

Validating data

Teacher's Notes

Lesson Plan

Length	60 mins	Specification Link	2.1.5/i	
Learning objective		Candidates should be able to: (a) describe methods of validating data as it is input		
Time (min)	Activity	Further Notes		
10	<ul style="list-style-type: none"> Explain that errors may be made when data is entered into a database. Often a user is copying data from a written form into a database and these errors are called transcription errors. The fields in a database can be set so that they can carry out checks on the data to check that it is reasonable or acceptable and this is called validation. Stress that the entered data could be reasonable but it could still be incorrect. Therefore a user should do a visual check and this is called verification. Remind the students that the school sends out to parents a data checking sheet for verification of student details. 			
15	Watch the set of videos pausing to discuss the content.			
5	<p>Discuss the videos to assess learning. Ask questions such as:</p> <ul style="list-style-type: none"> What is meant by validation? <ul style="list-style-type: none"> List some validation checks 	<p>Validation is a check carried out by the computer when data is entered to ensure that it is sensible, is a particular type or falls into a set range.</p> <p>Presence, type, range, length and format checks.</p>		
15	<p>Pupils to complete Worksheet 1 either on paper or on a computer.</p> <p>Ask individual students for their responses and discuss with the class so that all students will have the correct answers.</p>	<p>Answers provided.</p> <p>Ask students with the correct responses to explain to the class how they arrived at their answers.</p>		
10	The students use Interactive Activity 1 .			
	<p>Extension Challenge/Homework</p> <p>Students to complete and submit Worksheet 2 for homework.</p>			
5	<p>Plenary – Quick revision</p> <p>Ask the students to list all of the validation checks that they can remember.</p>	<p>Presence, type, range, length and format checks.</p>		



WORKSHEET 1 ANSWERS

1

(a) Explain what is meant by validation.

Validation is a check carried out by the computer when data is entered to ensure that it is sensible, is a particular type or falls into a set range.

(b) A validation check does not ensure that the data is correct, only that it is acceptable.

Give an example where the data may be acceptable but be incorrect.

Any suitable answer, such as:

In a school database the year group may be entered as 9 (which is acceptable) but the student may actually be in year 10.

2

Using examples explain the following validation checks.

(a) Presence check

This checks that data has actually been entered into the field.

Always required for a key field.

(b) Type check

Checks that the data is of the correct type e.g. if it is text or numeric.

(c) Length check

This checks the number of characters entered in a text field.

If the field is of fixed length and too many characters are entered then the ones after the maximum length will not be stored.

(d) Range check

This checks that numbers or dates fall into a particular range.

For a school database a range could be set for the year group field with the following
 ≥ 7 AND ≤ 13

(e) Format check

This ensures that the data entered is in a suitable format. It is carried out by applying an input mask to the field.

For example, using the following placeholders: L I O 9.

L = letter must be entered at this position.

I = letter may be entered at this position.

O = number must be entered at this position.

9 = number may be entered at this position.



WORKSHEET 2 ANSWERS

- 1** A school database has fields for the gender and date of birth of the students.
(a) Describe a validation check that could be carried out on the gender field. (2)

Existence check

Male/Female or M/F

And no other entry possible

- (b) Describe a different validation check that could be done on the date of birth field. (2)**

Range check.

Must be between birth date, lowest year of entry and highest.