

15.1 Software Tools

Syllabus 2026 - 2028

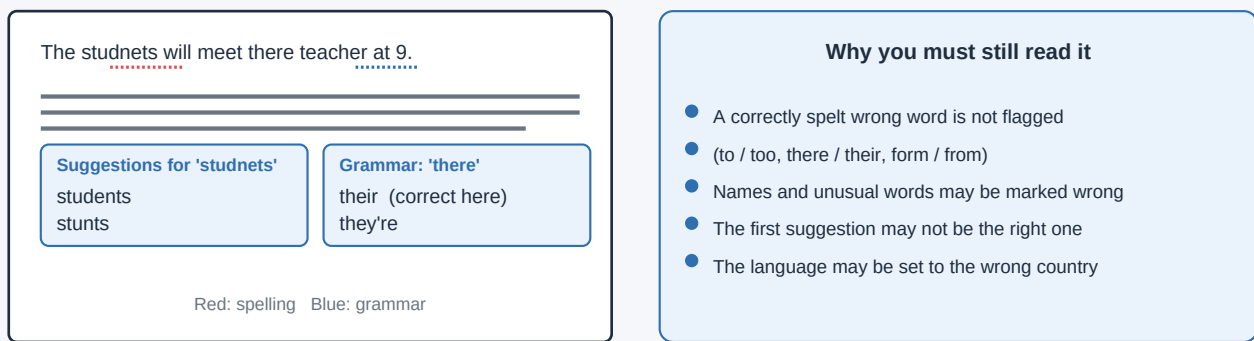
WHAT YOU NEED TO KNOW

- Use automated software tools (spell check, grammar check) and make appropriate changes so work contains as few errors as possible
- Use validation routines to minimise data entry errors
- Automated suggestions given by spell check software do not always give the correct response
- The importance, characteristics and uses of validation: range, character, length, type, format and presence checks

Spell check and grammar check

A **spell checker** compares each word with a dictionary and marks words it does not find. A **grammar checker** marks mistakes in sentence structure, punctuation and word use. They help to remove errors quickly, but they are not perfect.

Figure 74: Spell and grammar checkers need human checking

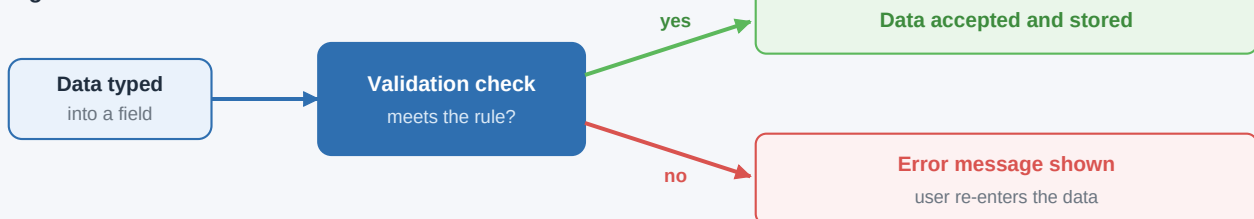


- Use them to find mistakes, then **decide** whether to accept, ignore or change each suggestion
- Set the correct **language** and dictionary (for example English UK) so correct spellings are not marked wrong
- Add names or specialist words to a **custom dictionary**
- Always **read** the work again, as the tools miss correctly spelt words used in the wrong place and may offer the wrong correction

Validation

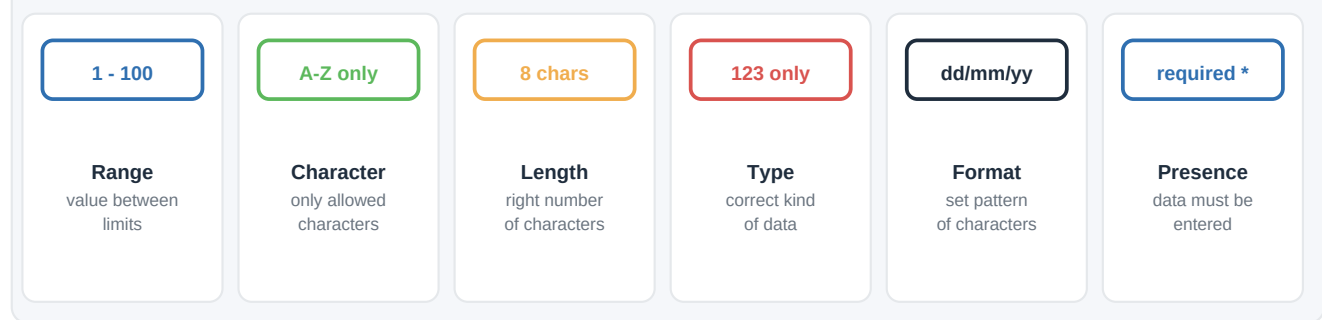
Validation is an automatic check that data entered is **reasonable and allowed**. It reduces data entry errors, but it cannot prove that the data is **correct**, only that it follows the rules.

Figure 75: How a validation routine works



Validation checks

Figure 76: Validation checks



Check	What it does	Example
Range check	Data must be between a lower and an upper limit	Test mark between 0 and 100
Character check	Only allowed characters may be entered	A name field with no digits
Length check	Data must have an exact number of characters, or be within a limit	A password of at least 8 characters
Type check	Data must be of the right data type, such as whole number or text	Age must be an integer
Format check	Data must follow a set pattern	Date as dd/mm/yyyy
Presence check	A required field cannot be left empty	Surname must be entered

EXAM TIP

Validation does not check that the data is **true**. A valid age of 15 might still be wrong for a person who is 14. Always give the **test** used and an **example** of data it would accept and reject.

Key terms

Term	Meaning
Spell check	A tool that finds words not in its dictionary.
Grammar check	A tool that finds mistakes in sentence structure.
Custom dictionary	A user's own list of accepted words.
Validation	An automatic check that data is reasonable and allowed.
Range check	Checks data is between set limits.
Type check	Checks data is the correct data type.
Format check	Checks data matches a set pattern.
Presence check	Checks that data has been entered.

Practice questions

Answer each question in full sentences. Command words used: State (give a short answer), Describe (say what it is like), Explain (give reasons), Analyse (break it down and examine it), Suggest (apply your knowledge to a situation), Compare and contrast (similarities and differences), Evaluate (weigh up and reach a judgement).

No.	Question	Marks
1	State two types of error that a spell checker may fail to find.	[2]
2	Describe how a range check works, using an example.	[3]
3	Explain why validation is used when data is entered into a database.	[3]
4	Suggest suitable validation checks for a field that holds a learner's year of birth.	[3]
5	Compare and contrast a length check with a format check.	[4]
6	Analyse why a document may still contain errors after a spell check has been used.	[4]
7	Evaluate the use of validation checks to make sure that data entered into a system is correct.	[5]

Total: 24 marks