

Generate Ideas Worksheet **Example Answers**

With a partner, answer the following questions. Then, we will share our ideas.

1. In your own words, describe the societal need that we are attempting to solve.

Responses will vary. Example answer: People want to be able to assess their genetic risks of cancer accurately so they know whether further action needs to be taken to protect their health. This means that a need exists for affordable and accurate ways to gauge individuals' cancer risks.

2. What are some possible causes of cancer?

Responses will vary. Answers may include: poor diet/unnatural/processed foods, pollution (air, water, soil), lifestyle (lack of physical activity, lack of sleep, chemical exposure, stress, UV overexposure, etc.), tobacco/smoke and other medicines and drugs, genetic make-up/mutation, and radiation exposure (medical treatment, nuclear bombs, power plants, etc.)

3. What information would I need to know to determine a person's risk of cancer from the causes you described above?

Responses will vary. Expect students to provide information necessary to assess each risk listed in #2. Example answers that link the cancer cause to necessary information may include: diet = details of typical weekly diet; pollution = exposure to unhealthy chemicals in air, water, cleaning products, etc.; lifestyle = time typically spent in physical activity in a given time period; tobacco and/or drug use = measurable amount of drug/smoke entering body in a given time period; genetic make-up = family history of cancer or some form of genetic testing; radiation exposure = duration and strength of radiation exposed to in a given amount of time.

4. How could I accurately assign a risk factor based on the information I gather?

Responses will vary. Example answer: Compare collected data to statistics that show how likely that particular risk factor is to result in cancer. For example, if it was established from previous cancer patients that for every cigarette's worth of nicotine entering the body every week, the risk of cancer increases by 1%, then this fact can be compared to a person's nicotine intake/number of cigarette's consumed per week to accurately gauge his/her cancer risk.