## GEOGRAM

This week in the earth science class we learned about mapping and GIS. Do these topics have any practical uses? Absolutely, David Ferring, an Adjunct Professor in UNT's Department of Geography and the Environment and a health geographer, writes, "Mapping and GIS can help us understand disease dynamics in ecologies transformed by disturbance (climate change, urbanization, etc.). These tools, used by health geographers, provide unique insights into the patterns of disease distribution and diffusion, as well as information essential for evaluating and improving health care infrastructure and resource placement. John Snow's spatial

analysis of cholera cases during the London outbreak in 1854 represents a critical moment in the field of public health, and the foundational study exploring spatial dimensions of infectious disease and patterns of diffusion. Identifying the problematic water pump (and removing its handle!) based on the distribution of cholera cases around Broad Street proved to be a pioneering approach to addressing public health emergencies. These basic models can still help us understand infectious diseases from local outbreaks to global pandemics. Incorporating



ecological change with concepts and tools (mapping and GIS) from health geography are particularly useful in studying both chronic and infectious diseases like the current COVID-19 pandemic.

What did you learn? a. John Snow is a COVID-19 researcher b. Cholera is caused by air pollution c. Cholera is more commonly known as Malaria d. mapping Cholera deaths identified the source of the infection e. Spatial analysis is conducted in orbit.