

USE OF ENGLISH PART 2:

Agar Art - Using viruses and bacteria to make works of art!

Have you __1__ seen art created in a petri dish using living, growing microorganisms? That's agar art! Creators use __2__ naturally colorful microbes or genetically modified microbes as 'paint' and various types of agar __3__ a 'canvas.' In fact, the original agar art artist was none other than Alexander Fleming himself!



In 2015, the American Society for Microbiology (ASM) launched the ASM Agar Art Contest to share the beautiful and diverse world of microbes __4__ the public.

It was surprised not only by the creativity and artistic skill of those __5__ entered the contest, but also by the public interest __6__ the images. The original contest was covered by more __7__ 200 media outlets from around the world.



Similar contests have sprung up in places like Nepal and Bulgaria, spreading the message that the microbial world is beautiful and diverse.

Danek is __8__ science teacher at The Nueva School a non-profit, independent school in San Mateo, California. She and her colleague introduced some changes to the subject of biology in 2018. The new microbiology unit develops students' laboratory skills and background knowledge before culminating in an unusual final project - students __9__ to design a living piece of "agar art". Danek says that students like the opportunity to be creative while showing off __10__ new knowledge and skills.



Students begin the unit learning __11__ to grow many different species of bacteria. Then, they experiment with different conditions __12__ as temperature and the presence of antibiotics. By observing how each species grows in these different conditions they can see the metabolic diversity of the bacterial world. Since none of the bacteria students work with __13__ harmful for humans, they also learn that bacteria do many things in our world apart __14__ making people sick.

We often think of viruses as agents of death and disease, but in truth, some viruses are actually quite helpful to the host that they infect.

This art piece has been painted onto the agar using virus particles.



Anyone who wants to try agar art should __15__ into account one or two things. Firstly, test your design and the materials you want to use in case your piece __16__ not grow as you intended. After all, your 'paints' are not static; they are living creatures.



"Fu(n)ji-san," Isabel Franco Castillo, Ph.D. Student, Instituto de Ciencia de Materiales de Aragón, Zaragoza, Spain.

The rare White Siberian Tiger suffers __17__ a lack of pigment in its skin and fur , __18__ makes it snow white. There are only about 200 individuals left in the world. They are mainly held in captivity since __19__ may be no wild white tigers left in the wild. The creator of this piece chose this 'negative style' image to raise awareness of this fact and that __20__ they disappeared for ever, we would be left with a huge negative space in our hearts.



Source: Adapted from information on the following web page <https://www.asm.org/Events/2019-ASM-Agar-Art-Contest/Home>

See more examples of agar art at facebook.com/asmfan

ANSWERS:

1. Ever
2. Or
3. As
4. With
5. Who
6. In
7. Than
8. A
9. Have
10. Their
11. How
12. Such
13. Are
14. From
15. Take
16. Does
17. From
18. Which
19. There
20. If