Editorial

Welcome to the thirteenth issue of *Science in School*

Health and disease are themes that run through this issue of *Science in School*. In our feature article, Alan Leshner describes his varied career, including his involvement in a major campaign to show that schizophrenia is a brain disease and not a result of environment. In contrast to this concern with the public awareness of mental illness, Sabine Hentze deals with illness on a personal scale – counselling patients and families affected by genetic diseases.

Teacher Gianluca Farusi encourages his students to eat healthily with a colourful chemistry experiment to test the antioxidant content of different foods; Holger Maul, Nele Freerksen and I show why a simple vitamin – folic acid – is such an essential component of a healthy diet; and immunologist Ana de Barros investigates the roles of white blood cells in preventing cerebral malaria.

Saving life is certainly a worthy aim, but the quest to *find* life – beyond the limits of our planet – has seized the imagination of science fiction writers and scientists alike. Malcolm Fridlund introduces the search for extra-solar planets and extra-terrestrial life, and explains how this could tell us about the evolution of life on Earth.

The history of life is an ambitious enough topic, but some astronomers have gone further – probing the history of the Universe itself. Ana Lopes and Henri Boffin describe the search for the first light in the Universe – the first dawn.

Back on Earth, the dawn of understanding on a student's face can be deeply satisfying. Jean-Yves Guichot's project enabled his students to understand the nature of research by working side-by-side with research scientists; he offers advice for setting up a similar project.

Rather than developing a project *for* their students, Ludwig Eidenberger and Harald Gollner developed a project *with* two of them. They describe their activities to demonstrate the unusual thermodynamic properties of latex – including a thermal engine and a 'refrigerator'. Thermodynamics is also one of the many phenomena that can be investigated using Bernhard Sturm's science dramas. Why not try out his ideas for enacting redox reactions, radical polymerisation or the effect of heat on water?

Water is the crux of Giuseppe Zaccai's research: he and his co-workers tested the assumption that biological reactions *in vitro* actually reflect the reality in the living cell. Scientists can heave a sigh of relief – it seems water does indeed behave similarly in the cell and in the test tube.

As if that were not enough choice of topics, we have more articles online – interviews with veterinarian Sarah Baillie and Italian teacher Alessandro Berton, a collection of online astronomy resources, and reviews of books and websites. From now on, these categories of articles will be online only, so don't miss out – visit our website (www.scienceinschool.org).

Eleanor Hayes
Editor-in-Chief of *Science in School*
editor@scienceinschool.org
www.scienceinschool.org

About *Science in School*

Science in School promotes inspiring science teaching by encouraging communication between teachers, scientists and everyone else involved in European science education.

The journal addresses science teaching both across Europe and across disciplines: highlighting the best in teaching and cutting-edge scientific research. It covers not only biology, physics and chemistry, but also earth sciences, maths, engineering and medicine, focusing on interdisciplinary work. The contents include teaching materials; cutting-edge science; interviews with young scientists and inspiring teachers; reviews of books and other resources; and European events for teachers.

Science in School is published quarterly, both online and in print. The website is freely available, with articles in many European languages. The English-language print version is distributed free of charge within Europe.

Contact us

Dr Eleanor Hayes / Dr Marlene Rau
Science in School
European Molecular Biology Laboratory
Meyerhofstrasse 1
69117 Heidelberg
Germany
editor@scienceinschool.org

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