# Fusion and stars

International Baccalaureate · IB Diploma · Physics · HL · Vocabulary in context

| Word | Example |
|---|---|
| **gas pressure and radiation pressure** | Inside a star, **gas pressure and radiation pressure** push out against gravity. |
| **equilibrium** /ˌiːkwɪˈlɪbrɪəm/ | The book is in **equilibrium** because the forces balance. |
| **nuclear fusion** /ˈnjuːklɪə ˈfjuːʒn/ | **Nuclear fusion** powers the Sun. |
| **proton–proton chain** | The **proton–proton chain** turns hydrogen into helium in the Sun. |
| **positron** /ˈpɒzɪtrɒn/ | A **positron** is like an electron with a positive charge. |
| **neutrino** /njuːˈtriːnəʊ/ | A **neutrino** has almost no mass. |
| **Coulomb barrier** | The **Coulomb barrier** pushes two protons apart. |
| **quantum tunnelling** | **Quantum tunnelling** lets protons fuse in the Sun. |
| **astronomical unit** | One **astronomical unit** is the distance from the Earth to the Sun. |
| **light year** | One **light year** is about $9.5 \times 10^{15}$ m.<br>$9.5 \times 10^{15}$ m |
| **parsec** /ˈpɑːsek/ | The nearest star is about 1.3 **parsec**s away.<br>1.3 |
| **stellar parallax** | **Stellar parallax** is used to find the distance to nearby stars. |
| **luminosity** /ˌluːmɪˈnɒsɪti/ | The **luminosity** of a star is its total power. |



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| **apparent brightness** | A nearby star has a large **apparent brightness**. |
| **Hertzsprung–Russell diagram** /ˈhɜːtsprʌŋ ˈrʌsl ˈdaɪəgræm/ | A **Hertzsprung–Russell diagram** plots brightness against temperature. |
| **main sequence** /meɪn ˈsiːkwəns/ | The Sun is a **main sequence** star. |
| **red giant** /red ˈdʒaɪənt/ | The Sun will become a **red giant**. |
| **supergiant** | Betelgeuse is a **supergiant**. |
| **white dwarf** /waɪt dwɔːf/ | A **white dwarf** is about the size of the Earth. |
| **instability strip** | Stars in the **instability strip** grow brighter and dimmer. |
| **nebula** /ˈnebjʊlə/ | New stars form inside a **nebula**. |
| **protostar** /ˈprəʊtəʊstɑː/ | A **protostar** is a young star that is still forming. |
| **planetary nebula** | A **planetary nebula** is a shell of gas around a dying star. |
| **supernova** /ˌsuːpəˈnəʊvə/ | A **supernova** can be brighter than a whole galaxy. |
| **neutron star** /ˈnjuːtrɒn stɑː/ | A **neutron star** is very small and very dense. |
| **black hole** /blæk həʊl/ | Not even light can escape from a **black hole**. |



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