Simple Metamorphic Identification Keys and Charts

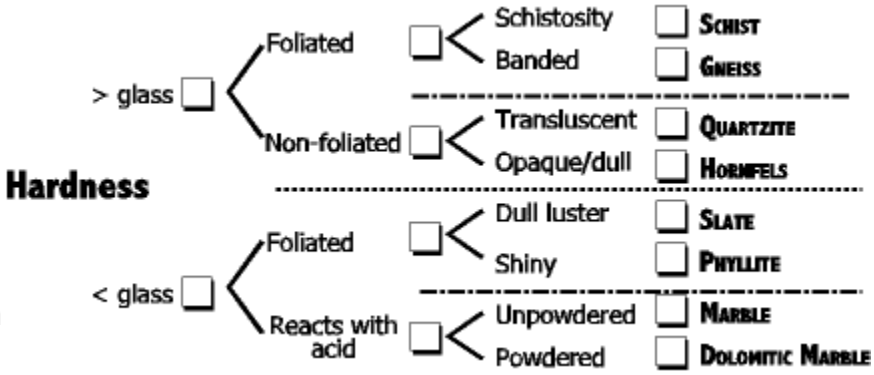
Rocks are identified by making a series of decisions about their properties, such as texture, composition, hardness, etc. This requires the ability to observe and recognize these properties. Two of the most common properties to determine classification of a rock are hardness and reaction with dilute hydrochloric acid (see Hardness And Acid Reaction Tests).

The Key To Common Metamorphic Rocks allows identification of a rock based on its physical properties. We are able to do this because the properties do not overlap completely. You can see this on the key through the color coding for the properties. None of the colors overlap completely.

For example, the Key has eight rocks; four of these scratch glass and four do not, so immediately we can divide the rocks into two categories. But also notice that four of the rocks are foliated, and of these two are harder than glass and two softer than glass. Thus, if we have a foliated rock harder than glass it can only be one of two rocks - schist or Gneiss. We distinguish them further based on their texture.

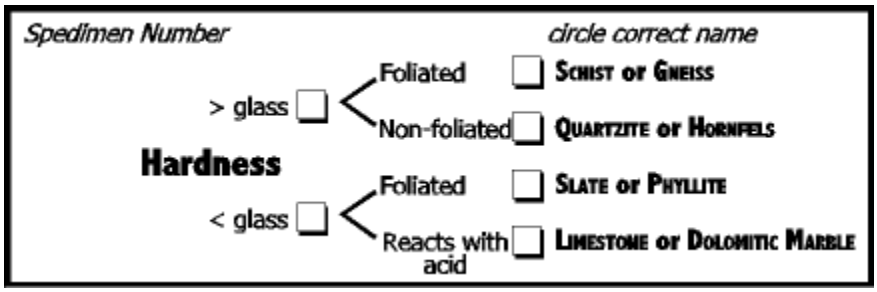
Observation Chart One

This chart leads a person systematically through a series of observations and decisions. Its organization is extracted directly from the key, and if done correctly will lead a person to the single correct identification.



(Click on picture for a full page version - Pdf Version).

Observation Chart Two



This chart does not have as many forks in it (i.e. dichotomous decisions) and at the end requires returning to the key for descriptions to make the final decision. It will connect better the use of the observation chart and the key.

(Click on picture for a full page version - Pdf Version).

Observation Chart Three

A variation on chart two.

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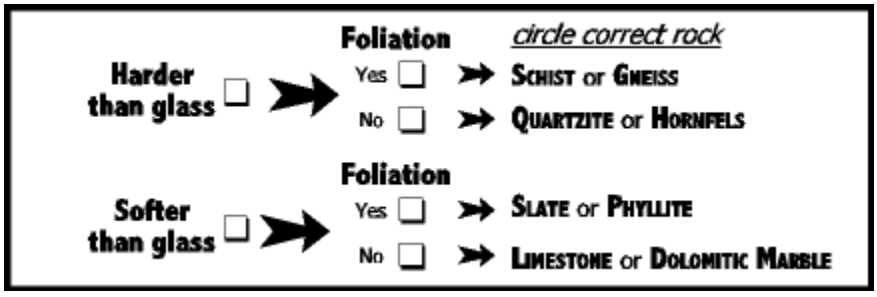
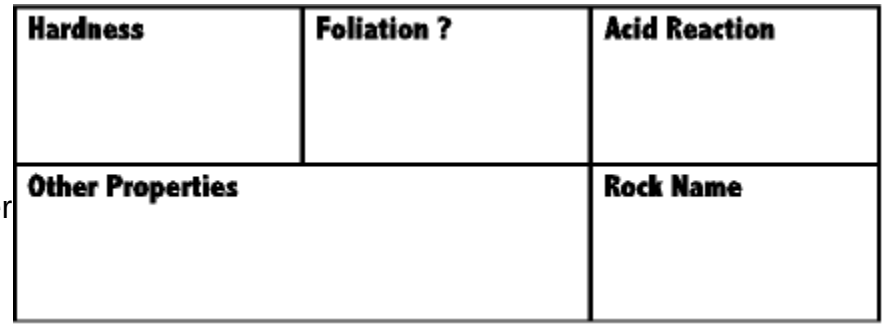


Observation Chart Four

This chart lets you take organized notes for further identification.

(Click on picture for a full page version - Pdf Version).



Observation Chart Five

A more complex observation table.

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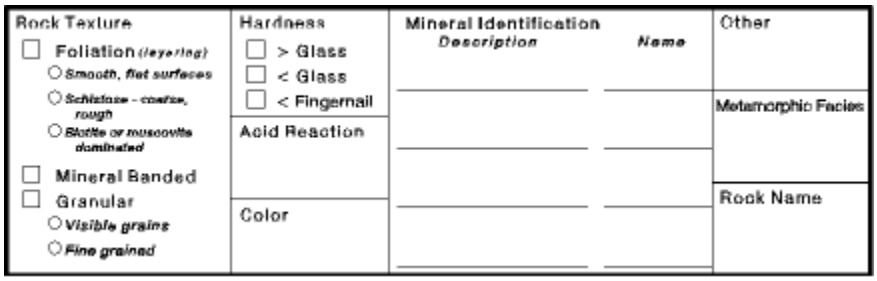

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