

Quiz

- 1) Briefly describe the steps of the scientific method.

Observation - Fact-gathering, becoming familiar w/ problem. (e.g., noticing dank, rotten-looking food)

Hypothesis - What you think is going on. (e.g., moldy food is killing turkeys)

Prediction - A specific experimental expectation. (e.g., if I feed healthy turkeys contaminated food, they will get sick)

Experiment - How you will test (e.g. I take eight healthy turkeys, feed moldy food to four of them, four others are control group...)

- 2) What are some factors that contribute to outbreaks of disease?

Many possible answers : genetics, duration of infection, environment, availability of treatment, virulence, population density, immune health...

A way to conceptualize complicated interactions between factors is to break it down into simpler model, i.e., *Disease triangle*: Disease outbreak arises from interactions between factors of the HOST, PATHOGEN, and ENVIRONMENT.

- 3) What are some potential human health risks associated with the food supply?

Many possible answers. Some of them: poisoning by terrorists or sociopaths; food-borne pathogens (bacteria, fungi) from unsanitary storage or processing; contamination from improper handling (e.g., unwashed hands in kitchen); famine from collapse of food supply; pesticides and animal pharmaceuticals in foods; toxins produced by non-infectious microorganisms; etc.

- 4) In the U.S., we have strong regulations in place to control toxins and pathogens in the food supply. What are some potential obstacles to keeping the food supply safe in less developed countries?

Again, lots of possibilities: Lack of infrastructure, financial limitations, hot and humid climates that favor many pathogens, lack of education about dangers, dependence on staple foods/few choices, difficult transportation, areas off telecommunications grid...

- 5) What is the primary organ in vertebrates that breaks down toxic chemicals?

The liver

Agenda:

- 1) Unit 2 Exam
- 2) Extra credit homework- (and helping Archana grade if needed)
- 3) Prequiz answer key (Dan's quiz)
- 4) Prequiz questions for next week (to be posted at the end of the week)
- 5) Teaching evaluations
- 6) Course wrap-up issues