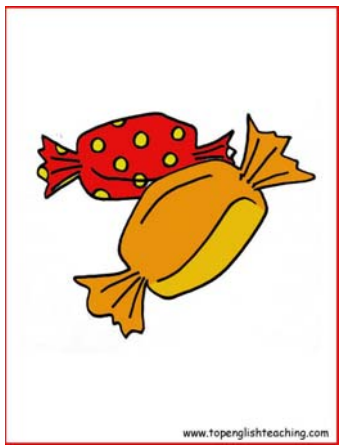
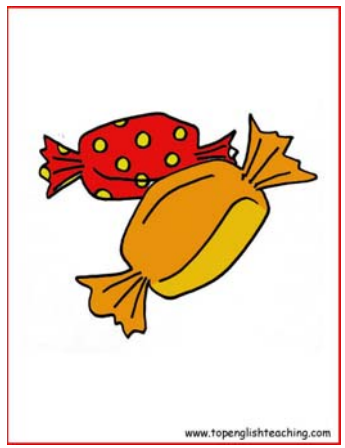
Sweet Science



Sue Howarth
Tettenhall College, UK

Alan Woollhead
Bromsgrove School, UK



Some practical ideas

for teaching geology / earth science to 11-14 year old students

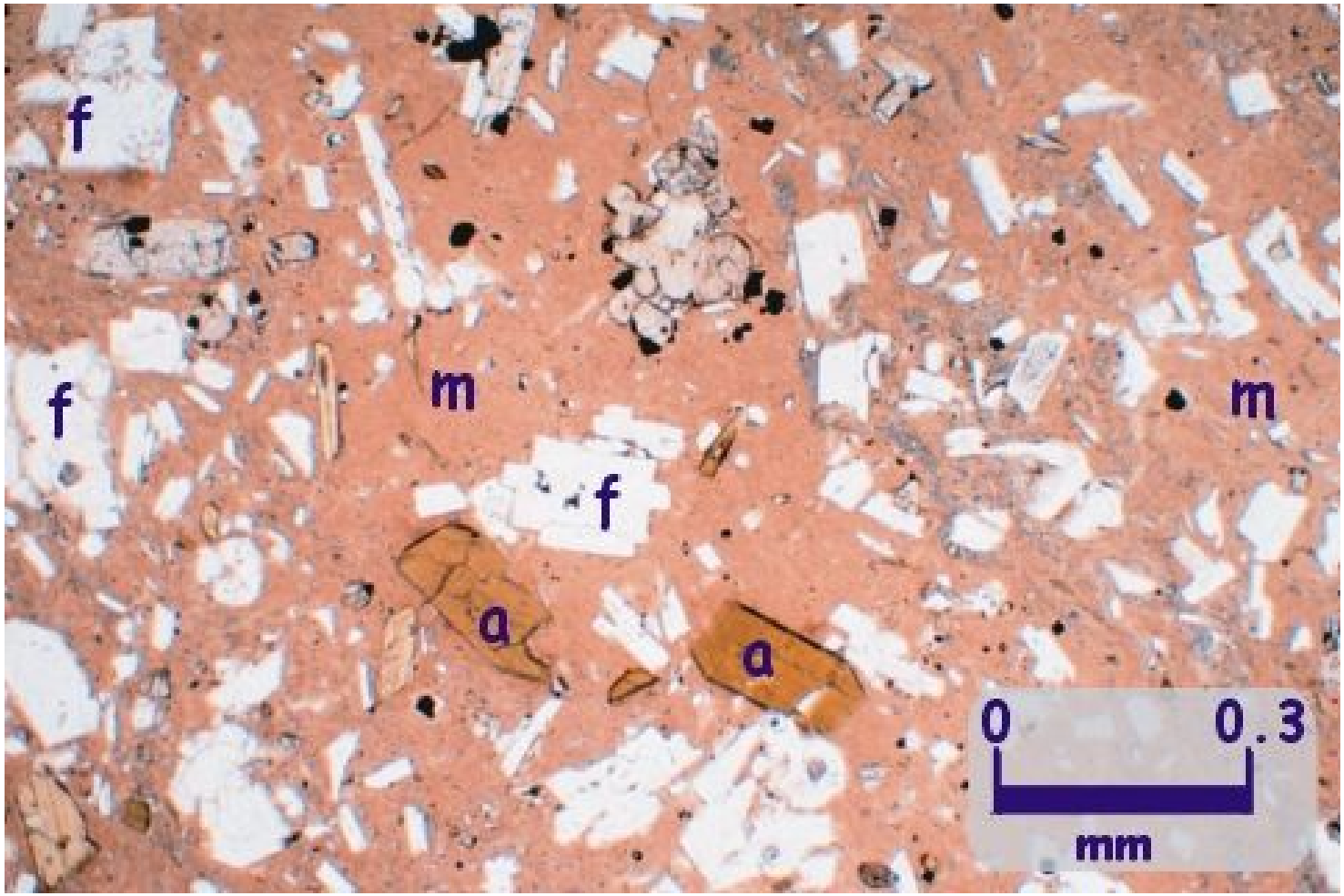
using sweets and biscuits

GIFT
Vienna April 2007

Crystal Size in Igneous Rocks

mineralminers.com

http://gsc.nrcan.gc.ca/urbgeo/vanrock/garibaldi_e.php



Garibaldi lava is composed of pinkish matrix (m) and microscopic crystals of the minerals feldspar (f) and amphibole (a).


crunchie


crunchie


crunchie


crunchie

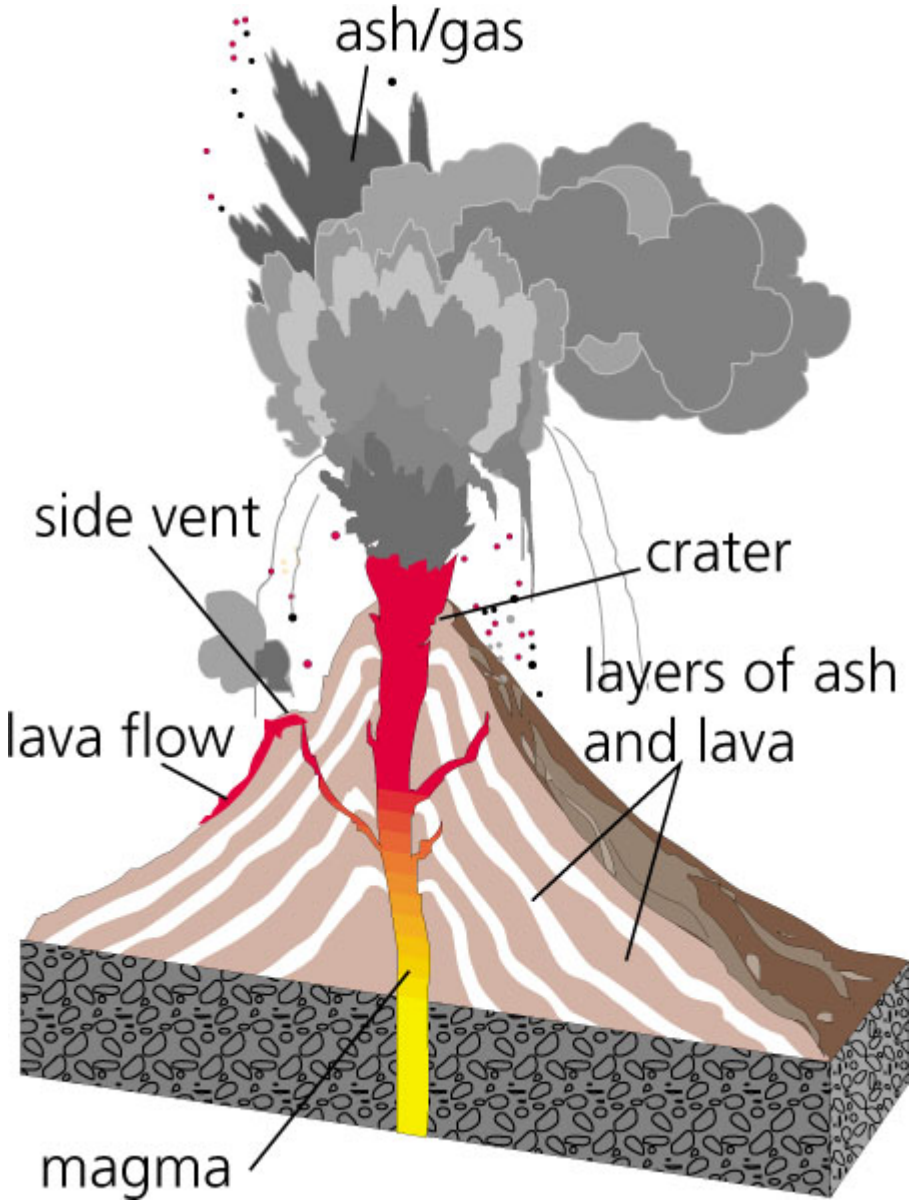

crunchie


crunchie

Mentos Mints
and
Diet Coca Cola :

Model Volcano

http://www.bartleby.com/images/A4images/A4volcan.jpg

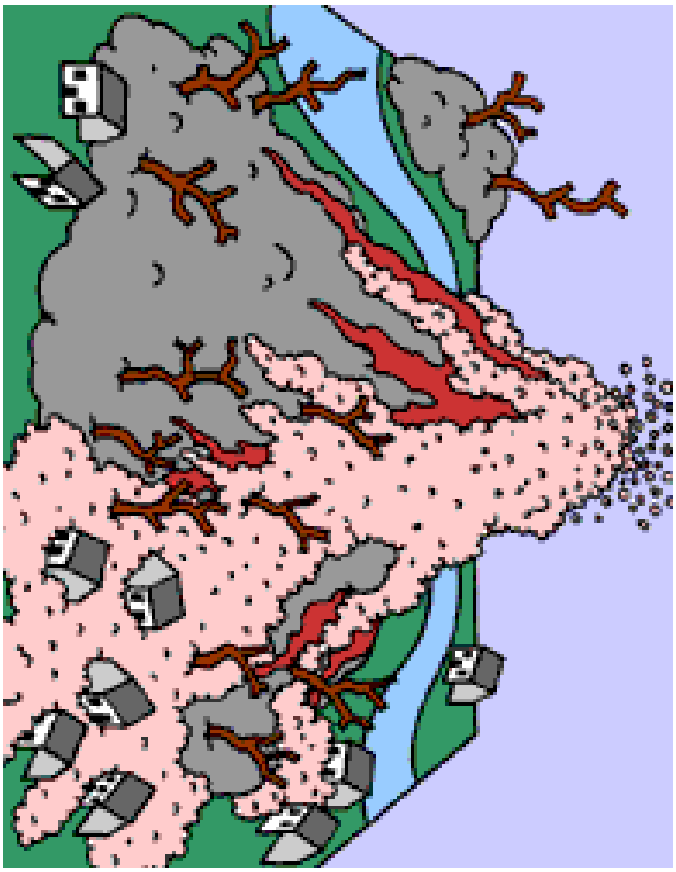



Coke
Diet
Coke
mentos
fruit


mint
mentos
The Cheery Mint
70% more fresh mint

http://www.eepybird.com/exp214.html

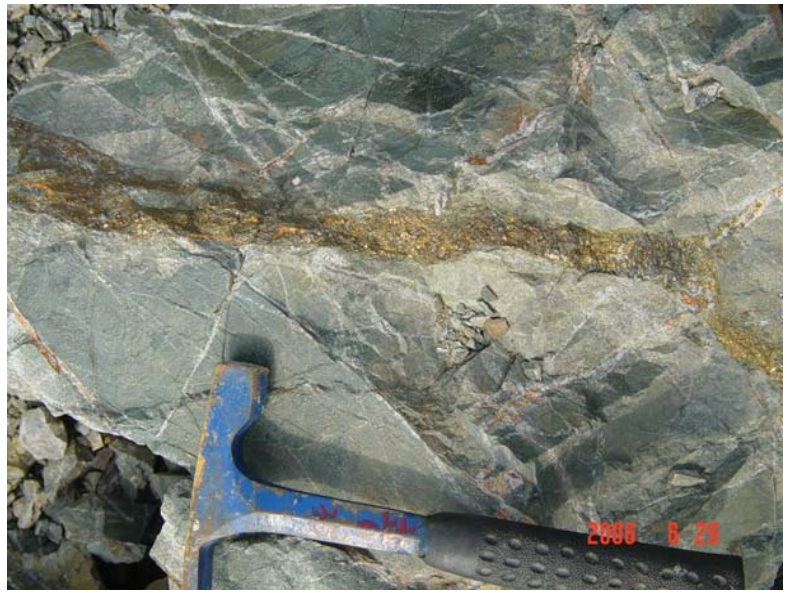
http://www.globalgang.org.uk/images/volcano_4_tcm7-1240.gif



Garibaldi Biscuits
and
Chocolate Chip Biscuits:

Mining Ores

http://www.umpi.maine.edu/~wangc/projects/jiangxi/dexing_project.htm



Mineral Mining in South China

http://snackspot.org.uk/images/burtonsMarylandPeanutToffee.jpg


Crawford's
BAKING FAMILY BISCUITS SINCE 1813
GARIBALDI
100g

When bought in supermarkets in the UK, Garibaldi biscuits usually come in four strips of five biscuits each. They have a golden brown, glazed exterior appearance and a sweet pastry, but their defining characteristic is the generous layer of squashed fruit which gives rise to the colloquial names e.g. *squashed fly biscuits*, because the squashed fruit are said to resemble dead flies.

Garibaldis go particularly well with tea. One biscuit provides only 40 calories but the temptation to munch a full sheet (200 calories) is extraordinarily strong among aficionados of this inexpensive classic treat.

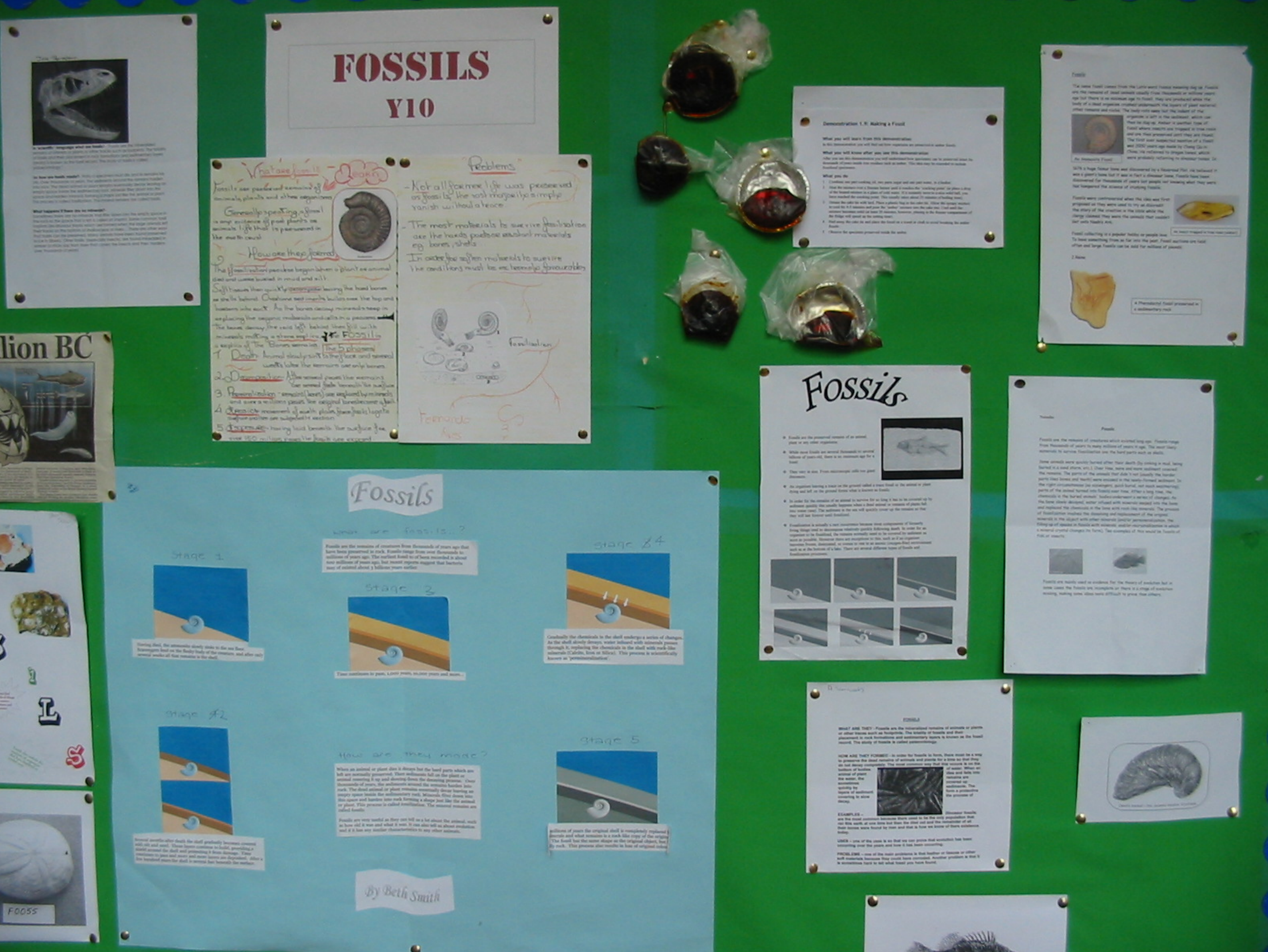
www.answers.com/topic/garibaldi-biscuit

The Garibaldi biscuit was named after Giuseppe Garibaldi, an Italian general and leader of the fight to unify Italy, who made a popular visit to England.

% chocolate chips / raisins = ore

% biscuit = waste ore

Toffee:
making a fossil


FOSSILS
Y10
Problems
lion BC
Fossils
Stage 1
Stage 3
Stage 5
By Beth Smith
Fossils
Demonstration 1.9: Making a Fossil

FOSSILS

Y10

learn

Snakestone

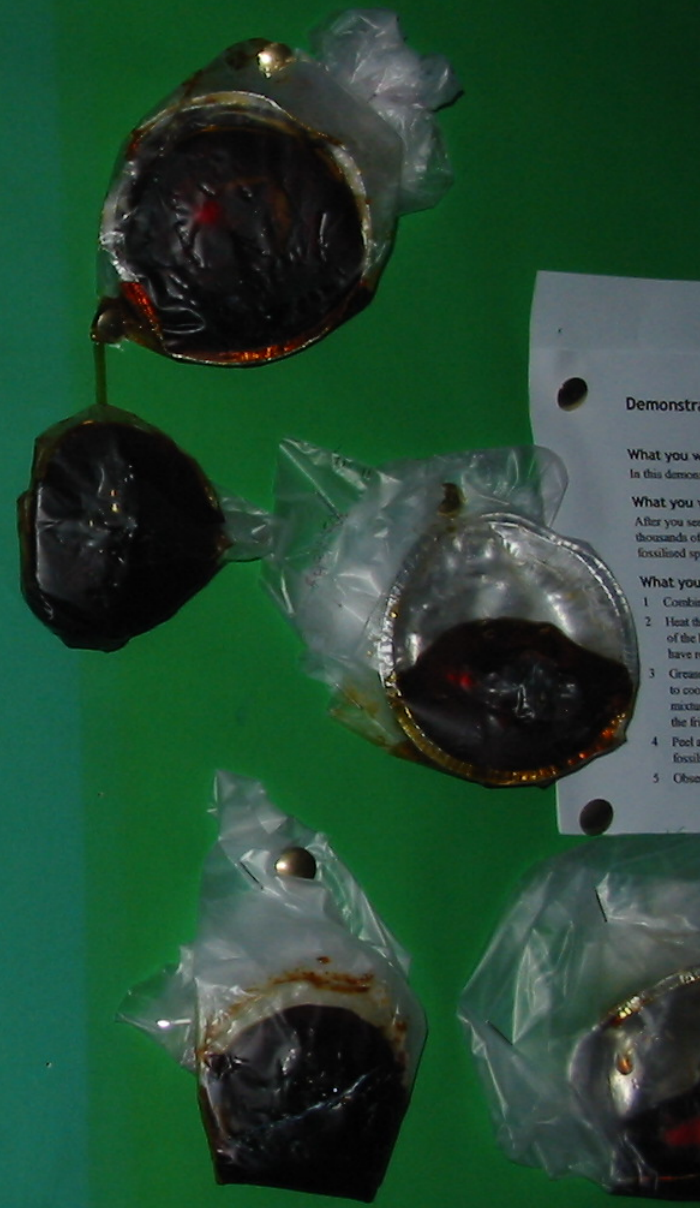
...n a plant or animal

...ving the hard bones
...uilds over the top and
...p minerals seep in
...ls in a process.
...then fill with
...fe FOSSILis
...e 5 phases
...ne floor and several
...s are only bones.

"Problems"

- Not all former life was preserved as fossils, the vast majority simply vanish without a trace.
- The most materials to survive fossilisation are the hards parts or resistant materials eg: bones, shells ...
- In order for soften materials to survive the conditions must be extremely favourables

fossilisation



Demonstr...

What you ...
In this demon...

What you ...
After you se...
thousands of...
fossilised sp...

What you...
1 Combi...
2 Heat t...
of the ...
have ...
3 Grease...
to coo...
mixtu...
the fi...
4 Peel ...
fossil...
5 Obse...

That's All, Folks!