

FORENSIC GEOLOGY - OBSERVATION

For the first class meeting of my Forensic Geology course I do several activities that are designed to point out the differences between eye-witness accounts and scientific observation.

I. Classroom scuffle -

Several students (actors) enter the classroom in a combative mode. One is usually chasing the other and both have some sort of weapon (typically a plastic knife and a rock hammer). I limit the observation time to 10 to 15 seconds and the actors then exit the room. Students in the class are asked to write down what they saw and to give as many details as possible. After the students have written down their observations the actors re-enter the room and the students can see how close their observations came to the real people. This exercise can have all levels of difficulty. The most difficult level is to have two actors of the same sex and roughly the same body type with similar dress (either dark or light clothes). The least difficult level is to have one actor of each sex with one wearing light clothing and the other wearing dark clothing. Its also interesting to look at sex bias, i.e. if the actors are male, do female or male students give better descriptions and vice-versa. What I often find is that students are better at describing the attributes of a member of the opposite sex.

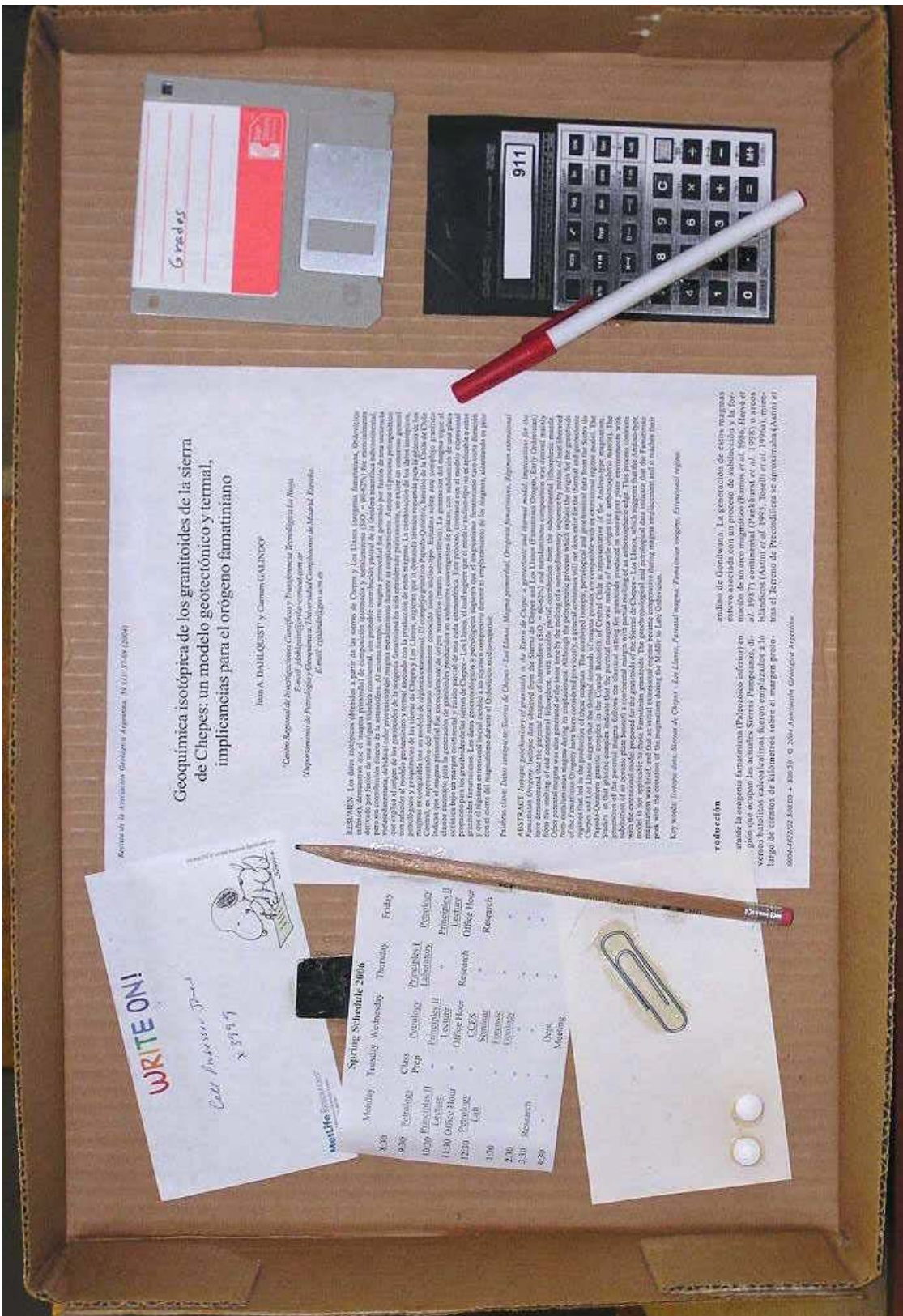
II. Office observation -

I have the students visit my office, a very information rich environment, and give them 5 minutes to make observations in the office. They are then asked to tell me about myself based on what they've seen. This is an interesting exercise because each student sees different things, probably based on their own life experience.

III. The desktop -

This is an exercise suggested by Steve Peters at Lehigh University. A variety of items are glued to a cardboard box lid and are intended to represent someone's desk top. Students are given a minute to examine the box lid (they work in groups of two and I have multiple box lids with the same configuration). They are then asked to write down their observations. The box lids are returned so they can check their observations with what actually exists. They are then asked to determine the order in which the items were placed on the desk top (a sequence of events exercise). A picture of the box lid (desk top) that I use in my course is shown on the next page.

I find that these exercises are a good way to "break-the-ice" in the class and are a way to address issues of observation, measurement, and inference. The students generally do reasonably well with these exercises, in fact better than I had anticipated when I introduced them into the course.



Geoquímica isotópica de los granitoides de la sierra de Chepes: un modelo geotectónico y tectónico implicancias para el orógeno Pamatimiano

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RESUMEN: Los datos isotópicos obtenidos a partir de los cerros de Chepes y Los Llanos (orógeno Pamatimiano, Orogénico Andino) de la sierra de Chepes, en el extremo sur de Chile, muestran una gran variedad de firmas isotópicas que sugieren un modelo tectónico de un arco magmático subvolcánico. El modelo propuesto sugiere que la granitización de la sierra de Chepes se produjo en un contexto de un arco magmático subvolcánico, donde la actividad de la corteza superior fue controlada por la actividad de la corteza inferior. La actividad de la corteza superior fue controlada por la actividad de la corteza inferior, lo que sugiere un modelo tectónico de un arco magmático subvolcánico. Este modelo sugiere que la granitización de la sierra de Chepes se produjo en un contexto de un arco magmático subvolcánico, donde la actividad de la corteza superior fue controlada por la actividad de la corteza inferior.

ABSTRACT: Isotopic data obtained from the Cerros de Chepes and Los Llanos (Pamatimian Orogen, Andean Orogeny) in the southern part of Chile, show a wide range of isotopic signatures that suggest a subvolcanic magmatic arc model. The model proposed suggests that the granitization of the Sierra de Chepes was produced in a context of a subvolcanic magmatic arc, where the activity of the upper crust was controlled by the activity of the lower crust. The activity of the upper crust was controlled by the activity of the lower crust, which suggests a subvolcanic magmatic arc model. This model suggests that the granitization of the Sierra de Chepes was produced in a context of a subvolcanic magmatic arc, where the activity of the upper crust was controlled by the activity of the lower crust.

Key words: isotopic data, Sierra de Chepes, Los Llanos, Pamatimian orogen, Andean orogeny, Environmental geology

Reflection

La actividad tectónica (Pamatimiano) en el extremo sur de Chile, durante el orógeno Pamatimiano, estuvo asociada con un proceso de subvolcánica y la formación de un arco magmático (Parron et al., 1986; Hogg et al., 1990). Este modelo sugiere que la granitización de la sierra de Chepes se produjo en un contexto de un arco magmático subvolcánico, donde la actividad de la corteza superior fue controlada por la actividad de la corteza inferior.

WRITE ON!

Call Professor Jones
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Spring Schedule 2006

Monday	Tuesday	Wednesday	Thursday	Friday
8:30	Class Prep	Prep	Prep	Prep
9:30	Principles I	Principles I	Principles I	Principles I
10:30	Office Hour	Office Hour	Office Hour	Office Hour
11:30	Principles II	Principles II	Principles II	Principles II
12:30	Principles II	Principles II	Principles II	Principles II
1:30	Principles II	Principles II	Principles II	Principles II
2:30	Principles II	Principles II	Principles II	Principles II
3:30	Principles II	Principles II	Principles II	Principles II
4:30	Principles II	Principles II	Principles II	Principles II