

4 Sustainability

Answer key

- 2** 1 Population moving from city centres to suburban and commuter towns, shrinking tax base, declining public services, falls in the standards in schools, greater demands for social security, environmental concerns
- 2 The shrinking tax base resulting from middle- and upper-income people moving away has resulted in a reduction in public resources and services. Furthermore, the population is now more culturally diverse, so new programmes and curricula are needed in schools.
- 3 Food items like potatoes, rice and cassava have been developed to contain the same protein value as meat.
- 4 White and middle- and upper-class people in high-income nations
- 5 Technology may have caused global warfare and localized technological disasters at toxic waste sites.
- 6 Complex systems cause increased vulnerability as they are more likely to fail.
- 7 No. Whilst political and religious leaders believe traditional families functioned better than modern families, some scholars disagree.
- 8 No, the public education system does not work well for the bottom 25% of students.
- 3** a 1 The shrinking tax base
2 The changing composition of the US population
- b Advances in medicine have allowed people to procreate where they would have previously been unable to, increased people's lifespan and, in some countries, decreased the death rate.
- 4 Summary b is the best, because it has changed the order of information and used synonyms rather than repeat the same phrases.
- 5 a Changing vocabulary; re-ordering sentences or phrases; changing word formation
- b a Just as technology has brought about improvements in the quality and length of life for many, it has also created the potential for new disasters, ranging from global warfare to localized technological disasters at toxic waste sites.
- b Technology has improved the quality and length of many lives; it has also created the possibility for new disasters, ranging from world war to local technological catastrophes at toxic waste sites.
- c Whilst many people live longer and at the same time have a higher standard of living due to technological developments, there is inevitably a downside, from the increased possibility of war throughout the world to more regional issues related to the disposal and dumping of hazardous waste.
- c** *Suggested answers*
- 1 A key issue which increases the concerns of environmentalists is the increase in population, which results in pressure on naturally available resources.
- 2 Populations of high-income countries now have better lives as a result of scientific and medical developments.
- 3 System failure is more likely to occur if a system is intricate.
- 6** a 1 The size and composition of families in the United States changed with the dramatic increase in the number of single-person and single-parent households. (page 2, §3)
- 2 Today, the United States still has one of the best public education systems in the world for the top 15 per cent of the students, but it badly fails the bottom 25 per cent. (page 2, §4)
- b *Suggested answers*
- 1 The number of single-person and one-parent households has had a significant effect on family size and make-up in the USA.
- 2 The state education system has excellent support for the top 15% of students; however, it does not succeed in supporting the weakest 25% of students. (page 2, §4)
- 7 1 *Urban* means 'within a built-up area, usually the centre of a town or city'; *suburban* means 'outside an urban area'.
- 2 A *chemist* (or, in British English, a pharmacist) is a specialist in chemistry; a *biochemist* is somebody who specializes in the chemistry of living organisms.
- 3 *Material* refers to the substance that a particular item is made of; *non-material* refers to something lacking in material or substance.
- 4 *Technology* refers generally to the application of science to a particular issue; *biotechnology* refers to technology which makes use of living organisms or biological substances as part of the process.
- 5 *Anticipated* means that something is expected or predicted; *unanticipated* refers to an event that was not expected.