



Calcium Ca Kenning



A bone builder

A tooth strengthener

A blood clotter

A kettle clogger

A cement binder

A stalagmite former

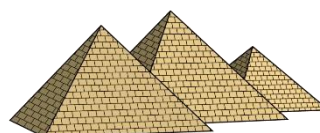
A house builder

A soil freshener

A fracture setter.



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Believe it or not, calcium (you know, the stuff in milk that people keep telling you is good for you, because it is!) is actually a metal! In fact, it's the fifth most abundant metal on earth! It mixes really well with air, so you never find it as pure calcium in nature.



INVESTIGATE THE SCIENCE

Calcium is the 'building block' of bones, maintaining bone strength throughout your lifetime. You can observe how essential calcium is to bone strength by removing it from bones.



You will need:

- A clean, dry chicken leg bone
- Vinegar
- A jar big enough to hold the bone covered with the vinegar



What to do:

1. Try to bend a chicken bone without breaking it. Gently does it!
2. Soak the chicken bone in vinegar. Make sure it's covered completely.
3. Check on the bones periodically (up to a few days) to see how easy they are to bend.
4. When you are done soaking the bones, you can remove them from the vinegar, rinse them in water and allow them to dry.

So, what happened?

Vinegar is a type of **acid**. When the **chicken bone** was placed in the glass of **vinegar** it dissolved the mineral calcium carbonate so that

only a flexible material called **collagen** was left. Collagen is the stuff that the hard bit of your nose and ears is made from. Calcium (the mineral in calcium carbonate) is needed to make our **bones** strong. When there isn't enough calcium, our **bones** become **soft** and are more likely to break. This can happen in older people.



Can you find out the name that is given to the condition of brittle bones in older people caused by the lack of calcium?

Can you find the name of the illness that is caused because of lack of calcium in childhood?



INVESTIGATE THE STORY

Because calcium reacts so quickly with air, it is never found as pure calcium in nature. These 'fusions' of different chemical elements such as calcium, carbon and oxygen are called 'compounds.'

Compounds of calcium, natural and man-made, have many uses. Some of them are listed in the poem. You've already investigated the role calcium carbonate plays in strengthening bones. Can you now investigate some of its other functions?

Some of the questions below, may be of help in carrying out your research:

- What are stalagmites and stalactites? Where would you find them? What's the difference between them?
- What is limestone and what can it be used for in the construction industry?
- How did the ancient Egyptians use lime (not 'lime' the citrus fruit, but 'lime' the compound calcium oxide) to build their pyramids? We still use it for the same purpose in our buildings today!
- What might cause a kettle to go 'furry'? How can water be 'hard'?
- How is a calcium compound used to fix a broken arm or leg?



INVESTIGATE THE POEM

This type of poem is called a kenning. Kennings were a very popular type of poetry amongst Norsemen and Anglo-Saxons (that's **years** ago!).

The name 'kenning' comes from the old Norse language. It meant 'to describe' or 'to understand'.

Basically, kennings consist of a two-word phrase taking the place of a noun. For example, instead of the word 'body', the kenning may use the two-word phrase 'bone house'. The phrase describes or helps the reader understand the noun.

CHALLENGE

Write your own kenning. Choose a topic then start to make a list of two-word phrases that help describe the topic. Rearrange the order of the list until you create a kenning that both describes the topic and pleases you when you read it.

Some further examples of kennings are given below. Have fun!

My Dog

Ankle biter
Bone cruncher
Night howler
Rabbit catcher
Fur pillow.

Big Dipper

Breath taker
Squeal maker
Heart stopper
Stomach churner
Nerve tingler.

Mouth

Food gobbler
Wide opener
Constant eater
Yawn maker
Noise bringer
Thumb sucker.