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Cover: Velocities of molecules at various points in a liquid flowing in a cavity as determined by a computer. In this particular illustration, the cavity wall at the top of the drawing is moving toward the left. Cavity-flow problems of this sort are among those that can be solved more exactly by arithmetic methods of doing physics than by the usual calculus methods. See p. 186. (Illustration: Donald Greenspan)

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LETTERS

Remeasuring metric

I have been reading the constant stream of controversial letters over the metric system touched off by your article "U.S. Metric Conversion: Rough Road Ahead" (SN: 7/16/77, p. 42). Now I feel it is time for a student's viewpoint to be heard.

I started learning the metric system very early in school. Though the school's metric conversion program is a mandatory one, it is started early enough in the student's education to allow the student ample time to grasp the basics of metrics. (The program is not the crash-course type.) As the years pass in the student's education, the English method is slowly "phased out" and the metric system is slowly "phased in." By the time the student reaches the high school level, use of the English system becomes rare.

Many fellow students agree that the metric system is infinitely easier to learn and use than the English method. I commend and encourage all school systems that use this "early-start" method. The metric system is certainly not hard to learn, but it is easier and more beneficial if it is learned early as the English method presently is.

Possibly learning the metric system earlier is one way of making the "rough road ahead" a little smoother.

*Pat Brown
Highland High School
Highland, Ind.*

Further to the discussion of the metric system: it interests me that while a lot of attention is given to distance, weight, volume and temperature, none is given to time. Why should those who want to get rid of 16-ounce pounds, 3-foot yards and 1,728-cubic-inch cubic feet be willing to accept 24-hour days, 60-second minutes and 7-day weeks?

For complete rationality of the metric system, we need to have metric time, too. We could begin by dividing the day into 10 equal periods called *hitters* (*h* from "hour" plus *iter* from "liter"), which would be further divided into deci-, centi- and millihiters. These latter three would be quite useful durations, being respectively very nearly a quarter hour (.24 hours), not unlike a minute (1.44 minutes), and about 10 seconds (8.64, exactly). It turns out that 0.1 millihiters is remarkably close to a second (1.16 seconds).

A decahiter would equal a day. For longer

durations, the 10-day hectohiter would replace the week, and the 100-day kilohiter our present clumsy and unequal calendar quarters (though a quite similar duration, being equal to 1.095 mean calendar quarters). Finally, we would have the myriahiter, or 1,000-day cycle. Think of the resulting ease of calculating interest for our borrowing and growth rates for our statistics-loving society.

It is true that the myriahiter is much longer than our present years, indeed equal to 2.74 of them, but the shortness of the year is a universal problem. Who would not welcome the opportunity to file an income tax return only once every myriahiter, to prepare the departmental budget only once every myriahiter, or to mark our mortality by only one birthday per myriahiter?

Of course this temporal metric would not tie in to the revolution of the earth around the sun or the cycle of the seasons. As our lives become ever more managed and our environment ever more artificial, however, this would be less and less inconvenient. In days of technological climate control, it would cease to be noticed.

No logical mind can deny the hiter its rightful place beside the meter, the liter and the centigrade degree.

*Alex J. Pollock
Northbrook, Ill.*

Because I am not a practioner of science, but merely a teacher of it, I have always hesitated to get too deeply involved in some of its controversies. However, the letters from McVey and Pardue have emboldened me (SN: 8/6/77, p. 83).

I, too, have not been able to figure out why Celsius degrees are preferable to Fahrenheit in the measurement of temperature. I have come to expect all metric units to be based on a thousand parts. Since neither scale is so divided for the measurement of temperature, I don't care for either.

I therefore propose that a new scale be devised. This scale would be based on the melting and boiling points of water as before. However, it would range from 0 to 1,000 units. I should also like to propose a new name for the unit. Since "meter" and "liter" are a nice rhyming pair, the new unit should rhyme with "gram." I propose that the new unit of temperature measurement be termed a "sham."

*Thomas J. Eiermann
Blue Island, Ill.*

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