



Once upon a time, scholars tended to wear long robes, live in monasteries and focus on botany. Some of these medieval scientists recorded their extensive knowledge of medicinal plants; today, researchers are using these manuscripts to inspire and develop modern medicines (page 38).

Although efficient in some cases, these early treatments could not combat the rampant epidemics of the time, such as the plague, which constantly re-emerged because humans and animals lived in such close proximity. Unfortunately, history repeats itself, and we are once again struggling with the threat of zoonoses: animal diseases that cross to humans (page 12).

Modern genetics, too, owes a debt to monastic botany, and more specifically to Gregor Mendel, whose laws of heredity underlie the theory of evolution and are still taught in biology classes. To explain – literally – the nuts and bolts of evolution, why not use everyday materials to construct your own phylogenetic trees in the classroom (page 26)?

Plants clearly provide inspiration in many scientific fields. Did you know, for example, that iodine was originally discovered in seaweed? Although at the time, the chemists involved were actually trying to make gunpowder (page 45).

More violent and infinitely more destructive than the firing of a gun are volcanic eruptions. To better understand volcanoes, an international team of scientists are using tiny particles – muons – to see inside (page 6).

On an even bigger, hotter and more destructive scale, the supernova explosion of a dying star can result in a black hole – sucking into it all surrounding matter. Black holes may be difficult to grasp conceptually, but they can be easily demonstrated in the classroom using simple equipment (page 32).

From medieval herbal remedies to monitoring volcanoes with cosmic particles: this issue should make your heart beat fast with excitement. So why not take the opportunity to simulate this with a gruesome, hands-on activity to investigate how the heart pumps (page 18)?

Isabelle Kling

Co-Editor of *Science in School*

editor@scienceinschool.org

www.scienceinschool.org



To learn how to use this code, see page 53.



About *Science in School*

The European journal for science teachers

Science in School is the **only** teaching journal to cover all sciences and target the whole of Europe and beyond. Contents include cutting-edge science, teaching materials and much more.

Brought to you by Europe's top scientific research institutes

Science in School is published and funded by EIROforum (www.eiroforum.org), a partnership between eight of Europe's largest intergovernmental scientific research organisations.

Inspiring science teachers worldwide

The *Science in School* website offers articles in 30+ languages and is read worldwide. The free quarterly journal is printed in English and distributed across Europe.

Advertising: tailored to your needs

Choose between advertising in our print journal, or on our website. For maximum impact, reach our entire readership with an advertorial (online and in print). Online and in print, we have a total of over 120 000 readers per quarter.

- The majority of our readers are secondary-school science teachers.
- Our readership also includes many primary-school teachers, teacher trainers, head teachers and others involved in science education.
- The journal reaches significant numbers of key decision-makers: at the European Commission, the European Parliament and in European national ministries.

For more information, see www.scienceinschool.org/advertising or contact advertising@scienceinschool.org

Subscribing

Register free online to:

- Subscribe to the e-newsletter
- Request a free print subscription (limited availability)
- Post your comments.

How can I get involved?

Science in School relies on the involvement of teachers, scientists and other experts in science education.

- Submit articles or reviews
- Join the referee panel
- Translate articles for publication online
- Tell your colleagues about *Science in School*
- Make a donation to support the journal.

See www.scienceinschool.org or contact us.

Contact us

Dr Eleanor Hayes / Isabelle Kling

Science in School

European Molecular Biology Laboratory

Meyerhofstrasse 1

69117 Heidelberg

Germany