STUDENT ACTIVITY 1.1 KEY

MTA Course: Database Administration Fundamentals
Topic: Understand how data is stored in tables
File name: DBAdminFund_SA_1.1_key

**Lesson Objective:**

**1.1:** Understand how data is stored in tables. *This objective may include but is not limited to:* understanding what a table is and how it relates to the data that will be stored in the database; columns, fields, rows, records.

**Resources, software, and additional files needed for this lesson:**

- Students need a pen or pencil.

**Directions to the student:**

**Objective**: By the end of today's review, you will be able to show your understanding of a database table, fields and records.

*Create a table (a graphic organizer) and label as shown below:*

**Columns**

**Rows**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

*Tell them that this is a table and that they should review the terms.*

A **field** is a one spot in a table. Have the students place the word *field* in two or three spots.

**Columns**

**Rows**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | *field* | | | | | | |
| | | | | | *field* | | |
| | | | *field* | | | | |
| | | | | | | | |
| | | | | | | | |

In the diagram above, the vertically highlighted area represent a column and horizontally highlighted area represent a row.

**A field** = data = some value

**Columns**

**Rows**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | *field* | | | | | | |
| | | | | | *field* | | |
| | | | *field* | | | | |
| A | | R | e | c | o | r | d |
| | | | | | | | |

Have the students update their notes as above.

A **record** is a group of fields across one row.

Have the students create an example of a table/database that holds all the records of a report card. *(This is the time for you to check that the students have understood the lesson. You may have to pull aside a few students and reteach the concepts at this point.)*

Collect all the examples and explain the relationships between the information that they just created. Every student database has common items, for example:

- Everyone has a name.
- Everyone has the same class (i.e., "DATABASE 101").
- Everyone has a teacher's name.

Introduce a **variable.** *Teacher Name* is a variable or label, and all the teachers' names would be in one column, and all the students' names would go in another column**.**

Teacher Student          Student Grade Section

Name   ID Name Number

| | | | | | | |
|---|---|---|---|---|---|---|
| smith | | | | | | |
| Jones | field | | | | | |
| Johnson | | | | field | | |
| | | field | | | | |
| A | | R | e | c | o | r | d |
| | | | | | | |

You may need to reinforce this concept with additional work, but once students understand this, they are ready to start the review of section 1.2.

**Define these terms from the presentation.**

   **Field - A field is one spot in a table.**

   **Column - A column is a group of items that are listed up and down (that is, vertically).**

   **Row - A row is a group of items that are listed across—left to right (that is, horizontally).**

   **Record - A record is a group of fields across one row.**

   **Table - A table is a group of rows and columns.**

   **Variable  - A variable name is the label that we give to a column.**