THE BIG CHEW
A Theme Park Ride through the Digestive System

PROJECT OVERVIEW
You have been selected to submit a design for a ride in a theme park that is based on the organs and processes found in the digestive system. The design requirements specify that the theme park ride, called THE BIG CHEW, must meet the following criteria:

- It must be designed for families (the main audience for the park).
- It must educate as well as entertain.
- The ride must allow visitors to experience ALL aspects of the digestive system.
- While the ride must be educational, there is plenty of room for creativity. For example, the ride could be based on a water slide, a skate board park, an auto race track (Remember: kid friendly!), etc.

DESIGN REQUIREMENTS
You will submit (1) a drawing of your ride and (2) a brochure explaining the ride.

The drawing must include:

- Your name
- A neat, creative, colored drawing of the ride with at 9 points of interests or stops that will make up the ride. These attractions are listed in the brochure.
- Each attraction should be given a name that leaves no doubt about what part of the digestive process it represents (e.g. “The “Stomach Squeeze” or the “Large Intestines Loop”). A point of interest does not necessarily need to be part of the ride. It could include an educational video or may even be a snack bar. For example, folks might stop at the “Pancreas Picnic Park” for lunch.
- The ride and the brochure together must be able to educate visitors about ALL of the terms listed on the bottom of this page.
- The ride must “flow” in a logical sequence through the digestive system (i.e. from mouth to rectum).
- Remember the pancreas, gall bladder and liver are accessory organs and are not part of the long tube.

The brochure must include:

- Your name
- An explanation of how the ride will educate visitors as well as entertain them.
- All of the following words must be incorporated in the descriptions of the points of interest in the brochure:
  - Mechanical digestion
  - Chemical Digestion
  - Mouth
  - Teeth
  - Saliva
  - Specific enzymes (in mouth, stomach, SI)
  - Esophagus
  - Epiglottis
  - Peristalsis
  - Mucus
  - Stomach
  - Bolus
  - Hydrochloric Acid
  - Small intestine
  - Liver
  - Bile
  - Gallbladder
  - Pancreas
  - Villi/Microvilli
  - Blood Vessels (or bloodstream)
  - Large intestine
  - Rectum
  - Appendix
  - Bacteria
  - Nutrients
GETTING STARTED
1. Look at your notes and text book and the other books that are available in the classroom to be sure that you fully understand the digestive system.
2. Look at cartoons of the digestive system that are available on the internet. These cartoons may provide you with some ideas of how you can represent parts of the digestive system. YOU CANNOT SIMPLY COPY THEM. BE ORIGINAL.
3. Give some thought to the layout of the brochure. The brochure must be typed or handwritten neatly.
4. Come up with a preliminary rough draft for your ride. Do not use colored paper or pencils for the preliminary work. Have the draft approved by the teacher before you begin the final design.
5. You will have about 2 class periods for this project. Work that is not completed in class must be finished at home.

GRADE: 100 ASSESSMENT POINTS
The project will be graded as follows:
- Meets Design Requirements: 20 points
- Appearance (Neatness and Creativity): 20 points
- Organization and Content: 30 points
- Scientific Accuracy: 30 points

### Project Grading Rubric

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<td>(16-20) Outstanding. You have met or exceeded all the requirements for the brochure and drawing.</td>
<td>(16-20) Awesome. Each point of interest is depicted neatly, colorfully and in excellent detail. It shows a great deal of creativity.</td>
<td>(26-30) Superior. Descriptions of all attractions are detailed and leave no doubt about their purpose. A good deal of thought was given to all aspects of the digestion process.</td>
<td>(26-30) Wonderful. Scientific aspects of digestion are completely accurate and precisely explained for all attractions. It is obvious that visitors will learn a great deal about the digestive process.</td>
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<tr>
<td>(11-15) Satisfactory. You have met most of the criteria for the brochure and drawing.</td>
<td>(11-15) Suitable. Project is neat and shows some creativity.</td>
<td>(21-25) Adequate. Most descriptions of attractions are detailed and clear as to their purposes.</td>
<td>(21-25) Satisfactory. Scientific aspects of digestion are completely accurate and precisely explained for at most points of interest. There is evidence that the theme park ride will be a good learning experience.</td>
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<td>(6-10) Acceptable. You have met at least half of the criteria required for the brochure drawing.</td>
<td>(6-10) Somewhat suitable. Project shows some effort in the areas of neatness and creativity.</td>
<td>(16-20) Mostly satisfactory. At least half of the descriptions are detailed and clear OR a few key concepts relating to the digestive system were left out.</td>
<td>(16-20) Mostly adequate. Scientific aspects of digestion explained but in some cases the descriptions lack accuracy or completeness.</td>
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<td>(0-5) Unacceptable. The brochure and drawing were not designed with the requirements in mind.</td>
<td>(0-5) Unsuitable. It does not appear that much thought went into creation of the brochure or drawing.</td>
<td>(0-15) Unsatisfactory. Descriptions of the attractions lack detail. It is not clear how visitors will learn about this body system from your descriptions.</td>
<td>(0-15) Insufficient. Scientific aspects of digestion are not completely or accurately explained. The project does not provide evidence that the ride will be a learning experience.</td>
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