# Travel Brochure of the Body Systems

You have been hired by the Duodenum Dynamics Ad Agency as a travel consultant to design a luxury tour through the Human Body Systems. Before you can collect your fee from the Anatomy Travel Bureau, you must produce a brochure. The owner of the travel bureau, Mr. Seymore Sphincter, has informed you that in order to win the contract you must highlight the trendy spots, the exciting activities, and the imports and exports of the areas. For insurance considerations, you must also discreetly mention any possible dangers or special precautions that tourists might encounter in visiting these systems. Your world body tour should include visits to the following systems: (1) Digestive, (2) Respiratory, and (3) Circulatory.

## Format

- The brochure will be divided into 3 sections, one for each system.
- The key feature is to give an overall sense of the organization and function of each of the 3 systems. You must use drawings, computer graphics, photographs of actual organs, pictures from magazines, journals, or books to help in your advertisement of each system. Whenever possible, type all written parts of the brochure.

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## The Digestive System

**OBJECTIVES:**

1. List the parts of the digestive system and give their functions.
2. Compare mechanical digestion to chemical digestion.
3. Explain the function of the digestive enzymes amylase, protease and lipase.
4. Explain the results of the chemical digestion of carbohydrates, proteins and fats and discuss if this digestion occurs in the mouth, stomach and/or small intestines.
5. Discuss the importance of the liver and pancreas in digestion. List the substances they produce and explain their function.
6. Describe the structure of the villi and explain how its function is related to its structure.

**VOCABULARY TO BE INCLUDED IN THE PAMPHLET:**

digestion, salivary glands, epiglottis, esophagus, stomach, pyloric sphincter, duodenum, ilium, jejunum (small intestines) , role of liver, role of gallbladder, role of pancreas,, mesentery, villi, large intestines, rectum,, peristalsis, rhythmic segmentation, amylase, hydrochloric acid, pepsin, lipase, bile, proteins, amino acids,,fats,  fatty acids, carbohydrates, glycerol, lymph,  and glucose..

## Respiratory System

**OBJECTIVES:**

1. Identify the structure and function of the parts of the respiratory system.
2. Explain the function of the ribs and diaphragm in the breathing process.
3. Explain how breathing rate is controlled.
4. Describe what happens between the alveoli and the capillaries.
5. Describe the effects of smoking on respiration.

**VOCABULARY TO BE INCLUDED IN THE PAMPHLET:**

alveoli, gas exchange, epiglottis, trachea, bronchi, bronchiole, larynx, lung, oxygen, pharynx, respiration, trachea,, inhalation, exhalation, pleural membrane, cilia, diaphragm, External Respiration, Internal Respiration, and Cellular Respiration

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## Transport: The Circulatory System

**OBJECTIVES:**

1. List the functions of the human circulatory system.
2. Trace a drop of blood through the heart from the right atrium to the aorta.
3. Locate and label the parts of a heart on a diagram.
4. Compare the blood on the right side of the heart with that on the left side.
5. Describe the components of blood.(red blood cells, white b.c., platelets and plasma)
6. Identify and describe the function of the different types of circulation: pulmonary and systemic circuits.
7. Explain how the heart beats.
8. Explain what is meant by blood pressure.

# Biology Tour of Human Systems Rubric

**FOUR POINT ASSESSMENT**

1= the element described is missing
2= the element is present, but does not meet standard described
3= the element is present and meets standard, but needs some revision or improvement
4= the element is present and meets or exceeds the standard and no revision is recommended

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**Content 65%**

1 2 3 4 Information presented is accurate, factual, and relevant to the specific topic
1 2 3 4 Research is in-depth and covers all systems and required topic areas
1 2 3 4 Time, energy, and effort, to the project are evident
1 2 3 4 Project shows mastery of structure and function of human systems
1 2 3 4 Interrelationships between systems are clearly depicted and explained

**Travel Brochure 25%**

1 2 3 4 Travel brochure is neat and shows thought and effort
1 2 3 4 Travel brochure clearly illustrates all structures, functions, and risks associated with travel to each system
1 2 3 4 Travel brochure exhibits creativity

**Communication 10%**

1 2 3 4 Content is easy to read and free of grammatical errors.
0 1 This rubric must be attached to your project

## Total /37