

CANS OF JAM²

From the editors

Welcome everybody to this new issue of *cans of jam*², the science magazine written by Paul Langevin High School pupils.

As winter is coming fast on our region, our first topic will be... Temperatures, of course, but you will find other topics as well in these pages, so we hope you will enjoy them, comfortably sitting in your armchair near the fireplace...

Since we are trying to get back to a monthly rhythm of publication, and there is only one class writing the articles this year (and they are only in seconde), this issue is definitely light. But hopefully, *cans of jam*² will be back to you in December!

Temperatures

Temperature is a physical property. To measure temperature, we take a thermometer. There are three scales of temperature.

The first is in Celsius degrees (noted °C). When we use a thermometer with Celsius graduation, the water is boiling at 100°C and is freezing at 0°C (under atmospheric pressure, of course).

The second is used in the anglo-saxon

countries. This is the Fahrenheit degrees (noted °F) : the water is boiling at 212°F and is freezing at 32°F.

The third one starts at the absolute zero : the absolute zero is the coldest temperature found by scientists in the universe. It corresponds to -273.15°C, or -459.67°F, or 0 kelvin (noted K).

scales	°C	°F	K
absolute zero	-273.15	-459.67	0
water to ice	0	32	273.15
water to vapour	99.98	212	373.13

Readers' letters and e-mails

(kindly translated by the editors)

Thanks for these, although the disease described seems really dreadful! All the best to everyone for the future.

Martine, from Hengoat, 22

Very good, the paper, as usual.

About the guitar, there are many things to show, like sound curve according to the note played, the frequency, the instrument, etc.

Vincent, from Ballancourt, 91

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Chemistry : **Safety**

Chemistry is relatively dangerous because it uses products that can sometimes be harmful and damage your health.



That is why you must protect yourself in the lab with gloves, goggles and a white coat to protect your clothing and your body. But you must also have your hair tied.



In addition, you should always read what is written on the bottle labels as a mix between two products is not always good and can be dangerous.

The different labels are :

Toxic : the image is a skull to warn of a danger of death.

Very Toxic : the image is a skull to warn of a danger of death, but the risk is higher.

Corrosive : the image is a fish out of water and death because the product is dangerous for the environment.

Flammable : the image is a big flame because we mustn't put the product in a fire.

These are the principal labels in chemistry but there exist more...



The e-mail of the month (written in English!)

Hi Mr Galard !

This is Aurélie D... W... Do you remember ? I wanna know if, this year, the Cans of Jam² is written again ? If yes, can you send me it please =).

Aurélie, from Beauvais, 60

Well Aurélie, it is good to have news from you... Of course you will receive a copy of cans of jam² from now on; Mr Bouichou and I are so happy to have news from former pupils, especially a former contributor to cans of jam², like you!

All the best to you,

Mr Bouichou and Mr Galard, editors

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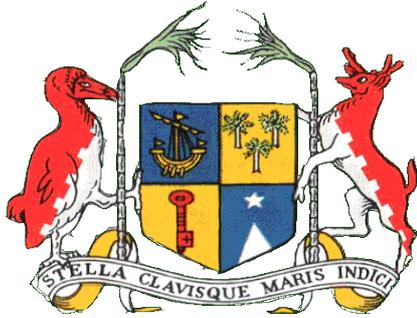
Liquid light

Take a safety lightstick (blue colour) and cut the tube. Pour the first liquid into a glass, and then break the glass container and pour the liquid into another glass to separate them.

Finally, place yourself in a dark room, pour the content of one glass in the other. Watch, and enjoy !



The Dodo, an extinct animal



In the 17th century, the Dutch occupied the island of Mauritius; they cleared the forest to cultivate sugar cane, and to feed themselves, they hunted dodos. This animal wasn't a really good food but it was easy to catch.



Dodos didn't fly because they were too big and had too short wings; they were without defence.

They looked like clumsy swans, and were really easy to catch for humans. They laid a big white egg in a nest on the ground, next to a white stone to deceive enemies, but it was an easy prey to the animals which arrived on Dutch ships, like rats, cats, dogs, and even pigs...

Approximately one century after man arrived, dodos were already extinct.



Nowadays the dodo is a symbol of Mauritius, and it appears in many famous works like *Alice's Adventures in Wonderland* or more recently, *Ice Age*.