

Toes and energy

Think about this – don't actually do it. Say you are standing up and you haven't put your shoes on, yet. You have a rock in your hands, about the size of an apple.

You are watching a bird outside the window. You go to put the rock down on the table, but it slips and falls on your left toes.

Why do you go jumping around the room on your right foot saying, "Ow, ow, ow! Ouch, ouch, ouch!"?

You go jumping around the room on your right foot saying "Ow, ow, ow! Ouch, ouch, ouch!" because your left toes are hurting!

[Remember, when you rub your hands together, they get a bit warm. You use up some energy in your arms and that becomes warmth or heat in your hands. Heat is a sort of energy.]

Anyway, when the rock falls, it puts too much energy into your toes – this 'too much energy' makes your toes hurt. So, you go hopping around on the other foot.

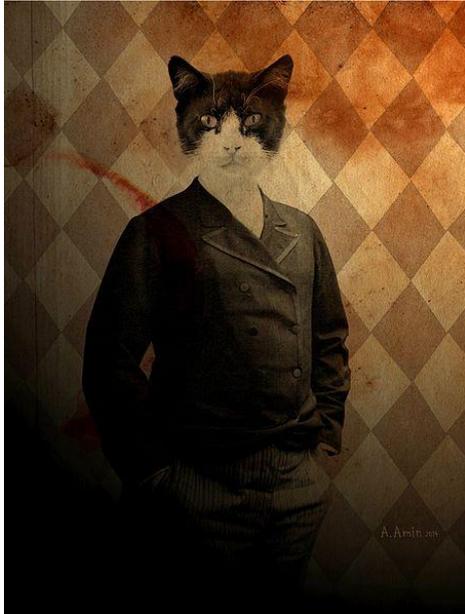
Why does this rock have energy?

It has energy because it is high and can fall. Things that can fall can do stuff.

If you held the rock and let it drop onto a hard wooden floor it would make a big bang – that noise is a sort of energy. If you knock on a door really hard [use a lot of energy] your knock will be really loud. So, if the rock will make a loud noise when it lands, that tells us that if you are holding it up in the air, it has energy.

Next week we will talk about water having energy when it is up high.

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[Amanj amin. https://commons.wikimedia.org/wiki/File:200_%D9%86%D8%B3%D8%AE.jpg]

Before we go, we must say one more thing about hurting your toes by putting too much energy on them. Imagine, you need a bath. You turn the tap on and put the water in – but, you forget to check it. It is really hot. You put your toes in first, and you go jumping around the room on the other foot going, “Wa, wa, wa! Ooh, ooh, ooh!”



[<http://clipart-library.com/bath-cliparts.html>]

This is because, first of all, you are really good at making weird noises. Secondly, heat is a sort of energy. The really hot water put too much energy into your toes – and that hurts. It is OK to draw faces on your toes – they don’t mind.

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OK, here is a skeleton of a foot



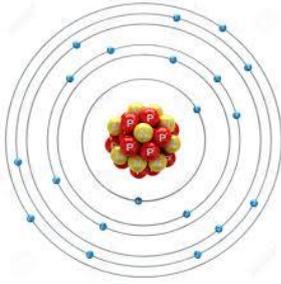
and here is a skeleton of a hand.

They look like each other, a fair bit. They don't look so much the same when they have all the skin and everything on them.

OK, how many elements do we know? Elements are made up of little things [atoms] – in an element, all the tiny atoms are exactly the same.

So, we know oxygen, that we breathe in from the air, and we need to live. We know helium and hydrogen, two very light gases, which are also in the air. We know gold – some people have rings made out of gold. We know mercury – that weird silver metal, which is runny, like water. Oh, we know carbon, which makes diamonds and coal.

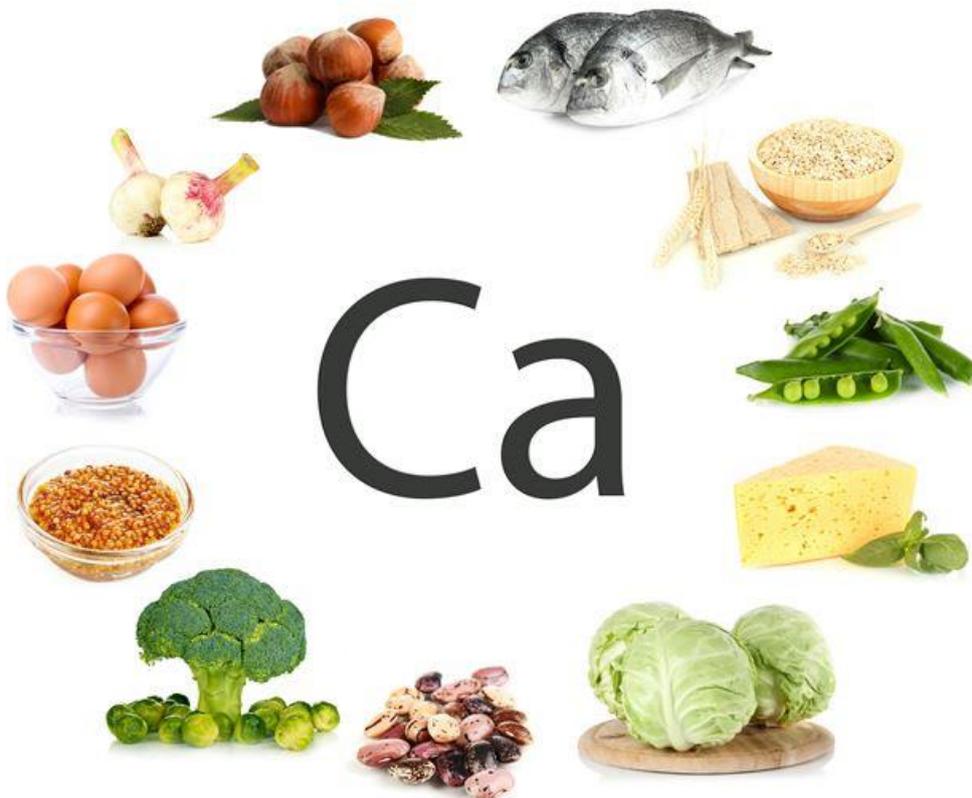
Then, there is also calcium.



Compared to hydrogen, calcium has **BIG** atoms.

Now, the point is...

calcium is what gives our bones their strength – so, we need lots of calcium, so we have strong bones, and they won't break easily.



And this is where we get calcium – broccoli and peas and cheese and eggs and fish.

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This week we are very grateful indeed to © Galapagos Conservation Trust / Marek Jackowski [and Verity Ramsay] for allowing us to use this amazing picture. This is a marine iguana – it is a lizard which swims and catches lots of its food in the sea. The marine iguana is the only lizard which goes into the sea. It only lives in one place in the world – the Galapagos Islands.



The Galapagos Islands are in the Pacific Ocean, near to the country of Ecuador. We will talk about the Galapagos Islands again in the future.

Q: Why did the math book look so sad?

A: Because it had so many problems!

Knock, knock.

Who's there?

Razor.

Razor who?

Razor hands, this is a stick up!

Q: What do you call cheese that isn't yours?

A: Nacho cheese!

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Q: Why are elephants so wrinkled?

A: Because they take too long to iron!



What is this?

Hint – You might have to think about it!

My friend said to me: "What rhymes with orange"

I said: "No it doesn't"