you are taking class
- What do you want to learn or find an answer to?
- When did you first hear about biological evolution?
I grew up in Cincinnati and went to Catholic Parochial schools for 12 years. I went to a small Quaker College in Indiana (Earlham College) and majored in Biology. I received my Ph.D. from Case Western Reserve University and taught and did research in Biology for over forty years. I am married and have one son.

I find biology and evolution an amazing idea. It speaks to the beauty and wonder of nature. I love sharing this amazing idea with others.

I want to learn how others see science and its impact on how we live our every-day life.

I first heard about evolution in my first year of high school at Roger Bacon High School. It was taught as a part of Freshman Biology.
Basic Biographical Information on Darwin

- Born on February 12, 1809, Shrewsbury, Shropshire, England
- Had a childhood of comfort
  - His father was a doctor, and his mother—who died when he was only eight years old—was the daughter of a successful 18th-century industrialist.
- At age 16, Darwin enrolled at University of Edinburgh along with his brother Erasmus.
  - Was to follow in Father’s footsteps to become a surgeon
  - Two years later, he became a student at Christ’s College in Cambridge to become a minister
- Married his first cousin Emma Wedgwood and had 10 children, 3 of whom died at a young age.
  - He was a devoted husband and father.
- Died on April 19, 1882, Downe, Kent
  - Buried in Westminster Abbey (against his wishes)
Down House (Where Darwin Spent Adult Life)
Great Britain During Charles Darwin Life

- It was a time of two worlds
  - Industrialization was bringing people from the countryside in large numbers
  - The growing population and poverty was a significant problem.
    - “Since you ask me what I wish, gentlemen, that is my answer. I don’t make merry myself at Christmas and I can’t afford to make idle people merry. I help to support the establishments I have mentioned: they cost enough; and those who are badly off must go there.” “Many can’t go there; and many would rather die.” “If they would rather die,” said Scrooge, “they had better do it, and decrease the surplus population.”
    - Charles Dickens 1843. A Christmas Carol
  - Child and women labor
  - Disruption on family
  - Starvation

- Darwin was not immune to his privilege and to world conditions.
  - Saw the competition and meanness of the industrial revolution
  - That the were winners and many more losers
illustrations and Photos of London


https://www.sciencephoto.com/media/362695/view/crystal-factory-19th-century

https://illustrationchronicles.com/Feed/filter/1840s

https://www.sciencephoto.com/media/362695/view/crystal-factory-19th-century
The power of population is indefinitely greater than the power in the earth to produce subsistence for man.

Thomas Malthus

The rich, by unfair combinations, contribute frequently to prolong a season of distress among the poor.
Voyage of Beagle

1838 Works intensely on a variety of natural history and geological topics. Finishes a paper on the geology of Glen Roy in Scotland. On 28 September he read 'for amusement' T. R. Malthus Essay on the Principle of Population (1798). 'Here, then, I had at last got a theory by which to work' (Autobiography).

On 11 1840 Publishes paper On the formation of mould. The book on this subject would only be published in 1881.

1846 Publishes Geological Observations on South America. October begins work on barnacles.

1847 Continues work on barnacles.

1854 Publishes concluding volumes on barnacles, A Monograph on the sub-class Cirripedia, and A Monograph on the fossil Balanidae and Verrucidae. Immediately begins full-time work on species.

1858 In June receives a letter from Alfred Russel Wallace who is collecting specimens in Indonesia. Wallace encloses an essay on species and varieties that mirrors Darwin’s own theory of natural selection. ‘I never saw a more striking coincidence. ...If Wallace had my MS sketch written out in 1842 he could not have made a better short abstract!’ Baby Charles dies of scarlet fever on 28 June. Extracts from Darwin and Wallace’s writings presented by Charles Lyell and Joseph Hooker at the Linnean Society of London on 1 July. Neither Darwin nor Wallace attend. Papers published in Journal of the Proceedings of the Linnean Society of London. Visits Isle of Wight where he begins an ‘abstract’ of his views for publication.

1859 On the Origin of Species by means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life is published in London on 24 November by John Murray. On publication day Darwin is taking the water cure in Ilkley, Yorkshire.

1871 Publishes The Descent of Man, and Selection in relation to Sex. Engages in dispute with St George Mivart, adds a new chapter to sixth edition of Origin of Species to rebut Mivart’s claims. Daughter Henrietta marries Richard Litchfield and moves to Bryanston Street in London where Darwin becomes a regular visitor.
Darwin Biography

- Short film
Discussion

- Devil or Angel?
- Christian or Atheist?
- Radical who wanted to destroy society or Conservative?
- Can we separate his scientific idea from who he was as a person?