## Lesson 1
**Asking Questions about Diabetes**

Students are exposed to the anchoring phenomenon for the unit through a slide set from the CDC that shows the rapid increase in diagnosed cases of type 2 diabetes in the past 20 years. Students ask questions about the phenomenon and explore data revealing how diabetes diagnoses are impacted by age, educational level, geography, and other factors.

- CDC slide set illustrating the dramatic increase in t2d
- Exploration of diabetes data from CDC.gov

## Lesson 2
**Homeostasis: Glucose in Balance**

Students trace glucose molecules from carbohydrates they eat to cellular respiration. They are then introduced to glucose homeostasis through a model that shows how organs and systems interact through feedback mechanisms to maintain balance. As an extension, students use yeast as an indicator for cellular respiration.

- Pencil/paper model of carbohydrates
- Visual demonstration of sugar in different drinks
- Homeostasis slide set presentation

## Lesson 3
**Modeling Type 2 Diabetes**

Students collect evidence for the causes of type 2 diabetes by using the homeostasis model board to figure out how blood glucose homeostasis is affected by diet, exercise, insulin resistance, and pancreatic function.

- Model board of glucose homeostasis using scenario cards

## Lesson 4
**Genes and Environment**

Students learn about environmental, genetic and social factors that influence type 2 diabetes by simulating how high risk and low risk gene variants may be distributed through a population and looking for patterns in their own environments and eating habits.

- Bean simulation to model genetic risk
- Pencil/paper risk tally to determine environmental risks

## Lesson 5
**Evaluating Solutions**

Students evaluate solutions to the complex problem of type 2 diabetes by evaluating and communicating information about four different prevention and treatment options. Using evidence gathered throughout the unit, students engage in argumentation to support their position on the best treatments and preventative measures that address this complex condition.

- Jigsaw or round robin of solution/treatment options
- Evaluation and justification of own solution