Carl Sagan (1934-1996)

Carl Sagan was a professor of astronomy at Cornell University and an amazingly successful popularizer of science. Among his many accomplishments:

- Speculated that the planet Venus had a very high surface temperature (later shown to be the result of a runaway Greenhouse Effect).
- Was among the first to use the term "nuclear winter."
- Wrote the novel *Contact*, the basis for the movie of the same name.
- Made the search for extraterrestrial intelligence respectable.
- Promoted the ideas of skeptical inquiry and the scientific method.
- Made many people aware of the natural world through his series *Cosmos: A Personal Voyage*. (We will watch one episode today).

Voyager Golden Record

The Golden Record was included on the Voyager 1 and 2 space probes launched in 1977. They are now beyond Pluto, and in 40,000 years will pass “close” to two different stars.

The records were designed to last for billions of years. It is hoped that at some point in the (distant) future an intelligent species will find them, decode the data, and learn something about Earth and humanity.

What should be on the record?

- How do you represent all of humanity?
- What fields of study are represented? Art? Science? History? Literature?
- What criteria do you use for selecting?
- How do you ensure that different groups are represented fairly?
- How do you balance the natural and man-made world?

Clicker Question

Which of these was *not* included on the Voyager Golden Record?

- A. A Navajo chant.
- B. A photograph of a supermarket.
- C. *Johnny B. Goode* by Chuck Berry.
- D. 4’ 33” by John Cage.
- E. A photograph of sprinters.