Olympiáda v anglickom jazyku, 31. ročník, krajské kolo 2020/2021, kategória 2C1 – riešenia a úlohy

R O L E P L A Y

STUDENT

You are an employee at an education agency that offers financial literacy courses and activities for primary and secondary schools. You have come to a secondary school to advertise your recent project, called Student Company, in which students master financial literacy skills by founding and operating their own enterprise. The project is funded by the Ministry of Education, which covers the training of coordinators from the teacher staff and continuous methodical support. At the same time, participants in the project are supposed to put together start-up capital, which is required to imitate the functioning of a real company. You have scheduled an appointment with the secondary school's headmaster, during which you will have to explain the importance of educating students in financial literary and convince him/her to take part in the Student Company project. Be ready to answer any question that might arise.

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R O L E P L A Y

TEACHER

You are the headmaster of a secondary school. A representative of an education agency that offers financial literacy courses and activities for schools has asked for an appointment with you to present their new project and to convince you to participate in it. You are curious about the project but there are other issues occupying your mind. You wonder whether the school should contribute financially to the implementation of the project, and whether your teaching staff should be involved. You also have some doubts regarding the way in which you could fit the project into the existing schedule and the school's limited premises.

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PICTURE DESCRIPTION

Look at the pictures and describe the differences and similarities between them. Identify the issue they illustrate and express your personal opinion on the matter.

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LISTENING –SCRIPT (please read only once)

Welcome to Soundhenge. Better known as Stonehenge, this ancient monument in southern England created a peculiar acoustic space, a study suggests. Acoustical engineer Trevor Cox and colleagues used laser scans of the site and archaeological evidence to construct a physical model one-twelfth the size of the actual monument. **That was the largest possible scale replica that could fit inside an acoustic chamber at the University of Salford in England, where Cox works**. This room simulated the acoustic effects of the open landscape surrounding Stonehenge and the compacted ground inside the monument.

Stonehenge Lego, as Cox dubbed the model, was assembled assuming that Stonehenge's outer circle of standing sarsen stones—a type of silcrete rock found in southern England—had originally consisted of 30 stones. Stonehenge today includes 63 complete stones, including 17 standing sarsen stones in the outer circle. Based on an estimated total of 157 stones placed at the site around 4,200 years ago, the researchers **3-D printed 27 stones of all sizes and shapes. Then, the team used silicone moulds of those items and plaster mixed with other materials to re-create the remaining 130 stones.** Finally, the team placed speakers and microphones at various points inside and just outside Stonehenge Lego. Each speaker emitted chirping sounds that swept from low to high frequencies. Sound frequencies were modulated so that the speakers' sounds interacted with the model stones much as natural sounds behave at actual Stonehenge.

Despite many gaps between stones, sounds briefly lingered inside the model. Reverberation time, a measure of the time it takes sound to decay by 60 decibels, **averaged about 0.6 seconds inside the model for midfrequency sounds**. That effect would have boosted the ability to hear voices and enhanced sounds of drums or other musical instruments. For comparison, **reverberation time is about 0.4 seconds in a living** room, two seconds in a large concert hall, and eight seconds in a large cathedral.

Stonehenge Lego did not project sounds into the surrounding area or boost the quality of sounds coming from external speakers. And sounds did not echo in the scale model. Inner groups of simulated stones obscured and scattered sounds reflected off the outer sarsen circle, blocking echo formation.

Previous research on Stonehenge's acoustics was incomplete, says Timothy Darvill, an archaeologist at Bournemouth University in England who has excavated at Stonehenge but did not participate in the new study. **That work includes sound measurements taken at what remains of Stonehenge today and at a Stonehenge replica in Washington state made of concrete.**

The new study was carefully and rigorously done, but questions remain about sonic effects, says Rupert Till, a musicologist at the University of Huddersfield in England who conducted some of the previous research. A wider range of acoustic measures is needed, for instance, to detect echo effects in the scale model that are also present at Stonehenge. Further research also needs to untangle why Stonehenge hums when the wind blows hard. It's not known what, if any, ceremonies or activities occurred at Stonehenge.

The site did serve as a cemetery between about 5,000 and 4,400 years ago. Cox cautions that the designers of Stonehenge were likely less concerned about acoustics than about issues such as the treatment of the dead and astronomical alignments. **Whatever people did at Stonehenge, the study shows that sound was fairly well-contained within the monument and, by implication, Stonehenge was fairly well insulated from sounds coming in.** Hearing sounds of some kind circulating inside the monument must have been one of the fundamental experiences of Stonehenge.

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ANSWER KEY

GRAMMAR – 15 points

1. started to become
2. having encountered
3. ingests
4. does most of that never come
5. filled
6. was
7. are still tuned
8. would be better
9. got
10. would eat

11. It 12. for 13. than 14. to 15. in/ over

VOCABULARY – 10 points

1 C 2 B 3 A 4 B 5 A 6 D 7 B 8 A 9 C 10 C

READING – 10 points

1 H 2 D 3 K 4 B 5 I 6 F 7 M 8 G 9 A 10 L

LISTENING – 5 points

1 B 2 B 3 A 4 D 5 C

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Olympiáda v anglickom jazyku – krajské kolo 2020/2021
Vydal: IUVENTA – Slovenský inštitút mládeže, Bratislava 2021