UKMA news

The newsletter of the UK Metric Association
For a **single** *rational* system of measurement

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Editorial, by John Austin

With Covid-19 restrictions only slowly easing, the UKMA once more will be holding its AGM and conference online on 4 July. More details on page 11. Earlier in this newsletter, Martin Vlietstra continues our recent historical theme on our measurements by pointing out the connections to our former Empire. This item was originally posted in Metric Views and is included here for those who prefer their information from the Newsletter. Also from Metric Views, Ronnie Cohen provides a detailed overview of the metric system. Many readers are familiar with the details but I consider it important enough to be reproduced here. An issue dear to our soles (sic) follows in the next article describing our shoe size measurements. Why do we metric enthusiasts still use shoe sizes using the "British" sizing, which believe it or not is based on our old friend the barleycorn? A few shorter items follow. The first looks at the most famous equation in science: Einstein's $E = mc^2$ --- what does it actually mean to a metric and non-metric unit user? The second item compares the metric system to the use of braille, which has also become an international standard. I have also introduced in this newsletter news from our colleagues across the pond. They have had some sad news recently, but there are more positive items as well. The newsletter ends with Association news and the list of articles recently posted on Metric Views

Hugging is now allowed, but be careful!

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Decolonising Science, *Article by Martin Vlietstra first published in Metric Views*

In the past year calls have gone out to "decolonise" education, including maths and science. In respect of the STEM (Science, technology, engineering and mathematics) subjects, the University of Oxford has responded by setting up a project to investigate how this can be done. The description of the Oxford project suggests that little can be done about the actual technical content of the STEM subjects, though a certain amount can be done about teaching the context in which the technical content evolved.

Very few people in the United Kingdom appreciate that the colonies (See Note 1) saw the imperial system of units as a barrier to greater self-reliance. In the years leading up to the Boer War, the South African Republic (also known as the Transvaal or the ZAR) employed large numbers of civil servants from the Netherlands rather than recruiting officials from the Cape Colony or from the United Kingdom. When the ZAR introduced its own coinage in 1892, there was a strong feeling in the Volksraad (ZAR Parliament) that the ZAR should have a decimal currency, presumably based on the Dutch guilder. However the strength of the commercial ties with the Cape Colony militated against this and the ZAR currency mirrored the British currency. The ZAR policy on railways was however different. Although the railways in the ZAR had a 3'6" (1.067 m) as did the neighbouring British colonies, their distance markers were in kilometres.

The railways of British East Africa, shown here from a 1953 catalogue adopted a one metre gauge, but distance markers were calibrated in miles as was done in India. Unfortunately, the metre gauge lines in East Africa fell into disrepair after independence and are currently being replaced by a standard gauge railways. Image taken from https://commons.wikimedia.org/wiki/File:EAR_1953_Steam_%26_diesel_catalogue_Page_74_-_Nr._5602.jpg

Edward VII was crowned on 9 August 1902, two and a half months after the end of the Boer War. The British Colonial Secretary, Joseph Chamberlain, used the occasion to call a Colonial Conference which was attended by the prime ministers of all the self-governing colonies. Although the aftermath of the Boer War featured high on the agenda, trade and other matters were discussed and in particular the conference passed the motion "That it is advisable to adopt the metric system of weights and measures for use within the Empire and the Prime Ministers [of the colonies] urge the Governments represented at the Conference to give consideration to the question of its early adoption". On 9 September, a month after the end of the conference, Chamberlain sent a letter to all the governors of the various colonies to get their views. In the responses, the Seychelles and Mauritius said that they already used the metric system, a number of large colonies including Australia, New Zealand and most of the African colonies were in favour of adoption while a number of the smaller colonies said that they would follow Australia, India or the United States (as appropriate) while only a few small colonies were opposed to adopting the metric system. Canada did not commit itself while India was not included in the survey. The result was the 1907 metrication bill in the British Parliament. The bill was eventually defeated by 150 votes to 118 with one of the reasons for the defeat being the desire of British industry to "lock-in" existing customers.

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Following the Indian Mutiny of 1857, the government of India passed from the East India Company to the British Crown. Queen Victoria formally became known as Empress of India in 1877 and was represented in India by a viceroy. Until independence in 1948, India was not legally a British Colony, but a separate realm. This is probably the reason why India was not included in Chamberlain's request for views on metrication. In practice India was controlled by British-born administrators who worked alongside the Indian princes and maharajas. At the time of the mutiny, the various Indian provinces had a variety of units of measure, often going by the same name but representing different quantities. During the period of British administration attempts were made to standardise the units of measure across all India by retaining the Indian names of the units where possible, but rounding them to appropriate Imperial measures. This policy never succeeded. In 1885 the Indian National Congress (INC) was founded having, as its main aim, independence for India. From about 1930 onwards, the INC also tackled the problem of units of measure and supported the adoption of the metric system. They did not have the support of Gandhi who feared that decimalisation of the currency and metrication of units of measure would be used to the detriment of the poor. However in 1956 India, realising that a substantial portion of her trade was with metric countries adopted a decimal currency and in 1958 she adopted the metric system. One of the staunch supporters of metrication was Nehru who reminded people that the system of numbers as we know them as opposed to Roman numerals originated in India by saying "we are not adopting something alien to India. We are going back to something which was originally the product of Indian genius."

A set of road signs just west of the Nullarbor Roadhouse, South Australia, warning of camels, wombats and kangaroos crossing the Eyre Highway for the next 96 km in a westerly direction. Image taken from Wikimedia:

https://commons.wikimedia.org/wiki/File:Nullarbor_warning_signs,_2012.jpg

In 1965 the United Kingdom announced its intention to adopt the metric system. Within a few years the rest of the Commonwealth announced plans to follow. Each country made the choice to change over to metric units independently of other countries, and each had their own timetable – for example one of the first areas for metrication in Australia was horse racing (one furlong being about 200 metres). Apart from the United Kingdom and to a lesser extent Canada, most of the Commonwealth had adopted the metric system by 1980.

In his delightful series of books, the No 1 Ladies' Detective Agency, Alexander McCall Smith missed a trick. The series is set in Botswana where McCall Smith worked for in the early 1990's. The main character in the book is Mma Precious Ramotswe who not only solves many mysteries, but also philosophises about many aspects of Botswana life including Aids in Sub-Saharan Africa, the rural way of life in Botswana, social relations, marital infidelity and how Botswana has changed over the years. Even though the books are set in the 1990's and Mma Ramotswe might well have remembered the conversion to metric units in her childhood, she never breaks the 30mph speed limit and has never been known to talk about Botswana's adoption of the metric system in the early

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1970's, a few years after its independence in 1966. In my two visits to Botswana in 1976 and 1977 all the road signs that I saw were in kilometres or kilometres per hour.

What has this to do with decolonising education? Most of British education uses the metric system but outside the school environment there are many activities where the imperial system is used, particularly in matters that affect only the man in the street. These include the use of stones and pounds for people's weights where the medical professionals use metric units, the use of miles and miles per hour on the roads where the road professionals use metres and kilometres per hour and the sale of dual-unit measuring devices. The result is that the teaching in the classroom is not reinforced by experience outside the classroom with the long-term result of decreasing numeracy, especially amongst the less-able children.

Note

In the context of this article, the word "colony", without prejudice to any legal implication, includes any area over which Britain had jurisdiction or influence since 1800, thus excluding the United States, but including Ireland, the Boer Republics and India.

References

(2021) University of Oxford Mathematical, Physical and Life Sciences Division: Diversifying STEM Curriculum Project – new call for interns: https://www.mpls.ox.ac.uk/equality-and-diversity/diversifying-stem-curriculum

•(1968) E Rosenthal: From Barter to Barclays, Barclays Bank DCO, Johannesburg
•(1903) Édouard Percy Cranvill Girouard: History of the Railways During the War in South Africa, 1899-1902;
HMSO https://books.google.co.uk/books/about/History_of_the_Railways_During_the_War_i.html?id=JcM2AQAAMAAJ
•(1904) The Electrician, Vol 52, Page 766: The Metric System and Colonies https://books.google.co.uk/books?id=JJk9AQAAMAAJ&pg=PA766
•(2012) Just Buffalo Literary Centre: Alexander McCall Centre – Readers Guide: https://www.justbuffalo.org/wp-content/uploads/2015/09/alexander-mccall-smith-readers-guide-babel-just-buffalo-2012-04-12.pdf
•(2018) Aashish Velkar; Rethinking Metrology, Nationalism, and Development in India (1833-1956)
•https://www.research.manchester.ac.uk/portal/files/65152126/Past_Present_Author_Accepted_Version.pdf

How Metric Units Fit Together, *Article by Ronnie Cohen first published in Metric Views*

UKMA often describes the metric system as a single, rational, consistent, simple and coherent measurement system. This article examines the rationale for these descriptions and demonstrates how the metric system fits together. It will also look at common base units and prefixes and their common uses.

At its core, the metric system is made up of basic units and prefixes. The modern metric system, known as the International System of Units or SI for short, is based on the principle that all measurable phenomena covered by the system – pretty well everything in the known natural world! – have one basic named unit. However, there are also some metric units outside SI that are approved for use with SI and they are all compatible with SI. All the multiples and subdivisions then follow the same logical structure using prefixes. All units and prefixes in the metric system have common language-independent symbols. These symbols are case-sensitive and are not abbreviations. In the metric system, each prefix always means the same multiple or subdivision of

a unit wherever it is used. They are all simple multiples of or divisions by ten (and powers of ten) and they all apply to every basic named unit. Unlike the imperial system, there are no measurement tables to learn.
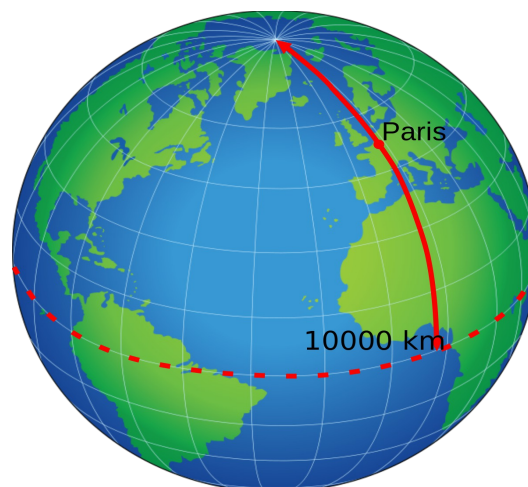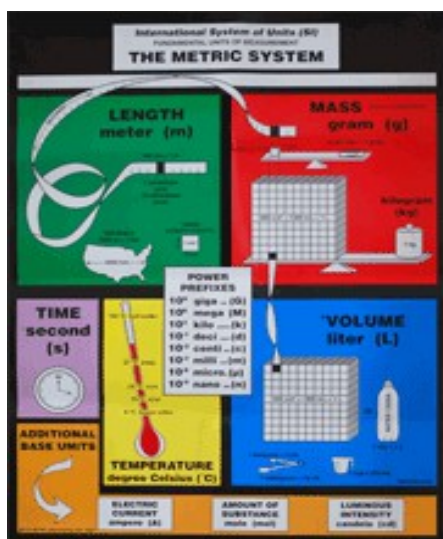

Image taken from Wikimedia.https://en.wikipedia.org/wiki/History_of_the_metre

The USMA poster above (left) shows the links between various metric units.
The metre (symbol: m), the metric unit of length, comes from "metron", the Greek word for measure. It was originally defined as the ten millionth part of the distance from the North Pole to the equator (above, right) but is now defined as the distance travelled by light in a vacuum in a given fraction of a second.

The litre (symbol: l or L), the metric unit of volume, comes from "litra", a Sicilian monetary unit. It is equal in volume to the tenth part of a metre cubed. There are 1000 litres in one cubic metre. Litres are widely used on drink labels and, for example, to describe dustbin and fridge capacity.

The kilogram (symbol: kg), the metric unit of mass, is the only base unit in SI that contains a prefix. The gram (symbol: g), from which the kilogram is derived, comes from late Latin and Greek "gramma", meaning a small weight. The kilogram was originally defined in 1795 as the mass of a litre of water. However, several problems were subsequently discovered with this definition so the kilogram was eventually redefined as the mass of the international prototype of the kilogram [Ed: this has subsequently been redefined via the "seven constants"of the SI, described in the next newsletter]. For all practical purposes, a litre of distilled water at a certain temperature has a mass of approximately 1 kilogram. The tonne (symbol: t) is equal to 1000 kilograms.

The hectare (symbol: ha), the metric unit of area, is made up of "hecto-" plus "are" (pronounced "air"). The "hecto" part of hectare comes from the Greek "hekaton", meaning hundred. The "are" part of hectare comes from the Latin "area", which literally means "vacant piece of level ground". The hectare is equal to 10 000 square metres, which is equivalent to a square that is 100 metres on each side. The hectare is used for land registration across the European Union and widely used for referring to large land areas.

The newton (symbol: N), named after Sir Isaac Newton, is the metric unit of force. The newton is defined as the force which will accelerate a mass of 1 kilogram at a rate of 1 metre per second squared. The newton is not seen very much outside scientific contexts but is mentioned here because several common metric units are derived from the newton. The joule (symbol: J), named

after English physicist James Prescott Joule, is the metric unit of energy. The joule is defined as the energy required to accelerate a mass of 1 kilogram at a rate of 1 metre per second squared over a distance of a metre (= 1 N m). The joule is widely seen in the form of kilojoules (1000 joules) on food nutrition labels. The watt (symbol: W), named after Scottish engineer James Watt, is the metric unit of power. The watt is defined as the rate of expenditure of energy equal to 1 joule per second. The watt is commonly used for smaller electrical appliances.

The ampere (symbol: A), or amp for short, the metric unit for electric current, is named after the French physicist André-Marie Ampère. Its definition is based on a constant current of a pair of parallel wires placed exactly one metre apart in a vacuum that would produce a force equal to a fixed number of newtons per metre of length. This is the familiar 'amp' we associate with things like fuses and electric cable. It is the fundamental base unit for electricity and magnetism. The volt (symbol: V), named after Italian physicist Alessandro Volta, is the metric unit of electric potential difference. The volt is defined as one watt per ampere. The volt is the familiar unit used for batteries, electricity supplies, power lines, and electrical devices.

Simplified Diagram
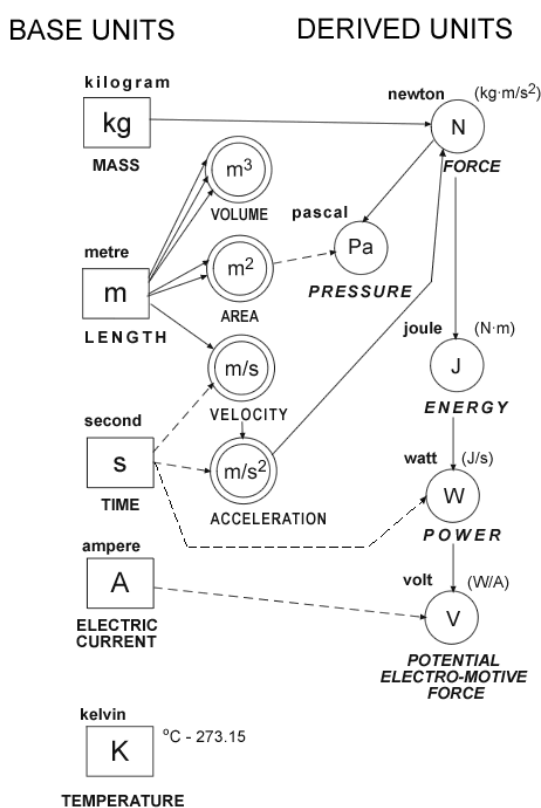
Full Diagram
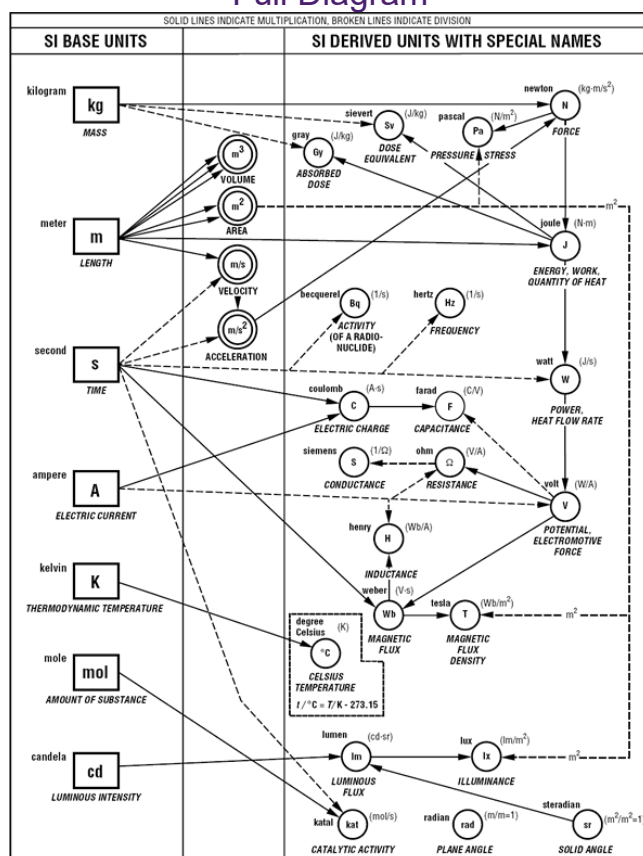
The links between metric units

The pascal (symbol: Pa), named after French mathematician and physicist Blaise Pascal, is the metric unit of pressure. The pascal is defined as one newton per square metre. The bar (symbol: bar), is equal to 100 000 pascals and is widely used in weather mapping.

The hertz (symbol: Hz), named after German physicist Heinrich Rudolf Hertz, is the metric unit of frequency. The hertz is defined as one cycle per second and is used for such things as radio

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channels, sound (pitch) and computer processors (clock speed where 1 'tick' is a cycle).Here are the most common prefixes used in the metric system:

Prefix	Symbol	Multiple/fraction	Origin
giga	G	billion	Greek "gigas", meaning giant
mega	M	million	Greek "megas", meaning great
kilo	k	thousand	Greek "Khilioi", meaning thousand
deci	d	tenth	Latin "decimus", meaning tenth
centi	c	hundredth	Latin "centum" meaning hundred
milli	m	thousandth	Latin "mille" meaning thousand
micro	μ	millionth	Greek "micros" meaning small
nano	n	billionth	Greek "nanos" meaning dwarf

Prefixes are combined with units to form multiples and fractions of units. The prefix tells you the multiple or fraction of the unit that the name represents. It is best to demonstrate this fact with common examples. Here are some common combinations of prefixes and units (note that this is an abridged version of that published in Metric Views):

Name	Symbol	Meaning	Common Usage
gigawatt	GW	billion watts	Power station output
megahertz	MHz	million hertz	Computer processor speed
kilogram	kg	kilograms	Goods sold by weight
kilowatt	kW	kilowatts	Electrical heaters, consumer and business power consumption etc.
decilitre	dl or dL	decilitres	Blood sugar levels
centimetre	cm	centimetres	DIY products furniture etc.
mg	mg	milligrams	Drug doses, drink-driving levels etc.
microgram	μg	micrograms	Very small drug doses
nanometre	nm	nanometres	Width of transistors on computer chips

(1) Reproduced with kind permission of the US Metric Association (USMA).
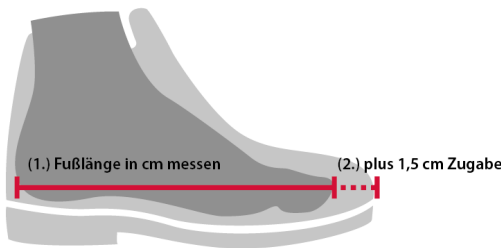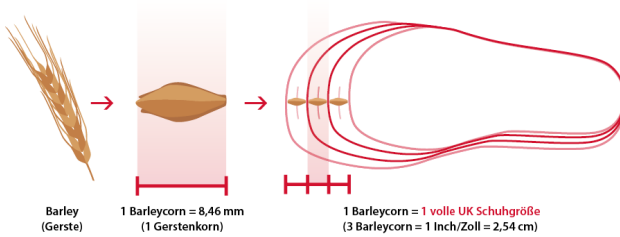Website: http://www.us-metric.org/
(2) Reproduced from the NIST website: www.nist.gov
Sources for etymologies of units: Oxford English Dictionary, Wikipedia
This article uses the term "billion" in the sense of 1000 million. This is the normal meaning of the word as used in the media.

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Do You Know Your Metric Shoe Size?, *Article by John Austin*

Many of us know our shoe size by simplying going to a shoe shop and finding a pair that "fits". We might even use the shop's measuring guage or use some sort of trial and error method. The chances are that in Britain, you will end up with a pair that has "British sizing". You may happen to know your "European" size but how loyal are you to the metric cause by thinking in metric. Is the European sizing metric anyway or are both sizing systems just some sort of scaling independent of ordinary measurement? This was something that I never gave much thought to until very recently. Both the European and British sizing is determined using similar methods based on the length of the foot, so you can measure your foot to see if after all this time you have been using the right size shoe. Do this while nobody is watching or you'll be thought of as mad as a hatter!

The European sizing takes the length of the foot in cm. You add 1.5 cm to allow for toe space and multiply the result by 1.5.	UK sizing takes the length of the foot in barleycorns add two barleycorns, and subtract 25.

The origin of UK shoe sizing goes back to the medieval unit of the barleycorn. The method of calculating shoe size is shown above and is republished from https://www.sioux-shop.co.uk/cms/shoe-know-how/shoe-size-and-fit/shoe-size-conversion/. For illustration, my own foot is 26 cm long, so the European size is (26 + 1.5) x 1.5 = 41.25. Close enough, I usually go for 42. The final step in the calculation, multiplying by 1.5, is the number of sole stitches per centimetre (the Paris stitch). In UK sizes my foot is 10.2"; multiply by 3 to convert to barleycorns (I kid you not!) and add 2 barleycorns to allow for toe space, equals 32.6 barleycorns, subtract 25. The result is a length in barleycorns = 7.6, which is the shoe size. Again, close enough: I usually prefer the comfort of a slightly larger shoe. That's because most of the time I wear running shoes which are curve lasted so you need a slightly larger size. In the UK children's sizes are calculated using a similar method, but instead of subtracting 25, you need to subtract 12. In the USA, a similar system is used but with the baseline higher by one for Men's sizing and 2 for women's sizing.

Unfortunately, not all countries use these systems and there are a myriad of different sizing systems in use (see https://en.wikipedia.org/wiki/Shoe_size). Australia and New Zealand give a nod to the old imperial system and impress with their diplomacy, by using UK sizing for men and children and follow the US system for women's sizes! The most straightforward is perhaps the Mondopoint system, which is simply the length of the foot in millimetres, rounded down to the nearest 5 mm. It is commonly adopted in many Asian nations. The measurement is sometimes accompanied by foot width and circumference measurements (also expressed in millimetres) and can provide better fits for exacting requirements such as sport and balet shoes. See the conversion chart below. As with the metric system it would be useful if everything were simplified and the world were to adopt one single system such as the Mondopoint system. You just measure your own foot and the fitter gets on with it. The other sizing methods have different offsets, extra spaces for feet

to move inside the shoe and sometimes you need to know the age or gender of the wearer. Finally, of course the foot measurement is only the start of fitting a shoe, and once you have the supposedly right size, you need to try a shoe for comfort as all shoe fitters reccomend, and adjust if necessary.

foot [mm]	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320
[in]	7¾	8	8¼	8½	8¾	9	9¼	9½	9¾	10	10¼	10½	10¾	11	11¼	11½	11¾	12	12¼	12½
Mondopoint	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	32
	202.5	210	217.5	225	232.5	240	247.5	255	262.5	270	277.5	285	292.5	300	307.5	315
EUR	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
UK	0	0½	1	1½	2	2½	3	3½	4	4½	5	5½	6	6½	7	7½	8	8½	9	9½	10	10½	11	11½	12	12½	13	13½	14
US M	1	1½	2	2½	3	3½	4	4½	5	5½	6	6½	7	7½	8	8½	9	9½	10	10½	11	11½	12	12½	13	13½	14	14½	15
US W (FIA)	2	2½	3	3½	4	4½	5	5½	6	6½	7	7½	8	8½	9	9½	10	10½	11	11½	12	12½	13	13½	14	14½	15	15½	16
last [mm]	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	325	330	335
[in]	8¼	8½	8¾	9	9¼	9½	9¾	10	10¼	10½	10¾	11	11¼	11½	11¾	12	12¼	12½	12¾	13

By Claus Färber - Own work based on: information from shoe size, Schuhgröße and 鞋碼, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=8329626

Brief comments

The Most Famous Equation in Science, item from John Austin.
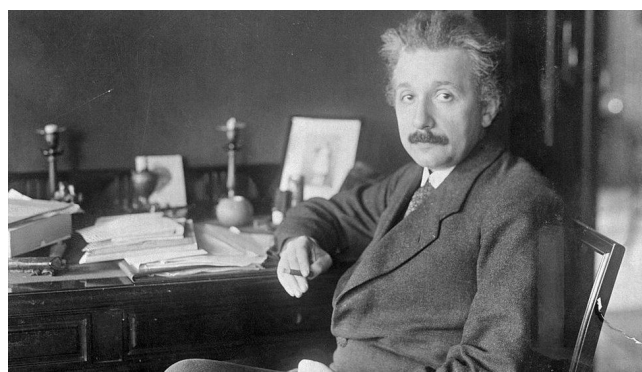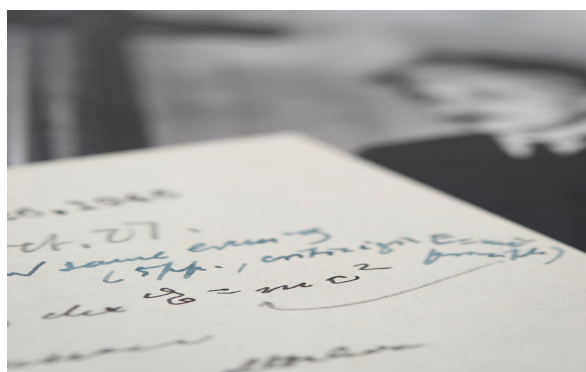
There was an auction recently of some Einstein papers, and these received considerable publicity, reported in the BBC (https://www.bbc.co.uk/news/world-us-canada-57209148), because there are very few examples of Einstein's use of his famous equation $E = mc^2$ in his own handwriting. Although the equation is very well known, how many people actually understand what it means and how does this relate to the unit system? The equation itself means that any (small) amount of mass, m, is equivalent to the energy, E, obtained by multiplying m by the speed of light (c) squared. Converting mass to energy isn't possible under normal circumstances but does occur in nuclear power stations and atom bombs! The amount of energy for even a tiny amount of mass is enormous. So, let's choose an example and use the metric system (automatic for scientists) m has to be in kilograms, the SI unit of mass, and c has to be in m/s, the SI unit of velocity (see Ronnie Cohen's article above). Given those numbers, the energy is in joules, the SI unit of energy: no thinking required. The speed of light is 299792458 m/s (exact) or 3×10^8 very nearly. So let's choose a nuclear power station which might convert 1 kg of mass to energy in a year (yes it would take that long) then the total energy produced is $1 \times (3 \times 10^8)^2 = 9 \times 10^{16}$ J. After dividing by the number of seconds in a year (365 x 86400), or just over 3×10^7, this means that the average

power is just about 3 x 10^9 W or 3 GW. About half of this or less goes to electricity so the nuclear power station produces about 1 GW of electricity. I think most people would understand this, as you know how much power your kettle uses (about 2 kW if you don't!).

But how would you cope in the Imperial system of units? Is the mass in stones (!) pounds or ounces? Probably pounds. What is the speed of light? Is it measured in mph, miles per second, feet per second, or what? Actually it should be ft/s. So what is the energy in? In fact the answer is foot-poundals, whch is a unit not many ordinary people have heard of. By comparison national power generation in the USA is expressed in quads, which are 10^{15} BTU (British Thermal Units). Well, 1 BTU is the energy needed to raise 1 pound of water by 1F. Are you lost already?

Thomas Armitage: promoter of Braille, item from Derek Pollard
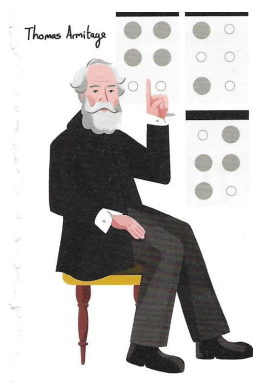
The French did not just invent the metric system. Another internationally recognised system was also proposed by one of their countrymen. Britain was using a muddle of systems of embossed type for blind people. Armitage suggested it should use a single, simple and universally accepted system. Sounds familiar?
Armitage (1824-1890) was a blind physician, promoter of Braille and founder of the National Institute for the blind. Like Florence nightingale, Armitage used his medical skills during the Crimean war, but on his return he was forced to abandon his medical career due to his deteriorating vision. It was this that led to his work to make literature available to blind people, through embossed type. Armitage was instrumental in the adoption of Louis Braille's system in Britain.

News from USMA

As noted last time, John Bailes of the Canadian Metric Association (CMA) died on 14 September 2020, after a long illness with Alzheimer's. The US Metric Association (USMA) published an obituary (Mar-Apr 2021 newsletter), mentioning in particular his contribution to the Metric world in North America.

We also learn of the sad demise of Paul Trusten, the USMA Vice President, on 5 December 2020 after a battle with Covid-19.

In the Jan-Feb 2021 newsletter, the issue of hard versus soft conversions to metric are discussed. For example in going from an imperial measurement to metric whether products are resold as the nearest metric equivalent or simply converted. For example, a 2 inch pipe could be resold as a 50.8 mm pipe (converted) but transitioning to a 50 mm pipe (substitution) takes longer as compatibility with other equipment arises. Another item in that Newsletter raised the issue of the difficulty of converting land areas of forest burn, 2,000,000 acres for example, into a more understandable size such as square miles. Of course conversion from hectares to km^2 is trivial (divide by 100).

The Mar-Apr 2021 newsletter also reports that US standard units are now permitted on alcoholic drinks bottles in addition to the mandatory metric, leading to label clutter.

UKMA Officers
        Secretary: Derek Pollard
The post of Chair(man) remains vacant.

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Assocation News
AGM and Annual Conference 2021

1. The AGM and Conference will be on Sunday 4 July. We shall use Zoom, and the link will be emailed to members a few days beforehand. The link will open at 10.00 and the AGM will start at 10:15. The Conference will follow immediately after the AGM and will conclude at around 12.30. The last item on the Conference programme will be a Members' Forum. Members may raise issues at the Conference (using the Zoom facility) or may email them to secretary@metric.org.uk beforehand. [see programme below].

The Committee will recommend to the AGM that the rates of subscription remain unchanged in 2021-22.

2. The producers of "Have I got news for you" contacted UKMA earlier in the year, asking if our newsletter could be the guest publication for one of the programmes. The Committee considered this request at its meeting on 30 March, and decided to decline. Do members agree?

3. Committee election.

All Committee members were re-elected.

At its meeting on 10 June, the Committee co-opted Peter Burke, whose biographical details the secretary will provide for the next newsletter.

Conference programme

It is hoped there will be time for discussions the following topics:

*   A phased approach to the traffic sign changeover
*   Global Britain versus British exceptionalism
*   Supplementary indications, conversions and the UK's dual-measurement muddle
*   Issues relating to health and medical treatment.

There will also be a report on recent improvements to the UKMA web sites.

The Conference will close with a members' forum. Questions may be submitted to the secretary beforehand or on the day using Zoom.

Recent articles posted on Metric Views

You may have missed the following articles posted on Metric Views, http://metricviews.uk , since the last newsletter:

"Stuck in an imperial past". Posted on 28 May. 5 comments.
"Decolonising science". Posted on 30 April. 6 comments.
"The UK's metric conversion – a comedy of errors?". Posted on 12 April. 15 comments.
"New role for Britain's road signs". Posted on 1 April. 7 comments.
"What I want to see in the highway code". Posted on 30 March. 4 comments.
"Census then and now." Posted on 20 March. 3 comments.
"History repeating itself". Posted on 12 March. 2 comments.
"How metric units fit together". Posted on 1 March. 12 comments.
"Decimal changeover lessons. Posted on 23 February. 6 comments.

UKMA news – the newsletter of the UK Metric Association

"50 years of decimal currency". Posted on 15 February. 7 comments.

Draft articles for Metric Views are welcome and should be e-mailed to: secretary@metric.org.uk

Where to find UKMA on the internet

UKMA began as an internet forum, and the internet is our principal vehicle for carrying our message to the public.
We now have:
The main UKMA web site, https://ukma.org.uk .
A factual web site, https://thinkmetric.uk .
A blog, https://metricviews.uk . [Note this new and shorter domain name compared with previously.]
A Twitter page, https://twitter.com/UKMetric .
A YouTube channel, https://www.youtube.com/user/UKMetric .
and a Facebook page, https://www.Facebook.com/UKMetric.
These are available to all, not just members.

"A very British mess"

This report, published by UKMA in 2004, looked at the UK's measurement muddle. The Foreword was written by the late Lord Howe, then UKMA's Patron, and the report was drafted by a group of Committee members. The 62-page report includes chapters on "How did we get into this mess?" and how we can get out of it, with many illustrations in full colour. Hard copies of the report are still available, price £2.00 including p&p. Please email the Secretary if you would like a copy.

Can you help?

The Committee is looking for volunteers who may be able to help in the following areas:
- Responding to technical consultations by ISO and BSI.
- Preparing web-friendly versions of UKMA News for PCs, i-pads, i-phones and android devices such as tablets and mobile phones.
- Reviewing printed media for stories to link to our Twitter and Facebook pages.
- Assisting with the production of material for uploading to YouTube.

If you think you may be able to help, please contact secretary@metric.org.uk

About this newsletter

UKMA News is published by the UK Metric Association, the object of which is to promote the full adoption of the International System of Units (SI), commonly known as 'the metric system', as the legal and default system of weights and measures throughout society in the United Kingdom.
Your feedback and comments on UKMA News or on the UK's stalled metric upgrade are welcome.
To submit, or if you no longer wish to receive UKMA News, please email secretary@metric.org.uk