Student book answers

6.3 Stars have a life cycle

Pages 144–145

Check your learning 6.3

Remember and understand

1 What event marks the birth of a star?

The fusion of two hydrogen atoms together forms helium. The large amounts of energy are released in the form of heat and light.

2 Why are most stars ‘main sequence’ stars?

Main sequence stars are stars that fuse hydrogen atoms to form helium atoms, and produce heat and light in a narrow range. Stars spend more time doing this type of nuclear fusion; therefore, more stars are in this category.

3 What is left after a supernova?

The core remaining after a supernova is thought to be composed of dense neutrons.

Apply and analyse

4 Draw a flow chart to show the life cycle of a star the size of our Sun.

Students’ flow charts should include gas nebula, protostar, main sequence star, red giant star, variable star and white dwarf.

5 Blue stars are much larger than our Sun. However, they do not have enough energy to explode. Draw a flow chart to show the life cycle of a blue star.

Students’ flow charts should include gas nebula, protostar, main sequence star, red giant star, variable star and nebula.