

# Questions to prepare for the exhibition

## Organ system model

### Discuss your organ system

What organ system are you modelling?

Digestive System

What are the functions of your organ system?

Digest food and absorb its nutrients

### Discuss your model

What function(s) does your model demonstrate? How does it demonstrate each function?

Break down graham crackers

What functions of your organ system are not demonstrated by your model? If you had unlimited time and resources, how would you demonstrate these functions?

We did not demonstrate absorbing the nutrients. We could do this by using dialysis tubing, water, and iodine to represent the small intestine absorbing nutrients from the food.

What scientific principles did you need to understand in order to build your model?

We needed to understand chemical breakdown when food is broken down by enzymes, and pressure when food is crushed in mouth as well as when muscle push the food through the system.

### Show your model in action

Check.

### Discuss the design process

How did you come up with ideas?

We wrote down the functions of each part of the system and figured out ways to make it mechanical.

How did your group decide on the ideas/plan that resulted in your model?

We brainstormed and then sorted through and compiled our ideas.

What ideas were considered and then dismissed? Why were they dismissed?

We decided not to use a blender to crush food because it would be too hard to incorporate into the rest of our design.

What problems did you face in the design process and how did you solve them?

It took a lot of tries to get the crusher working properly. We also had trouble getting everything to fit on the wooden board practically and in an aesthetically pleasing way.

How many times did you have to redesign/test/improve?

About seven times.

### Discuss collaboration

Who did what in your group?

Cate came up with the design and she is the leader of the group because she told us what needed to be done. Everyone else helped build the model.

How did each member of the group contribute? How did you decide who would do what?

Look at the above question. Everyone just did what needed to get done.

Did you leverage strengths and talents of people in your group or was it random or volunteer basis?

Usually, a task was done by whoever wasn't already busy.

### Discuss Process Management

How was the work managed in your group? Was there a leader? Did you choose a leader? How?

Cate was the leader of the group because she told us what needed to get done.

How did you communicate with each other about ideas and logistics of building the model?

We discussed it. We wrote down our ideas.

How did you resolve disagreements?

We let each person explain their side, and it was clear whose idea was better after that.

### Relate to the real world

How could what you learned during this project, your model, the concepts used in your model or the design and building process relate to/contribute to/help a real life situation?

The process of taking such a natural system and recreating it as a mechanical one helped us learn to think of problems and solutions in a completely different way. Later in life we will probably come across a problem that will take a lot of thinking to solve. Learning how to think in different ways would allow us to take on these problems and come up with a logical solution efficiently that someone else might not even think of.