

# Teaching in a prison helped reveal the challenges of urban teaching.

---



(photo by Ann Williams/Sacramento Bee)

Students were  
largely minority  
low socioeconomic background  
grew up almost entirely in URBAN settings.

---



# Teaching in a prison helped reveal the challenges of urban teaching.

---



“I bet you couldn’t take field trips...”

(photo by Ann Williams/Sacramento Bee)

Students were  
largely minority  
low socioeconomic background  
grew up almost entirely in URBAN settings.

---



# Teaching in a prison helped reveal the challenges of urban teaching.

---



(photo by Ann Williams/Sacramento Bee)

Students were  
largely minority  
low socioeconomic background  
grew up almost entirely in URBAN settings.

---



# FIELD TRIP TO THE PRISON YARD

---



---

(photo by Ann Williams/Sacramento Bee)



# Air photo mapping of the prison yard reveals a “dike”

---



# Air photo mapping of the prison yard reveals a “dike”





# Air photo mapping of the prison yard reveals a “dike”



Grand Canyon, Arizona  
[http://activelectronics.la.asu.edu/ramon/Images/Grand\\_Canyon/36grandcanyon.tif.jpg](http://activelectronics.la.asu.edu/ramon/Images/Grand_Canyon/36grandcanyon.tif.jpg)



# Air photo mapping of the prison yard reveals a “dike”

**CENSORED**

Area of  
enlargement

USGS



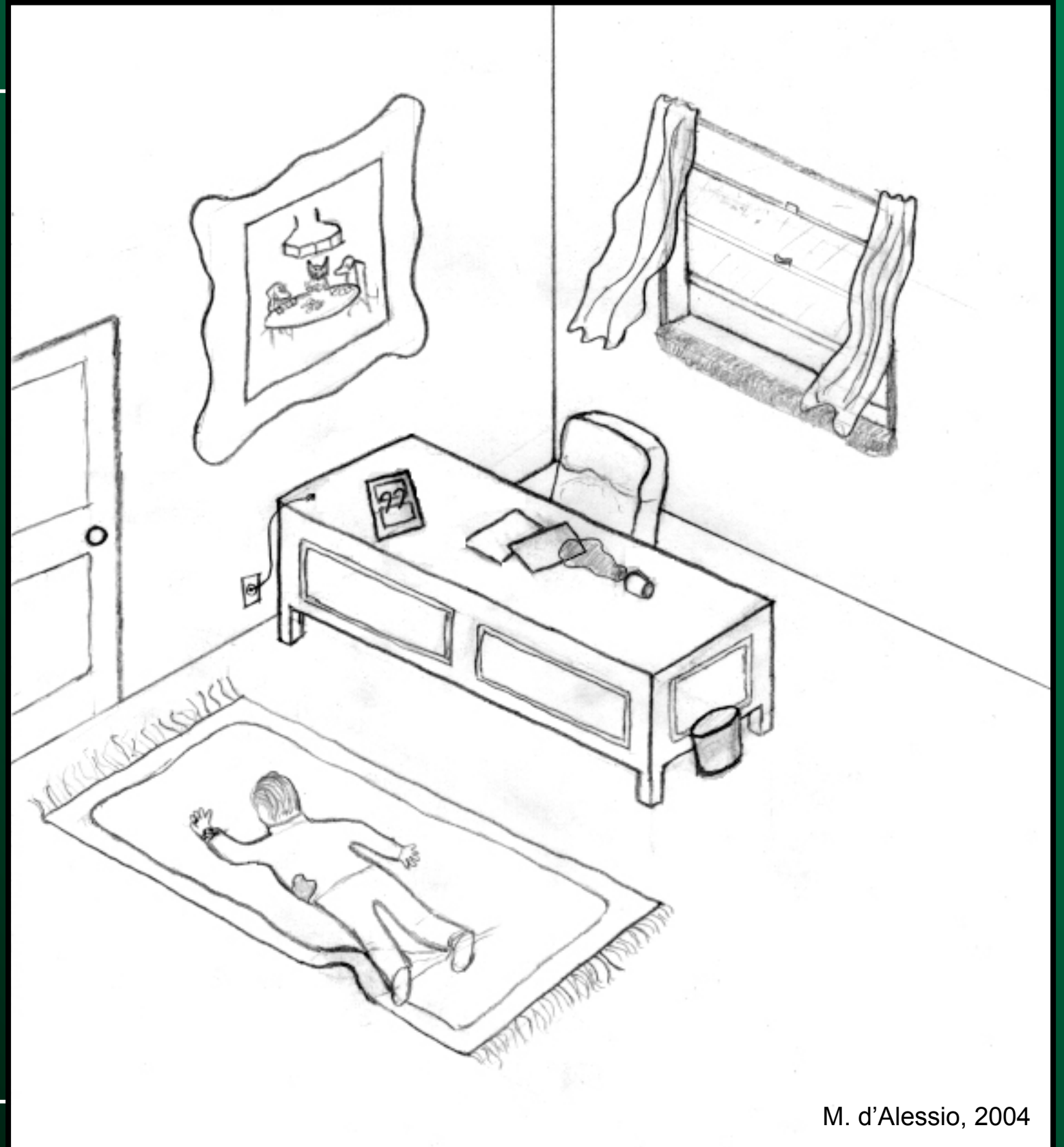
# GEO-SLEUTH MURDER MYSTERY



*For Students:* What was sequence of events?  
Who did it?

*For Geologists:* Can you identify the following  
geologic concepts in this murder mystery?:

- Principle of Superposition
- Principle of Cross-cutting Relations
- Principle of Original Horizontality
- Relative Timing
- Absolute Dating
- Unconformity
- Using the laws of physics to explain past events
- Common Sense!



M. d'Alessio, 2004

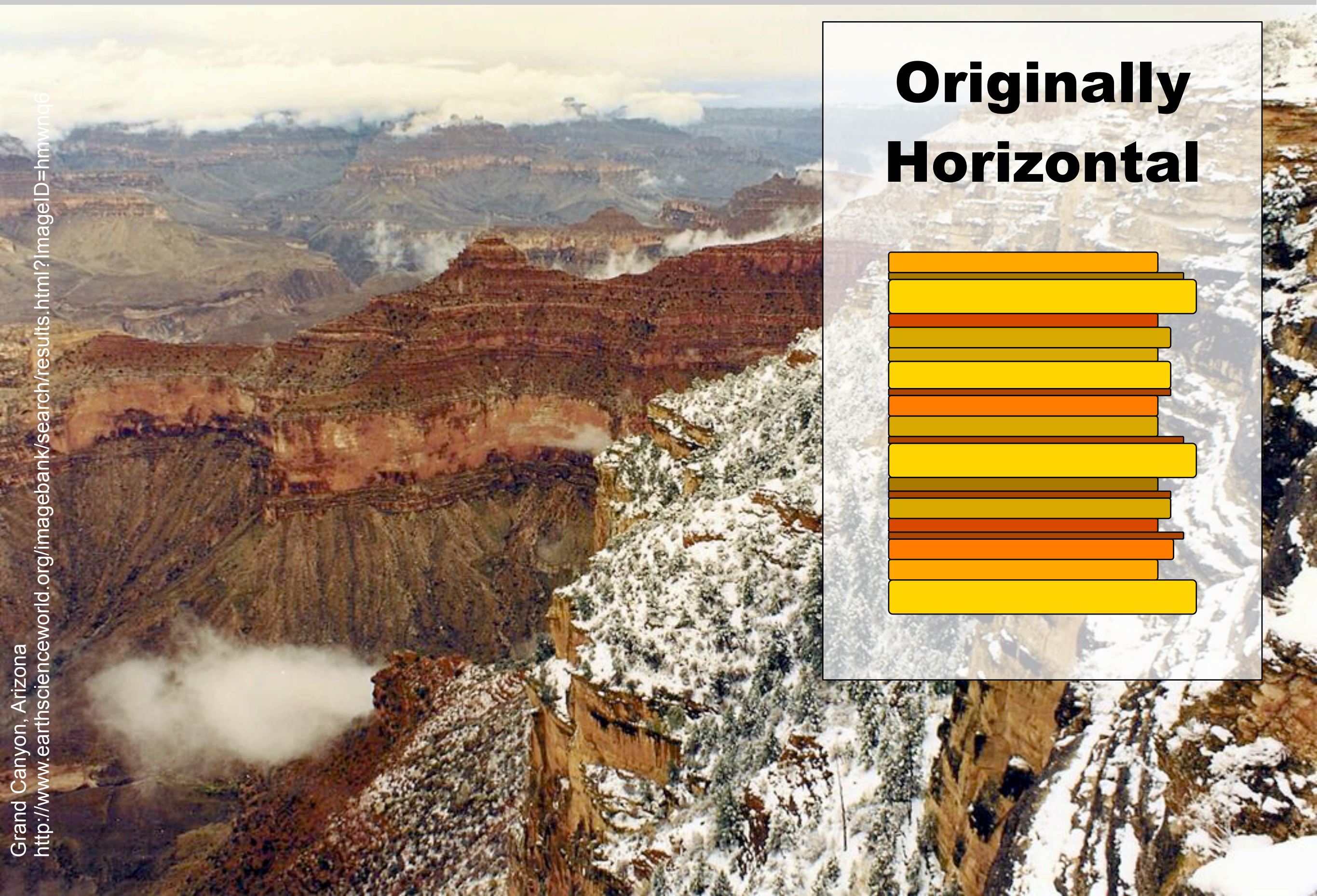




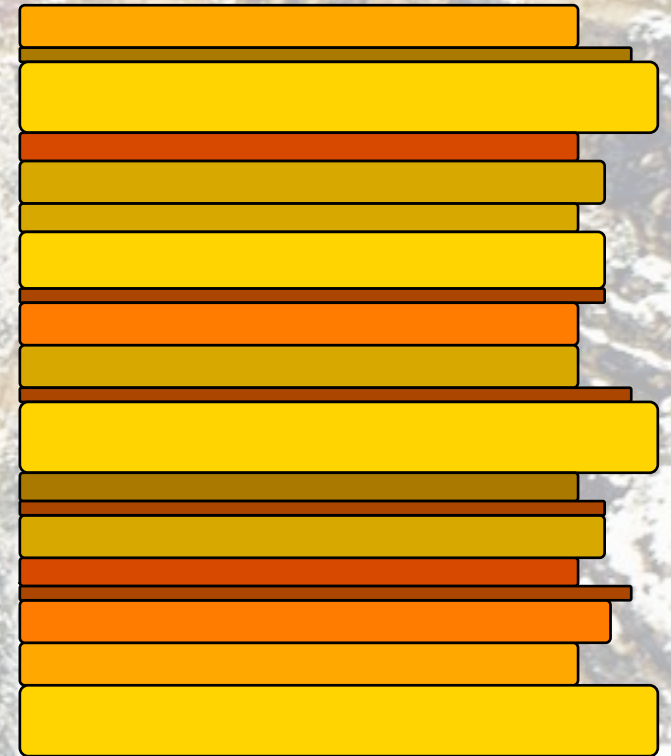
Grand Canyon, Arizona

<http://www.earthscienceworld.org/imagebank/search/results.html?ImageID=hmwnq6>





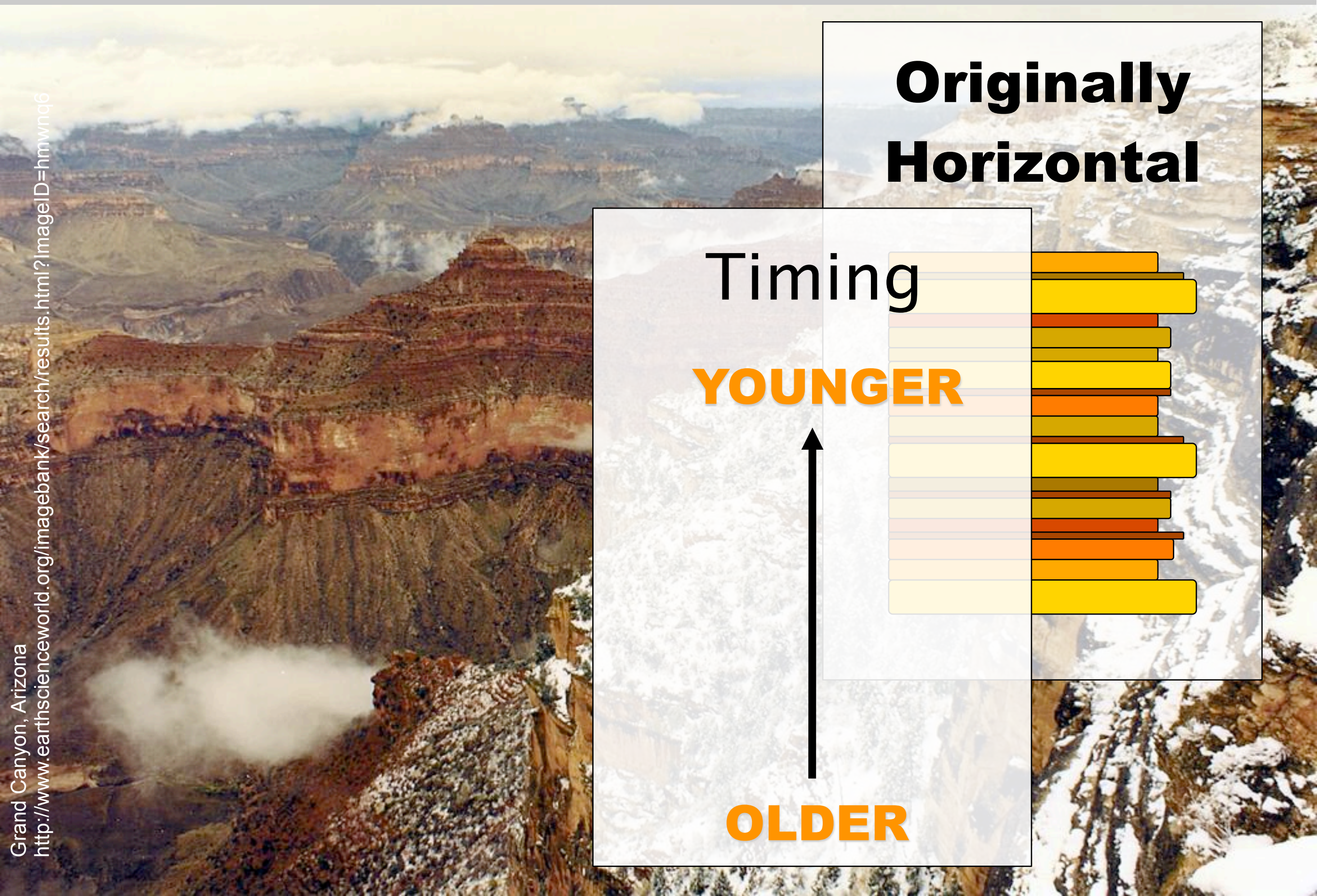
# Originally Horizontal



Grand Canyon, Arizona

<http://www.earthscienceworld.org/imagebank/search/results.html?ImageID=hmnwng6>





Grand Canyon, Arizona

<http://www.earthscienceworld.org/imagebank/search/results.html?ImageID=hmwnq6>

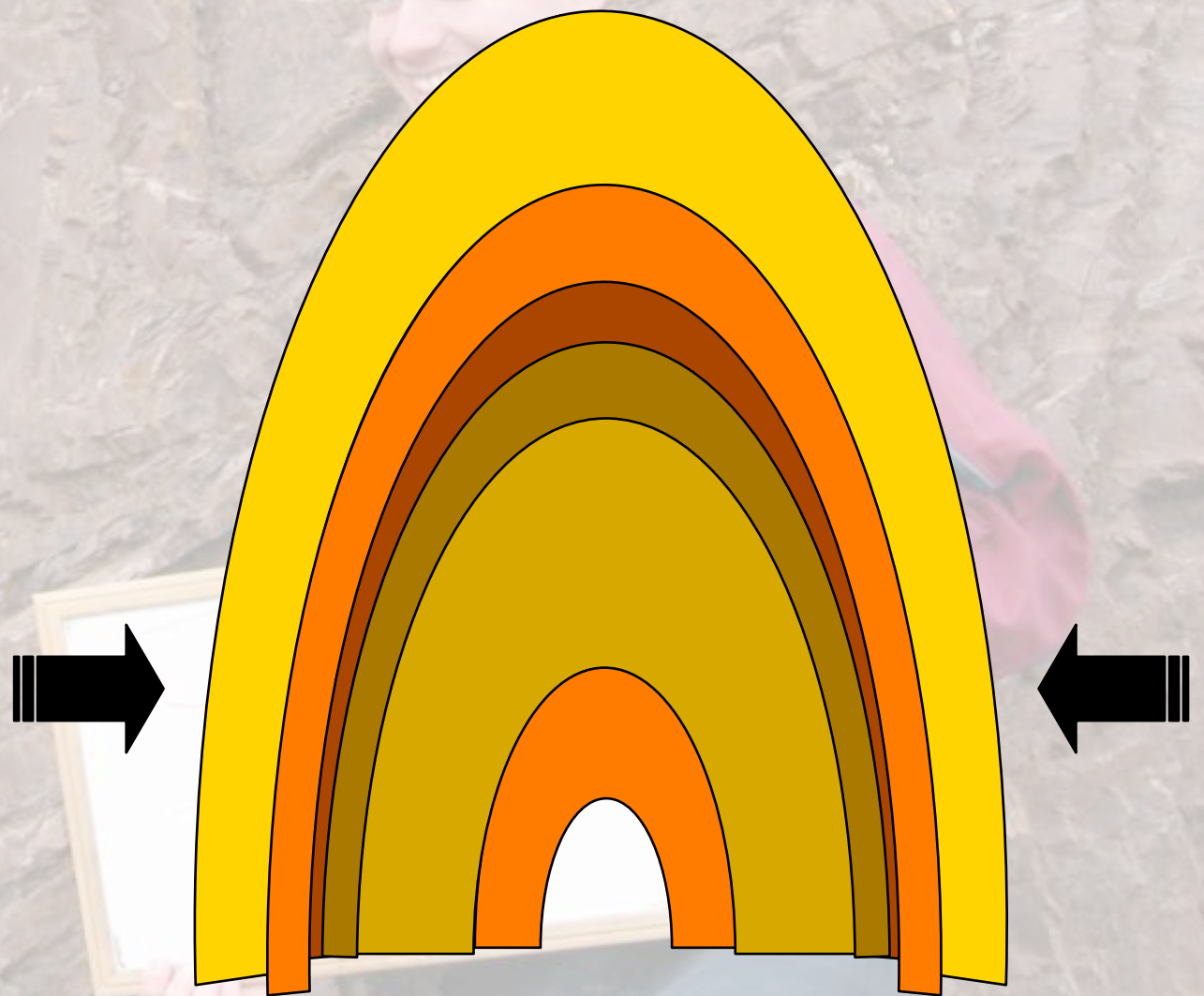




Marin Headlands, California  
<http://www.seismo.berkeley.edu/~burgmann/EPS116/labs/marin2004/Fold%20-%20John%20R%202.JPG>



# Fold







New USGS web site introduces geologic processes through short schoolyard “field trips”

Schoolyard Geology

http://education.usgs.gov/schoolyard/

USGS-Mail Phone Journals Religion RECIPES MyStuff EPOD Computer Other Outreach SAFOD

**USGS**  
science for a changing world

USGS Home  
Contact USGS  
Search USGS

**Schoolyard Geology**

**School Yard GEOLOGY**

**About Schoolyard Geology**  
Wish you could take more field trips? You can! Your own schoolyard is filled with great geologic features! This website is filled with activities and examples of what to look for to turn your schoolyard into a rich geologic experience.  
[How to use this Website](#)  
(Teaching Sequence, State Science Standards, and Suggestions)

**Lesson 1**  
Mapping Your Schoolyard  
**Overview & Instructions**  
[Map your schoolyard from above](#) (Activity)  
[Using the National Map](#) (Download free maps of your school)  
[Navigate your Schoolyard](#) (Activity)  
[Find the rocks](#) (Activity)

**Lesson 2**  
Rock Stories: Describing Sedimentary Rocks  
**Overview & Instructions**  
[The Making of Sedimentary Rocks](#) (Background)  
[Rock Stories: Describing Sedimentary Rocks](#) (Background)  
[Preformatted Student Instructions](#)  
[Examples of Rock Descriptions and their Geologic Interpretation](#)

**Lesson 3**  
GeoSleuth Schoolyard: Teaching Geologic Concepts with Schoolyard examples  
**Overview & Instructions**  
[Ages of Rocks](#)  
[Dinosaur Tracks](#)  
[Fossils](#)  
[Glacial Striations](#)  
[Layers on top of layers](#)  
[Slicing across layers](#)  
[Sinkholes](#)

Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey  
URL: <http://education.usgs.gov/schoolyard/>  
Page Contact Information: [Earthquake Hazards Webmaster](#)  
Page Last Modified: Tuesday, 9-Sep-2005 4:56:06 PDT

FIRST GOV  
The First Click to the U.S. Government

TAKE PRIDE IN AMERICA





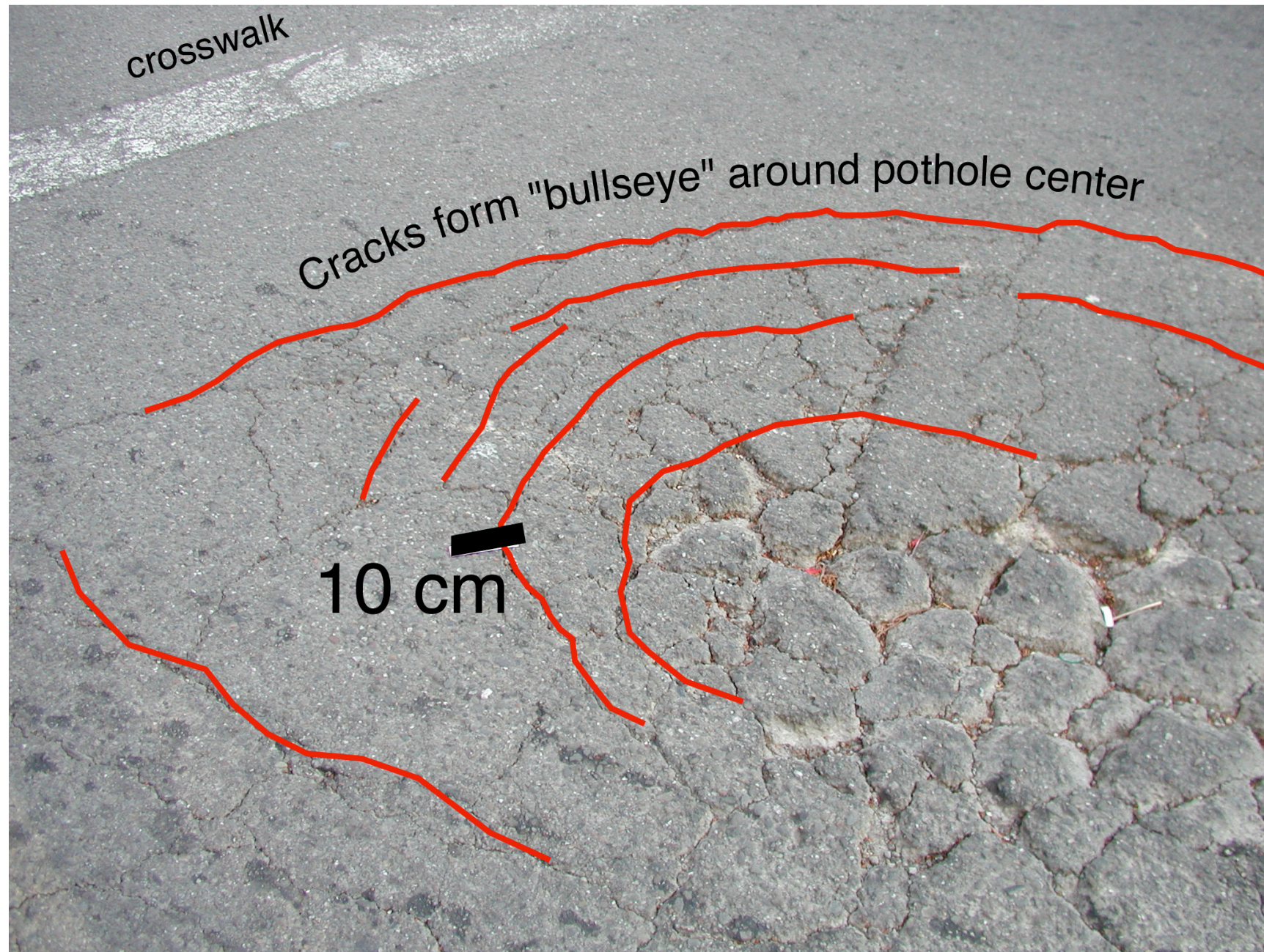




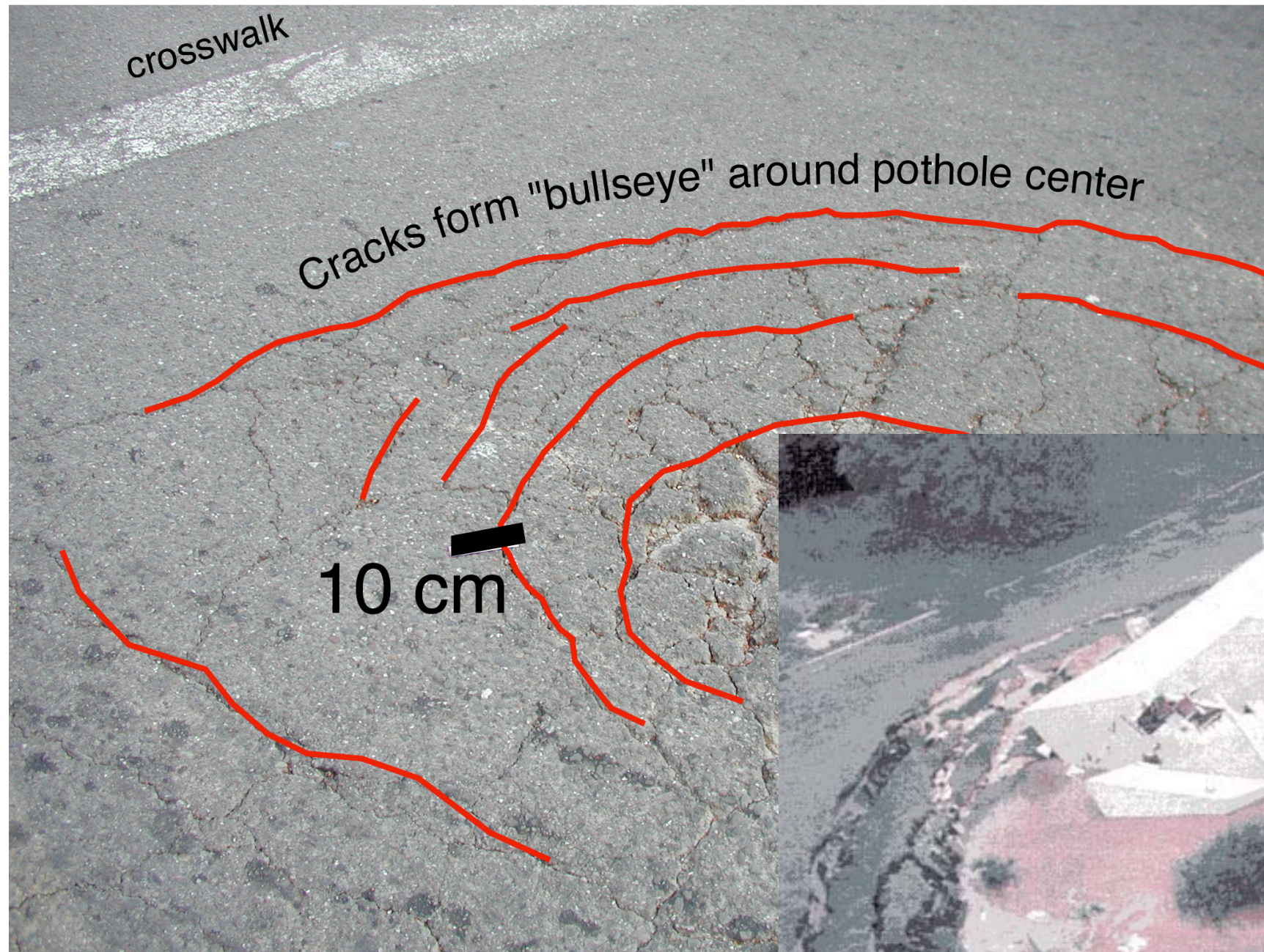




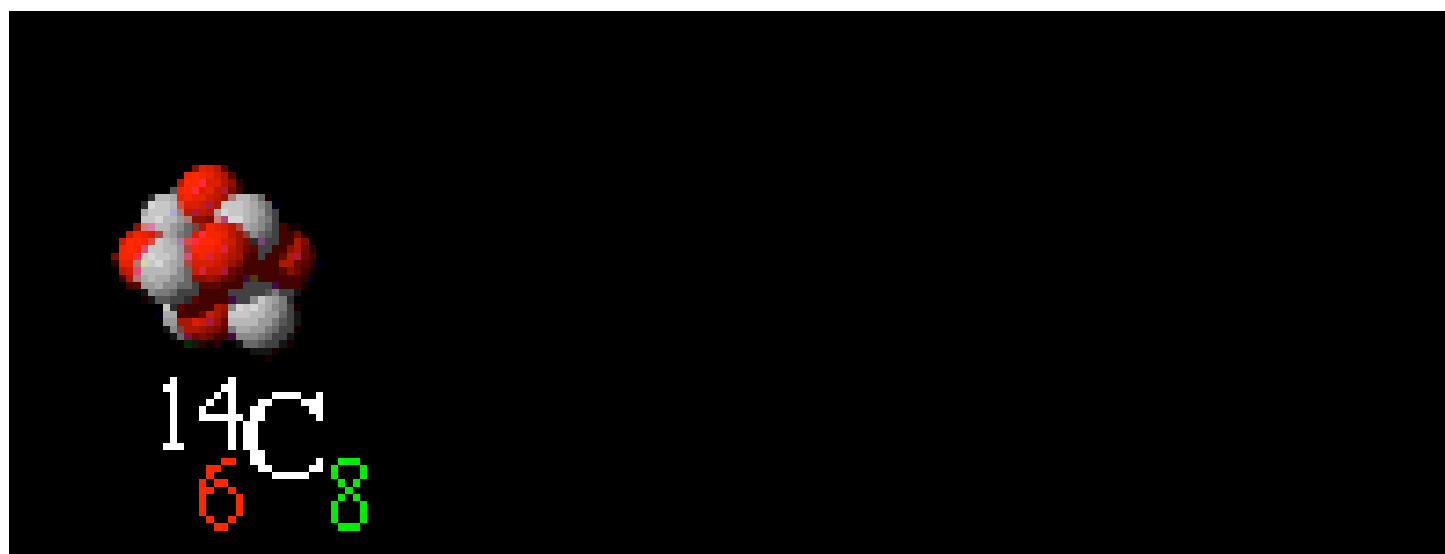








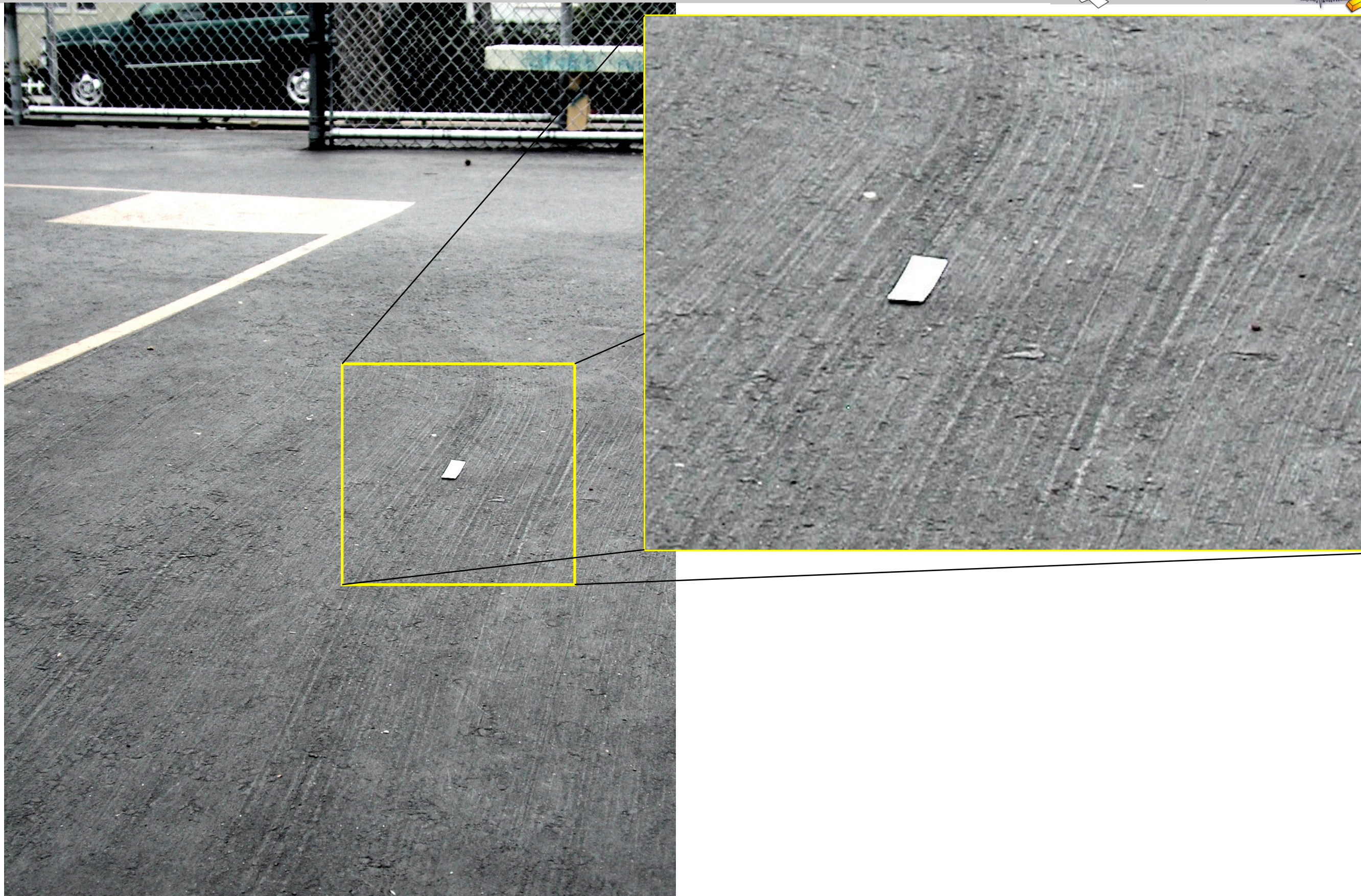




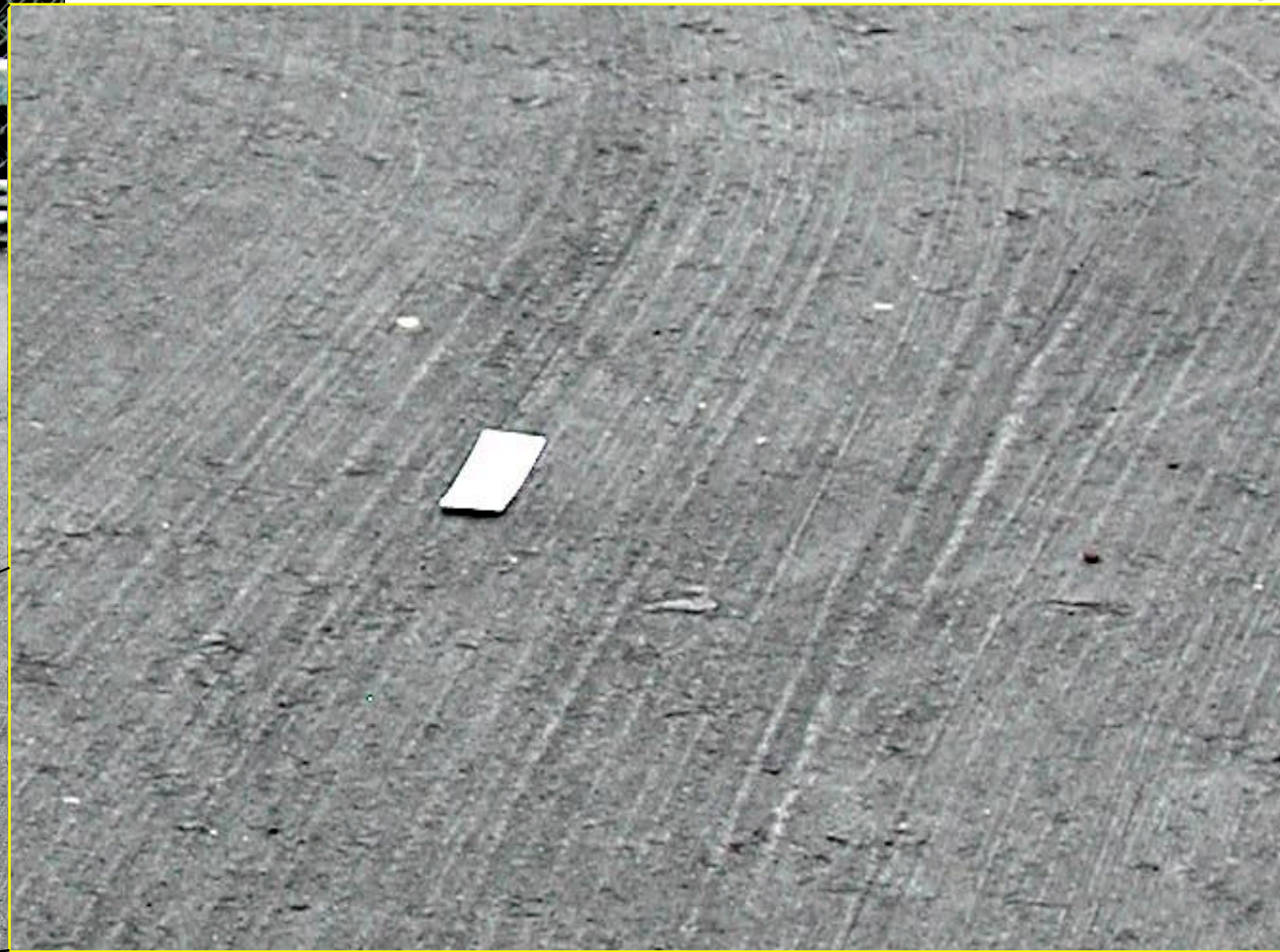
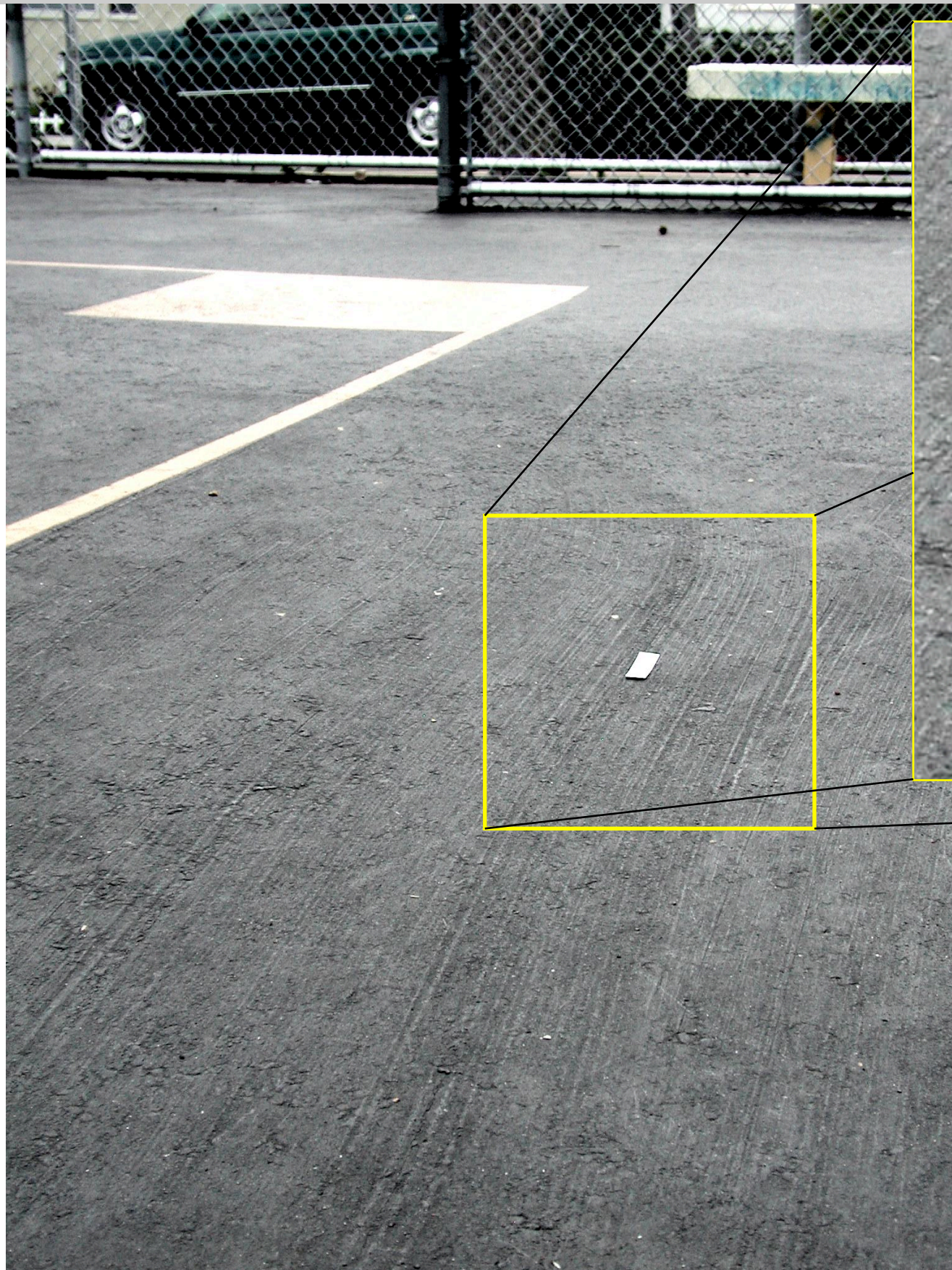




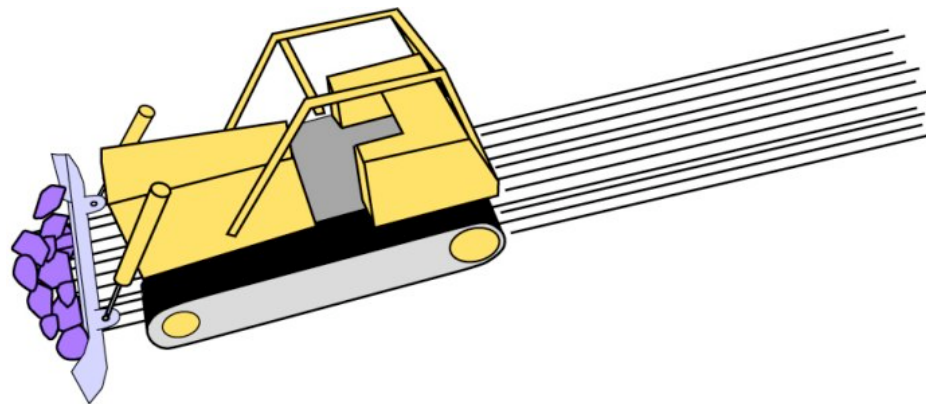




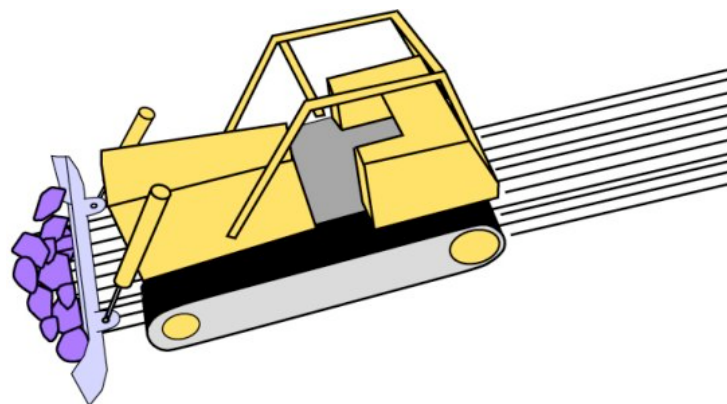
















A better way to teach map scale!





# Do analogies work?



Does the urban understanding translate into better “scientific” understanding?

A big difference between urban and natural processes is time scale. How can we help students grasp “deep time”?