

## Defining Features Matrix

### What is a Defining Features Matrix?

A Defining Features Matrix is a relatively easy classroom assessment technique to use during class and requires students to distinguish between related or seemingly similar items or concepts. It has some similarities to Venn diagrams but is easier to grade. An example of a completed abbreviated defining features matrix for metamorphic rocks is presented below.

### Metamorphic Rocks Defining Features Matrix

Complete the table below by placing a check mark in the one or both of the two columns of the table where appropriate. Identify which of the characteristics in the left hand column are present in rocks formed by contact and/or regional metamorphism. **Do not** place a check mark in either column if the characteristic is not present. One characteristic has been completed as an example.

Characteristic	Rocks formed by . . .	
	contact metamorphism	regional metamorphism
Formed at temperatures above 200 C	+	+
May originally have been an igneous rock	+	+
Form as a result of increasing pressures	-	+
May surround plutonic igneous rocks	+	-
Slate is an example	-	+
Form as a result of melting	-	-

### How to use a Defining Features Matrix

1. **Identify two concepts that have several similarities.** Students can readily confuse the characteristics of key features or concepts that exhibit some similarities (e.g., hurricanes vs. tornadoes, Lincoln vs. Douglas, Picasso vs. Matisse).
2. **List the important characteristics of the two concepts.** These may include characteristics that are similar in both cases or different (or even absent in both cases).
3. **Generate a matrix.** The simplest matrix has two open columns on the right side that can be used by students to place a + (feature is present) or – (feature is absent) and a wider left-hand column with concept characteristics.

Source:

Angelo, T.A., and Cross, K.P., 1993, Classroom Assessment Techniques: A Handbook for College Teachers, 2<sup>nd</sup> edition, Josey Bass.