Chemistry – an introduction
Answer key and audioscript

A – Vocabulary

1. quantity
2. Conservation of mass
3. breakthrough
4. combustion
5. Matter
6. accurate
7. Alchemists
8. properties

B – Comprehension

1. connects
2. processes
3. substances
4. structure
5. properties

C – Listening

… and so by describing something everyone knows about we can see how chemistry affects every part of our lives. Take two elements, in this case hydrogen and oxygen. They are both very common and are different from each other. Hydrogen has the atomic number 1 and oxygen, 8. Because they are elements there is nothing we can do to break them down any more, nor can we turn one element into another. What we can do is join them together, to bond them as a chemist would say. Let's take two molecules of hydrogen and one of oxygen; we then have not two elements but one compound. To a chemist it is H_20, but to the non-scientist it's water. Now we can reduce the temperature of this water to 0°C and it becomes ice. Or we can increase the temperature to 100°C and it becomes steam. To a chemist though, it's still H_20. What has happened is that the substance has changed its form. As ice, it's water in a solid form, as steam, it's water in the form of gas. Of course, we are more familiar with water as a liquid. However, by adding or taking away heat from H_20 we've made it undergo a transformation, and this adding or taking away heat is, in a very simple form, a chemical process. We see it happen very often, when we make ice for a drink, or in the winter when the rain falls as snow. We see it every time we boil water for cooking. Other chemical processes look more complicated because they have more different materials bonding in different quantities, but the process is the same. For example, when oil is used to make petrol …

1. elements
2. 1
3. 8
4. compound
5. form
6. materials

D – Vocabulary

1. D 2. G 3. H 4. C 5. I 6. B 7. J 8. F 9. E 10. A

E – Comprehension

1. They research and develop new medications.
2. By analysing samples from patients.
3. They sample and test the food products.
4. They develop processes for refining oil from which plastic is produced.
5. They are trying to filter harmful waste.