HSC REFERENCE HANDBOOK

TIPS AND DEFINITIONS YOU NEED TO KNOW
“Time doesn’t conceal anything, it tells the future what you did in the past, so prepare well in order to score extra marks.”

Michael Bassey Johnson
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Having to clearly answer the questions in an exam or assessment seems obvious, so it might sound silly to point it out. But it’s maybe the biggest cause of lost marks for all kinds of students, no matter how much they’ve studied their material. In fact, huge amounts of study can sometimes even “blind” you to what a specific question is asking, if you haven’t practised making relevance a priority in your written responses.

After all of the learning and study leading up to an exam, you owe it to yourself not to undermine your result because of an irrelevant or unclear answer.

Each subject has its own brand of questions and information, but the basic principles of writing a clearly relevant answer apply pretty much across the board.
1. Make sure you carefully read and understand the whole question.

2. Note the number of available marks and any specified marking criteria, then match this with the substance and depth of your answer.

3. Remember the key concepts and expectations behind the unit or module that the question belongs to.

4. Structure your response.
1. MAKE SURE YOU CAREFULLY READ AND UNDERSTAND THE WHOLE QUESTION

- Understanding the question is crucial to answering it properly. In an exam, this is a major part of what any reading time is for. Make the questions your priority: if the questions apply to specific texts that the exam paper supplies (e.g., in a comprehension section), then make sure you read each question before reading whichever text it applies to. Doing this will help guide your reading.

- Understanding a question involves being confident of what key instructive words (e.g., “Evaluate”, “Analyse”, “Explain”) are actually asking you to do. In this handbook, we’ve provided you with a Glossary of Key Words from the Board of Studies, which you can rely on as a guide to the practical meanings of these words no matter what subject they’re used in.

- Don’t fall into the trap of only noticing/retaining the part of a question that you feel the least threatened by. Answering a question means answering the whole question. So before you put pen to paper, you need to be as sure as possible that you’ve grasped every part of the question.

E.g. ‘Discoveries are meaningless unless shared with other people.’
Evaluate how the notion of discovery is linked to personal relationships within your Prescribed Text and at least one Related Text of your own choosing.

Here, understanding the question means comprehending:

- what the stimulus quote means, and appreciating that your response will need to engage clearly with this
- that you’re required to “Evaluate”, i.e., offer a judgement or determine the value of something
- that your focus needs to be on how personal relationships and discovery are linked within your texts, because that’s what the question is about
- the instruction to write on both your Prescribed and at least one Related Text.

Ignoring or forgetting any of these elements in the question would mean writing a partially or completely irrelevant answer, which gives a marker no choice but to award few or zero marks.

- In an exam, if there’s a word in the question that you don’t recognise or aren’t confident about, you just need to do your best with this. Look at the rest of the question, try to think of any other words that this word looks as if it might be related to, and make your best estimation of what it means. Then, factor this estimated meaning into your understanding of the question overall. This is a better approach than simply ignoring that word.

2. NOTE THE NUMBER OF AVAILABLE MARKS AND ANY SPECIFIED MARKING CRITERIA, THEN MATCH THIS WITH THE SUBSTANCE AND DEPTH AND DEPTH OF YOUR ANSWER

- The number of available marks for each question is your clear guide to how much substance and insight/complexity is expected of your response. Different subjects will award marks for different things, and for each subject this is something your relevant Mentor will help you learn. But in general, you need to give the marker a reason to award you each available mark. You do this by providing an amount of clear information and explanation to demonstrate your understanding. In many subjects, this means matching the number of supported and explained points you write to the number of marks available. (I.e., a 3-mark question would need three supported and explained points, a 5-mark questions would need five, etc.)

- If a particular question or section in an exam is preceded by a statement of the marking criteria, make sure you read these criteria! They aren’t a decoration; they’re there to tell you what your response must demonstrate in order for marks to be awarded.

3. REMEMBER THE KEY CONCEPTS AND EXPECTATIONS BEHIND THE UNIT OR MODULE THAT THE QUESTION BELONGS TO

- A question won’t always explicitly remind you of all the key ideas and expectations that were involved in studying a particular unit of work. But as an HSC student, you’re expected to have learned and incorporated these concepts and expectations for yourself.

E.g. English (Advanced) Paper 2, Module B question:

Question: In your text, how have elements of setting been employed to lend impact to the composer’s exploration of love?

Response: Here, there’s no mention at all of the key notion of “textual integrity” or how you should link this to the way your text was received in its original and present-day contexts. But these are concepts and expectations
built into the Advanced English Module B itself, and so they’re things you need to bring to bear in your response even though the question didn’t mention them explicitly. A student who achieves a high mark for their response to this question will factor in those Module B elements throughout their essay. Knowing how to do this in any long-answer subject (including the Sciences) requires a meaningful knowledge of the applicable Syllabus, along with plenty of practice and feedback with your response writing. This is one of the main reasons we cover the Syllabus requirements in detail at Talent 100.

4. STRUCTURE YOUR RESPONSE

• No matter what subject you’re writing for, don’t make the marker hunt for your answer. You need to set out your information and any discussion in a way that clearly addresses the question and then proceeds to develop and support your answer. Of course this will look a little different depending on which subject, topic and question type you’re responding to. But in general, for any answer of a substantial length, you will need:
  o An opening sentence (or paragraph) that clearly addresses the question and/or the issue at hand.
  o A body (paragraph or series of sentences or paragraphs) that develops and proves your answer with evidence and explanation.
  o Usually a concluding statement (or paragraph) that clarifies and cements your answer.

E.g. I – English (marks earned are indicated in brackets)

Question: Analyse how the poet conveys a connection between discovery and loss. (4 marks)

Response:
The poet portrays discovery and loss as intimately related, through the persona’s experience of a realisation triggered by grief [opening sentence that clearly answers the question]. The repetition of the adjective “gone, gone,” establishes a lingering sense of loss [1 mark], reinforced by the hollow-sounding assonance of the “o” sound in these same words [1 mark].

By rhyming “gone” with “shone” in the next line – “but there a truth shone!” – a clear link is established between the experience of loss and the illuminating experience of discovery [1 mark]. The concluding exclamation point emphasises the persona’s joy at finding a sense of discovery within her loss [1 mark].

E.g. II – Chemistry

Question: Discuss the potential of cellulose as a raw material. (7 marks)

Response:
Cellulose currently has limited potential as a raw material. It has a number of advantages, but a similar number of drawbacks that will limit its use [opening sentence that clearly answers the question].

Advantages:
  o It has the basic structure for building petrochemicals.
  o It is abundant because it is found in plants.
  o It is renewable because plants can reproduce.

Disadvantages:
  o Current technology for the conversion of cellulose to glucose is costly and inefficient.
  o The energy input would exceed the potential energy yield.
  o Cellulose needs vast amounts of arable land, which may not be feasible, particularly in Australia where drought and salinity are issues.
  o Biomass is difficult to transport and store.

In conclusion, until the disadvantages are overcome, cellulose cannot be used as a replacement substrate for materials produced by the petrochemical industry [concluding statement that clarifies and cements the answer].

E.g. III – Physics (marks earned are indicated in brackets)

Question: Explain the concept of ‘holes’ and describe how current can be transmitted by holes and electrons. (4 marks)

Response:
A hole is an absence of electrons [1 mark] that is created when an electron is promoted to the conduction band. In a semiconductor, when sufficient heat energy is provided, valence electrons can move from the valence band into the conduction band (a higher energy level). In so doing, they leave behind a ‘hole’ [1 mark]. The absence of the negative electron can be treated like a positive charge [1 mark] and hence when an external electric field is applied, the electrons in the conduction band will move in one direction (towards the positive terminal) whilst holes in the valence band move in the opposite direction [1 mark].
BASIC POINTS OF GRAMMAR

YOU NEED TO GET THESE RIGHT

If your grammar and expression aren’t fantastic, there’s no point in feeling bad about it. Yes, it could be related to your reading habits and your language background – but the fact is, everyone uses language differently anyway, and at this stage of your school life there isn’t a huge amount of time to overhaul the quality of your grammar. Still, you can definitely fix some of the basics so that you don’t undermine your marks.

This applies not just to English, but in every other subject that requires coherent discussion and explanation (Physics, Chemistry, Economics, History, Biology – basically everything except Maths).

Good grammar isn’t about sounding fancy. The point is just to be as clear, precise and understandable as you can be. You’ll get to practise many parts of your expression in your lessons and homework, and you need to do your genuine best to learn from the feedback you get from your Mentors at Talent 100 and your school teachers.

The following are some especially fundamental aspects of grammar for you to make sure you’re getting right.
USE ACTUAL SENTENCES

MAKE SURE YOUR VERBS WORK

FIT QUOTES INTO YOUR WRITING IN A WAY THAT ACTUALLY MAKES SENSE

ALWAYS USE THE PRESENT TENSE TO DISCUSS TEXTS

GET THE BASIC PUNCTUATION OF TITLES, NAMES AND QUOTES RIGHT

AVOID USING PASSIVE VOICE

USE AUSTRALIAN SPELL-CHECK

SOME FINAL CRUCIAL HABITS TO DEVELOP
When you’re distracted or under pressure it’s fairly easy to write a phrase that isn’t a sentence, but it’s hard for an examiner to award marks for it. One practical way of minimising this is to re-read your work aloud (for take-home responses) or imagine reading it aloud in your head (under exam conditions), because in speech we tend to notice the difference between a sentence and a non-sentence much more easily. Below are all examples of non-sentences that should be absolutely avoided in any written discussion or explanation, because they stop your writing from making sense.

- These phrases are all like the continuation of some other sentence, but they’re not sentences in their own right. You’d need to attach them to another sentence to make them work, or reword them into a full sentence of their own.

  Which cannot be the case, because the necessary elements were not present.

  Because she disagreed with her father.

  Thereby achieving an overall destructive effect.

- The following phrase is just missing or misusing the crucial joining word(s) that would make it a sentence, and so it doesn’t end up making sense:

  In the line “The wetness and whisper of the water’s slow and wasteful overflow”, conveys a sense of the waves’ insistent motion through the repetitive occurrence of the “w” and “s” consonant sounds.

  You could turn this into an actual sentence by rewriting it like this:

  The repetitive occurrence of the “w” and “s” consonant sounds in the line “The wetness and whisper of the water’s slow and wasteful overflow” conveys a sense of the waves’ insistent motion.

  Or you could just remove the “In” at the start!

  The line “The wetness and whisper of the water’s slow and wasteful overflow” conveys a sense of the waves’ insistent motion through the repetitive occurrence of the “w” and “s” consonant sounds.

- A sentence that you just keep adding more clauses (sentence-parts) to ends up losing control and becoming unreadable:

  Brian discovers that what he had hoped for was impossible, the phrase “It was beyond my tiny grasp” reflecting both his disappointment and his sense of weakness, emphasised by the adjective “tiny”, showing how his sense of his own importance has been reduced, in light of his experience at the registry office, where he had been rejected.

  If you find yourself writing gigantic and out-of-control phrases like this, then start practising limiting yourself to one main point per sentence, and split your overlong sentence into two or three shorter sentences.
Verbs (i.e. “doing words” like run, talk, think, hate, eat, believe) need to match up with the number of people or things that they apply to, and you’ve got to be consistent about when the action is taking place.

- Match the verb to the number of people or things it applies to.
  
  **Incorrect:**
  
  These elements combines to create...
  
  **Correct:**
  
  These elements combine to create...

  **Incorrect:**
  
  A discovery always have an impact upon...
  
  **Correct:**
  
  A discovery always has an impact upon...

  **Incorrect:**
  
  The Boer War and the First World War was influential in establishing...
  
  **Correct:**
  
  The Boer War and the First World War were influential in establishing...

- Make sure you’re consistent with tense (past, present, future).
  
  **Inconsistent and confusing:**
  
  I came down the stairs to see what was causing the noise. Suddenly I stop – a chill wraps its cold fingers around my neck and I froze in fear. It wasn’t long before I’m trembling, trying to cry out for my brother, but my voice wouldn’t come.

  **Consistent and clear (all past tense):**
  
  I came down the stairs to see what was causing the noise. Suddenly I stopped – a chill wrapped its cold fingers around my neck and I froze in fear. It wasn’t long before I was trembling, trying to cry out for my brother, but my voice wouldn’t come.

  **Consistent and clear (all present tense):**
  
  I come down the stairs to see what’s causing the noise. Suddenly I stop – a chill wraps its cold fingers around my neck and I freeze in fear. It isn’t long before I’m trembling, trying to cry out for my brother, but my voice won’t come.
Never just slap down a quote as a sentence on its own. Equally, never put a long and elaborate quote in the middle of one of your own sentences and then try to continue your sentence afterwards. Those things never work!

- Introduce your quotes, so a marker knows where it’s come from and what you’re doing with it.
  
  Incorrect:
  “We shall always keep trying. We shall always be at your side.” The repetition of both the inclusive first person “We” and the assertive verb “shall” conveys a sense of shared determination.
  
  Correct:
  The speaker reassures her audience, “We shall always keep trying. We shall always be at your side.” Her repetition of both the inclusive first person “We” and the assertive verb “shall” conveys a sense of shared determination.

- Don’t try to incorporate multi-sentence or very long quotes into the middle of one of your own sentences.
  
  Incorrect:
  In the lines, “We shall always keep trying. We shall always be at your side.”, the repetition of both the inclusive first person “We” and the assertive verb “shall” conveys a sense of shared determination.
  
  Correct (the same correct version from previous point would work, or this one below):
  The speaker’s repetition of both the inclusive first person “We” and the assertive verb “shall” conveys a sense of shared determination in the lines, “We shall always keep trying. We shall always be at your side.”

Here, the incorporation of the multi-sentence quote works ok at the end of the student’s own sentence, because the student doesn’t try to continue on with their own sentence after the quote.
This is a convention of academic writing, and it makes your job heaps easier if you just stick to it. It basically means that you discuss what happens in a text and the composer’s uses of language as if those things are ‘happening now’.

- For discussing what happens in a text:

  Not recommended:
  *When she experienced the conditions of an African refugee camp for herself, Raquel discovered how ignorant her previous assumptions about asylum seekers had been.*

  Recommended:
  *When she experiences the conditions of an African refugee camp for herself, Raquel discovers how ignorant her previous assumptions about asylum seekers were.*

- For discussing what a composer does with language:

  Not recommended:
  *Shakespeare chose to convey Hamlet’s thoughts in the form a soliloquy at this point, which gave the audience direct access to the character’s inner turmoil.*

  Recommended:
  *Shakespeare chooses to convey Hamlet’s thoughts in the form a soliloquy at this point, which gives the audience direct access to the character’s inner turmoil.*

- The only real exception to this present-tense rule is when you’re specifically talking about something that happened in the text’s history, as opposed to our own era. For example:

  *Shakespeare was composing for an Elizabethan audience whose belief in both ghosts and the Divine Right of Kings was widespread. As such, the dramatic and moral impacts of the murdered King’s ghost were greater for an audience four centuries ago than they can be for today’s much more secular theatregoers.*
GET THE BASIC PUNCTUATION OF TITLES, NAMES AND QUOTES RIGHT

When a marker sees incorrectly written titles and names in your writing, your marks start to go down. Obviously you should also know the correct titles of your texts and how to spell the composers’ names!

- Titles and names use capitals.

  Correct
  *The Tempest* by William Shakespeare

  Incorrect
  *The tempest* by William Shakespeare
  (or some other incorrect variation on missing capitals).

- Distinguish titles with specific punctuation. The conventions that work best across both typed and handwritten work are these:

  Underline the titles of entire books, plays, films and TV programs:
  *Brave New World, Rainbow’s End, Into the Wild, Go Back to Where You Came From.*

  Use single inverted commas for chapters, articles, poems and short stories:
  ‘*One in Ten Feels Isolated*’ from *The Sydney Morning Herald*, ‘*The Tuft of Flowers*’ by Robert Frost, ‘*Closer*’ by David Malouf from his *Collected Short Stories*.

- Distinguish quotes with specific punctuation that’s different from titles.
  
  Use double inverted commas for quotes that are one word to three lines in length:

  *We learn that he is “appalled” to be represented “in such a way that no shred of the family’s good name could survive another public flaying of this hideous and spitefully cruel nature”.*

  When the quote is longer than three lines, don’t use inverted commas and instead indent the entire quote:

  *We learn that he is “appalled” to be represented in such a way that no shred of the family’s good name could survive another public flaying of this hideous and spitefully cruel nature, given its already vulnerable position after the political scandals of the late 1970s and early ’80s.*

  When you’re cutting or changing parts of a quote, use an ellipsis and square brackets accordingly:

  *We learn that he is “appalled [to be represented] in such a way that no shred of the family’s good name could survive another public flaying of this […] nature, given […] the political scandals of the late 1970s and early ’80s.*

  In cases of cutting parts of a quote (like above), you need to make sure the altered quote you end up with is still grammatically correct and doesn’t misrepresent what the original text was saying. Never just quote the beginning and end of some passage and expect the marker to fill in the blanks for you.

  When you’re quoting more than three lines of a poem, you would need to indent as explained above for long quotes. When it’s just two or three lines, you quote without indenting but you indicate the line breaks with a /.

  *Eliot is deliberately paradoxical in claiming that “We shall not cease from exploration / And the end of all our exploring / Will be to arrive where we started”.*
The passive voice in grammar means expressing actions without actually saying who’s doing them or who they apply to. A lot of students try to use it because they think (mistakenly) that it sounds more sophisticated or academic. In reality, it’s just confusing and vague and usually undermines the impact of your sentence.

**Not recommended**

*Through discoveries, profound insights about the self and the wider world are gained. It can be seen in both texts that moments of revelation have a shaping influence on personal outlook.*

**Recommended:**

*Through discoveries, an individual gains profound insights about themselves and their wider world. Both texts show us that moments of revelation have a shaping influence on the personal outlook of someone who experiences them.*

Related to this is the use of the grammatical term “one”. Again, students try to use this because they think it sounds more correct or sophisticated, but almost no one actually knows how to use it correctly. Using “one” means you need to keep using “one” and “one’s” for the rest of your sentence and probably the whole paragraph. You *cannot* combine “one” with “them” and “their”. And in almost every case, it’s simpler and more meaningful to use “an individual”, “a person”, “people” or even “we” instead. (Don’t use “you” as an alternative – it’s too colloquial.)

**Incorrect:**

*In making a discovery, one can learn more about themselves and their world, even though they may have initially reacted with shame.*

**Correct (but still not recommended):**

*In making a discovery, one can learn more about oneself and one’s world, even though one may have initially reacted with shame.*

**Correct and recommended:**

*In making a discovery, an individual can learn more about themselves and their world, even though they may have initially reacted with shame.*

*Or*

*In making a discovery, we can learn more about ourselves and our world, even though we may have initially reacted with shame.*
USE AUSTRALIAN SPELL-CHECK

For any typed work you do, make sure the spell-check of your word processing program is set to Australian English (*not* U.S. English!). Generally your software will allow you to make this selection permanent. You don’t want to submit misspelled work, and you really don’t want to reinforce incorrect spellings in your own brain because of an incorrect setting on your computer.

SOME FINAL CRUCIAL HABITS TO DEVELOP

• **Always re-read your work** (i.e. especially homework and take-home assessments) where possible, and preferably read it out loud to yourself or someone else. Reviewing your writing after letting it “rest” for a little while can make a huge difference, because when you’ve had a bit of time away from it it’s easier to notice some of the things that don’t make sense or could be clearer. Reading it aloud is so effective because often your ears will pick up on errors and grammar better than your eyes can. Reading aloud to another person is even better, because it helps you hear your writing in terms of how much sense it makes to someone else.

• **Don’t go nuts with a thesaurus or elaborate vocabulary.** Genuinely sophisticated writers aren’t the ones who use the biggest or most academic-sounding words. The best writers are those who do the best job of being clear, precise and engaging. In other words, your highest priority when you’re writing should be to make sense and choose the words that actually mean what you want to say. There is zero value in using big or unusual vocabulary if you don’t really know what the words mean or how to use them. It just makes your writing sound incompetent and fake. Use words you know how to use, and always require yourself to mean and understand every word you write. It’s a basic reality that even the strongest students’ grammar starts to unravel when they’re saying something they don’t fully understand or actually agree with. You *must* understand your own points before you can expect to be able to make someone else understand them. At the end of the day, you don’t want to train yourself to be a wordy faker. You want to be someone who actually makes sense, and has something worthwhile to say!
A Glossary of Key Words

This glossary contains key words that appear often in Board of Studies syllabuses, performance descriptions and exams. The purpose of the glossary is to help students prepare better for the HSC by showing them that certain key words are used similarly in examination questions across the different subjects they are studying. Students should recognise the consistent use of these terms across different subjects and thereby get cues about how to approach exam questions that involve those words.

For example, students would be better placed to respond to “explain” questions if, in the context of different subjects, they understand that “explain” could require them to relate cause and effect; make the relationships between things evident; provide why and/or how.

It’s important that the key words should not be interpreted in an overly prescriptive way. Teachers must ensure that they do not use them in ways that conflict with their particular meaning within subjects. To do this would be counterproductive. A term like “evaluate”, for example, requires a different kind of response in Mathematics from that required in History, and this needs to be respected.

Finally, it’s also important to note that exam questions for the HSC will continue to use self-explanatory terms such as “how” and “why” and “to what extent”. When using and understanding key words within questions, tasks and marking schemes, it’s helpful to ask what the use of the term in a particular question requires students to do. Key words are best learned in the context of actual questions and tasks students are working on, rather than in isolation.

| Account | Account for: state reasons for, report on. Give an account of: narrate a series of events or transactions |
| Analyse | Identify components and the relationship between them; draw out and relate implications |
| Apply | Use, utilise, employ in a particular situation |
| Appreciate | Make a judgement about the value of |
| Assess | Make a judgement of value, quality, outcomes, results or size |
| Calculate | Ascertaining/determine from given facts, figures or information |
| Clarify | Make clear or plain |
| Classify | Arrange or include in classes/categories |
| Compare | Show how things are similar or different |
| Construct | Make; build; put together items or arguments |
| Contrast | Show how things are different or opposite |
| Critically (analyse/evaluate) | Add a degree or level of accuracy depth, knowledge and understanding, logic, questioning, reflection and quality to (analyse/evaluate) |
| Deduce | Draw conclusions |
| Define | State meaning and identify essential qualities |
| Demonstrate | Show by example |
| Describe | Provide characteristics and features |
| Discuss | Identify issues and provide points for and/or against |
| Distinguish | Recognise or note/indicate as being distinct or different from; to note differences between |
| Evaluate | Make a judgement based on criteria; determine the value of |
| Examine | Inquire into |
| Explain | Relate cause and effect; make the relationships between things evident; provide why and/or how |
| Extract | Choose relevant and/or appropriate details |
| Extrapolate | Infer from what is known |
| Identify | Recognise and name |
| Interpret | Draw meaning from |
| Investigate | Plan, inquire into and draw conclusions about |
| Justify | Support an argument or conclusion |
| Outline | Sketch in general terms; indicate the main features of |
| Predict | Suggest what may happen based on available information |
| Propose | Put forward (for example a point of view, idea, argument, suggestion) for consideration or action |
| Recall | Present remembered ideas, facts or experiences |
| Recommend | Provide reasons in favour |
| Recount | Retell a series of events |
| Summarise | Express, concisely, the relevant details |
| Synthesise | Putting together various elements to make a whole |
### Physical Quantity

<table>
<thead>
<tr>
<th>Physical Quantity</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>metre (m)</td>
</tr>
<tr>
<td>Area</td>
<td>square metre (m²)</td>
</tr>
<tr>
<td>Volume</td>
<td>cubic metre (m³)</td>
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<tr>
<td>Capacity</td>
<td>litre (L) [non SI unit]</td>
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<tr>
<td>Mass</td>
<td>gram (g)</td>
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<tr>
<td>Mass</td>
<td>tonne (t) [non SI unit]</td>
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<tr>
<td>Density</td>
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<td>Time</td>
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<tr>
<td>Velocity</td>
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<tr>
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<tr>
<td>Energy</td>
<td>joule (J)</td>
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<tr>
<td>Power</td>
<td>watt (W)</td>
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<tr>
<td>Potential difference</td>
<td>volt (V)</td>
</tr>
<tr>
<td>Resistance</td>
<td>ohm (Ω)</td>
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<tr>
<td>Electric current</td>
<td>ampere (A)</td>
</tr>
<tr>
<td>Frequency</td>
<td>hertz (Hz)</td>
</tr>
<tr>
<td>Chemical substance</td>
<td>mole (mol)</td>
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<tr>
<td>Plane angle</td>
<td>radian (rad)</td>
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### Prefix & Symbol

<table>
<thead>
<tr>
<th>Prefix &amp; Symbol</th>
<th>Meaning</th>
<th>Value</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>atto (a)</td>
<td>one million millionth</td>
<td>0.000000000000000001</td>
<td>10⁻¹⁸</td>
</tr>
<tr>
<td>femto (f)</td>
<td>one thousand millionth</td>
<td>0.000000000000001</td>
<td>10⁻¹⁵</td>
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<tr>
<td>pico (p)</td>
<td>one millionth</td>
<td>0.000000000001</td>
<td>10⁻¹²</td>
</tr>
<tr>
<td>nano (n)</td>
<td>one thousand millionth</td>
<td>0.000000001</td>
<td>10⁻⁹</td>
</tr>
<tr>
<td>micro (µ)</td>
<td>one millionth</td>
<td>0.000001</td>
<td>10⁻⁶</td>
</tr>
<tr>
<td>milli (m)</td>
<td>one thousandth</td>
<td>0.001</td>
<td>10⁻³</td>
</tr>
<tr>
<td>centi (c)*</td>
<td>one hundredth</td>
<td>0.01</td>
<td>10⁻²</td>
</tr>
<tr>
<td>deci (d)*</td>
<td>one tenth</td>
<td>0.1</td>
<td>10⁻¹</td>
</tr>
<tr>
<td>kilo (k)</td>
<td>a thousand</td>
<td>1000</td>
<td>10³</td>
</tr>
<tr>
<td>mega (M)</td>
<td>a million</td>
<td>1000000</td>
<td>10⁶</td>
</tr>
<tr>
<td>giga (G)</td>
<td>a thousand million</td>
<td>1000000000</td>
<td>10⁹</td>
</tr>
<tr>
<td>tera (T)</td>
<td>a million million</td>
<td>1000000000000</td>
<td>10¹²</td>
</tr>
<tr>
<td>peta (P)</td>
<td>a thousand million</td>
<td>1000000000000000</td>
<td>10¹⁵</td>
</tr>
<tr>
<td>exa (E)</td>
<td>a million million</td>
<td>1000000000000000000</td>
<td>10¹⁸</td>
</tr>
</tbody>
</table>

* The prefixes “centi” and “deci” are only used with the metre.
When stating the numerical value of a measurement, select a prefix which will give a value for the measurement between 0.1 and 1000, e.g. 1234 litres should be 1.234 kilolitres.
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