Browning Reactions:
#. What food molecules must be present for Maillard browning to occur?
#. What property/properties do aldehydes contribute to foods?
#. Above what temperature does significant Maillard browning take place?
#. What cooking conditions encourage Maillard browning?
#. What cooking conditions inhibit Maillard browning?
#. Above what temperature does significant caramelization take place?
#. What chemical reaction is catalyzed by phenol oxidase?
#. What molecular changes take place that cause enzymatic browning?
#. What conditions would encourage more sugar browning/caramelization when cooking?
#. What role does water play in most browning reactions?

Cooking Methods:
#. What are the main differences between boiling, steaming and pressure-cooking?
#. Why does the addition of salt change the boiling point of water?
#. What is "vapor pressure"?
#. What does a phase diagram tell you about a substance?
#. What are the 3 main mechanisms for heat transfer in preparing food?
#. How does baking incorporate all 3 main mechanisms for heat transfer?
#. Describe the major similarities and differences between boiling and deep-fat frying.
#. What is the "smoke point" of an oil used for frying?
#. Why is hot oil essential for deep-fat frying?

Storage and Preservation:
#. Why does cold-storing foods preserve them?
#. Describe the origins of the Fahrenheit and Celsius temperature scales.
#. If a substance is 25°C, what is its temperature in °F?
#. Why are absolute temperature scales useful/necessary?
#. Describe the similarities and differences between drying and freeze-drying, both the process and the effect on the foods.
#. What role does sugar play in the preparation and storage of sugar preserves?
#. What happens to the freezing point of a solvent (like water) when a solute (like sodium chloride, NaCl) is added?

Seeds:
#. Describe and identify the components of a seed.
#. Describe the difference between monocot and dicot seeds. Give examples of each.
#. What are some similarities and differences between grains, legumes, and nuts? How do they grow, what food molecules do they contain, etc

Graphing:
#. Given a set of (x,y) data and graph paper, construct a meaningful graph.
#. Interpret data presented in an XY-scatter plot format by defining linear trends.