Tobacco contains many chemicals that can harm the human body. Nicotine is found in all tobacco products, including cigarettes and chewing tobacco, as well as in electronic cigarettes. This chemical travels through the bloodstream to all parts of the body and is addictive. In addition, the smoke from a lit cigarette or cigar contains more than 7,000 chemicals. Study the diagram below to see the effects on the body.

**Brain:** Nicotine can reach the brain within seconds after a person smokes or uses tobacco. The chemical changes the way signals in the brain are processed. It can make people feel more alert or feel a sense of pleasure. But nicotine is addictive. When the effects of nicotine wear off, people feel a strong need to get more. That’s why it can be very difficult to stop smoking once you start.

**Tongue:** Your tongue is covered in taste buds. These cells detect the flavors in food. Using tobacco products can damage the taste buds. People who smoke may not be able to taste as well as nonsmokers. Exposure to the chemicals from the use of other tobacco products can also cause cancer of the tongue and mouth.

**Blood and Heart:** Chemicals in tobacco smoke can change the way your blood flows. They also damage the vessels that carry blood through your body. These changes can cause your heart to beat harder and faster. That can increase a person’s risk of a heart attack.

**Ears:** Children who are exposed to secondhand smoke have more ear infections. Germs get into the pocket of air behind the eardrum. That causes fluid to build up in the pocket, which leads to pain.

**Lungs:** The chemicals in smoke enter the pathways in the lungs where oxygen from the air is absorbed into the body. The poisonous chemicals damage the lungs’ cilia—fine hairs that help remove dirt from the air. The damage can make it more difficult to breathe and cause a permanent cough. Children who breathe in smoke are more likely to get illnesses such as pneumonia and bronchitis. The chemicals can also damage cells in the lungs and cause cancer.

Use the information in the diagram to answer the following questions.
(Write your answers on separate paper.)

1. What chemical makes it difficult to stop smoking once a person has started? Explain how.
2. Name at least three effects of breathing in tobacco smoke.
3. Explain why children who are around tobacco smoke may get sick with breathing illnesses.