Produced by KOYO Senior High School



THE KOYO TIMES



STUDENT EDITION, JANUARY 2025

Kumano Kodo Repairs



(left) Students used traditional tools called "tako" to harden the ground. (right) Students collect soil to repair the mountain road.

Photo by Yasunori Kameoka

It is very important for future generations to preserve and pass on historic and cultural heritage. At Kumano Kodo in Wakayama, a project to nurture the next generation is underway. Kumano Kodo is a world-famous pilgrimage route, and many people know that it recently celebrated the 20th anniversary of its registration as a World Heritage site in 2024. In 2000, the project was firstly launched at Kumano Kodo. It provides classroom support for students from elementary school through to high school in Wakayama Prefecture in order to deepen their understanding of the Kumano Kodo. 27 students from Koyo High School took part in this project in October 2024. They did "Michibushin" repairing the mountain road and walked the pilgrimage route with the guides. "Michibushin" is part of the environmental conservation of

Kumano Kodo. Kumano Kodo deteriorates due to the large number of visitors, so they maintain this beautiful route by treading down soil that is brought from the Shikoku region. Although the work was simple, just carrying soil, it was difficult to make 3 to 5 round trips along mountain roads while carrying heavy loads. They felt the value of this project to repair the Kumano Kodo, which is familiar to them. In addition, a field study was conducted with a local expert who is knowledgeable about the area between the Sangenchaya site and the Hongu Taisha shrine. Koyo students listened carefully to the expert's talk and deepened their understanding. During the walk, they walked chanting "Penitence, penitence, and purification of the six roots," which Shugenja chanted during their ascetic practices. This chanting was meant to express repentance and to purify the

body by cutting off the miscellaneous thoughts arising from the six roots (eyes, ears, nose, tongue, body, and will). It is said that when people in the past chanted Kakenembutsu, their physical exertion and lung capacity improved, and their minds were clear. Looking down on Oyunohara from the overlook, they thought about the scenery that people in the past must have enjoyed during their journeys. Their understanding of the Kumano Kodo deepened, and

but also from all over the world. The Kumano Kodo is a rare place where one can feel the passage of time, where the path started by the imperial family and aristocrats in the Heian period and was taken over by the samurai and common people, and where we can pass through the same way today. Why not take a walk along this mountain road to experience nature and history?

they felt the importance of preserving and passing on the Kumano Kodo. The Kumano Kodo is a mountain road that was traveled by the powerful Emperor Go-Shirakawa and Fujiwara no Teika, the compiler of the *Hyakunin Isshu*, with a collection of 100 poems. The fact that the road itself is registered as a world heritage site is a rarity in the world, and its charm is such that it attracts tourists not only from within Japan Minori Yoshida Moe Nakatani Mai Kushigami Wakana Inoue Kenshin Kimura

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Published by a group of 10 students in newspapaer club and English club of Koyo Senior High School, a prefectural school in Wakayama. Publisher: Koyo Senior High School Project Supervisors: Miho Sakaue Contact: 127 Oda, Wakayama city, Wakayama, Japan 640-8323 URL: <u>https://www.koyo-</u>

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By Kokona Kimura

Wakayama Castle Changes Its Appearance

History of Wakayama Castle

In 1524, Hideyoshi Hashiba, who would later be known as Toyotomi Hideyoshi, ordered his younger brother Hidenaga to build Wakayama Castle on the peak of Mt. Torafusu. In 1600, Yukinaga Asano built a blackboard-covered continuous tower and developed the shape of the castle and the castle town with the main square town division based on Otesuji. In 1619, Yorinobu, the 10th son of Tokugawa Ieyasu, entered the city, and the Kishu Tokugawa family was established. Sunanomaru and the Minaminomaru were added, and it became almost the current form of Wakayama Castle. The continuous tower, the symbol of the castle, was renovated from the blackboard to the white walls in 1798, but it was burned down by lightning in 1846. The second tower, which was rebuilt four years later, was also burned down again in an air raid in 1945. The current one is the third generation made of reinforced concrete.

After visiting Wakayama Castle, we visited the Wakayama History Museum. In addition to an exhibition of a wealth of historical documents on Wakayama Castle, the Wakayama History Museum also showed "Reviving Wakayama Castle", a VR reconstruction of Wakayama Castle in the Edo period (1603 \sim 1868). We toured the history museum and interviewed a curator, Junpei Sugiyama.

He thinks that the most difficult part of the history of Wakayama Castle was a movement of demolish the castle in the Meiji era ($1868 \sim 1912$) that almost succeeded. "At that time, there was no idea of 'historical value' and the castle tower was considered unnecessary.", he said.

He also thinks that Wakayama Castle's strength is its continuous tower. The castle tower has a garden in the middle, which makes it suitable for sieges. "Keeping Wakayama Castle from breaking due to earthquakes is a problem.", he complained. It is expensive to rebuild and repair. In addition, "We should convey the attractiveness of Wakayama Castle." he said strongly.

"We would like people to see the castle during events there. We need to spread the castle's features and get people interested in it."

We strongly felt that it is our turn to carry on the will of our predecessors. I would like you to visit Wakayama Castle and experience its history. Thank you very much for sharing your precious stories.

By Miyu Hamamoto Ayano Kishimoto





The tower of Wakayama Castle against the blue sky Photo by Ayano Kishimoto

The Landscape of Wakayama Castle

History of the Stone Walls

One of the attractions of Wakayama castle is its stone wall built by three generations of loads. You can estimate the age of the stone wall by examining the way it was built and its stone material. The stone wall is characterized by the carved seals on it. The design of carved seals ranges from simple ones such as \bigcirc , \triangle , \bigcirc , \times , to complicated ones like a bird. The purpose of them is unknown, but it is said that the peach-shaped one on the stone wall in the northeastern part of the castle was carved as a ward, because northeast is an unlucky quarter in Japan. The carved seals are fading year by year. If you want to see them, it is now or never.



History of the Garden



Nishinomaru Garden, beautiful fall scenery

Photo by Rina Mishima

Nishinomaru Garden is located within Wakayama Castle. It is also

A peach-shaped seal on the stone wall in an unlucky quarter Photo by Rina Mishima called 'Momijidani Teien' (Autumn Leaves Garden) because of the magnificent autumn leaves. The inner moat of the castle is used as a pond. During the Tokugawa and Asano periods, tea houses were built, and it seems that generations of shoguns enjoyed tea surrounded by the seasonal beauty. In the Edo period, only the feudal lord and a limited number of people were allowed to pass through the Ohashi corridor connecting Ninomaru and Nishinomaru, and in 1985 it was designated a national place of scenic beauty and is still enjoyed by many tourists as a garden where the four seasons can be enjoyed.

By Akari Matsuoka

By Rina Mishima

Great Success of the English Club



TED style presenter and Koyo debate team Photo by Yasunori Kameoka

We, the English club, enjoy English activities with our FLT teacher and actively participate in English related competitions and contests. Here I would like to introduce our English debating team, which participated in a national contest last year. English debate is a competition in which students debate on a given topic, taking the affirmative and the negative side of an argument. Koyo High School's English club has been competing in English debates for many years. This year, for the first time in seven years, Yuito Tsuji, Tokimune Hayasi, yui Fujiwara and Hikari Yamada able were to participate in the national debate tournament. We asked some of the members who participated in this

debate tournament what they thought. Their impressions were as follows.

We participated in English Debate because I was invited and because we wanted to practice our logical thinking and improvisation skills. It was difficult to make a speech without making mistakes in a short time and to communicate well with others in English. It was also difficule to manage our schedule. However, we enjoyed responding to the opponent's attacks and making many friends based on the "Make Friends" program. At the national tournament, we were glad to be able we had show everything to practiced in a high-level match. It was a great experience for us to interact with so many people. Through English debate, we learned the fun of debating and the importance of respecting your opponent. From now on, we would like to make use of the task management, logic building, and speed-reading skills we developed through debating in our studies.

Also, Minori Yoshida, the president of English club won the best audience award in the 38th Wakayama Prefecture Senior High School 9^{th} English Presentation on November in 2024. 9 schools took part in the competition, including dramas English and English presentations. She made a TED-style presentation titled "One step closer to being a global citizen". Her comment: "I was very happy to show my view of global citizens to others

and I was also surprised to receive lots of supportive words from students in other schools including an international student. I am sure that this will be the highlight of my Koyo High School life."

In addition to the English club, Koyo High School also offers many other club activities. There are a swimming club, a baseball club, and even some unusual ones such as a Shorinji Kempo club and a fencing club. The brass band club is one of the top class in the prefecture. Students at Koyo High School not only study hard every day but also engage in club activities seriously. Koyo students who aim to receive both literary skills and martial arts are growing every day.

By Minori Yoshida Kokona Kimura Moe Nakatani Mai Kushigami

Today's school uniforms are not meant to be entirely uniform or controlling of students, but rather special ones that allow for diversity and respect for individuality. We are now in a transitional period, moving from an era of "be like a man" and "be like a woman" to an era of "be like yourself." Uniforms are evolving we interviewed Mr. Hazama, whose manner idea was adopted as the school my des

New School Uniform



emblem.

The school emblem and button of

manner. "I was very surprised when my design was adopted because the other designs that were in the running were all good. I was very happy and grateful that they chose my design," she said.

Next, we asked the first-year students who are wearing the new uniforms their thoughts.



rapidly with the times.

At our Koyo High School, too, a new uniform was introduced this school year. Until now, students wore sailor uniforms and traditional gakuran, but from this school year, the uniforms will be replaced by blazers. We can now choose from skirts, pants, ribbons, and ties. The school emblem and buttons for our new uniforms were proposed by the students. Here, new school uniform

Photo by Koyo High School

According to Ms. Hazama, the yellow part of the letter "K" expresses ambition and a bridge to a bright future. The sunflowers, which are the school flower of Koyo High School and bloom toward the sun, carry the message that the students should spend their lives at Koyo High School in a bright and positive "I am happy to be able to choose my own uniform. I think it is convenient because I can adjust my body temperature according to the climate. Also, the design is modern, and I feel that the blazer I wear now is better than the sailor uniform I wore in junior high school. The change in uniforms has given the students a wider range of choices, and it has

New school uniform Photo by Koyo High School

reduced their anxiety about school life."

By Minori Yoshida Kokona Kimura Moe Nakatani

SCIENCE

Biological Environment of Wando

We interviewed members of the science club who had won the Wakayama Environment Prize and the Yomiuri Science Prize.

The Science club collects aquatic organisms such as fish, shrimp, and turtles in the Kino River every month. Using the fish species collected, they focus on characteristic species, species with large populations, and non-native species, and examine how they live in the Kino River. In the literature, it has been reported that the conservation of fish species, with an emphasis on the topography of the special landform called wando in Japanese, has been instrumental in the recovery of native fish populations. Therefore, they wanted to conduct conservation in the many wands that exist in the Kino River, but it was unclear what kinds offish inhabit and use these wands." First, we conducted this study to clarify

what the wando provides for fish species to make use of it for conservation" one of the members of the club said.

They had to wear big boots that reached up to their chests as they conducted the research, so it was hot and humid in the summer and the water was cold in the winter, making it difficult. "There were a lot of tough times, but the most enjoyable was the time we spent face to face with the fish, probably because we were all "fish lovers"." they smiled.

"We would like to thank Dr. Hirashima of the Wakayama Prefectural Museum of Nature for his guidance and Ms. Tsuchitani for accompanying us on our monthly surveys. We are happy that our research has been recognized in this way.", they said. Moreover, they would like to continue their research because it is only through long-term,

continuous research like this that we can learn a lot about living organisms. They will continue to collect data over a number of years and consider the ecology of fish (what they eat in which months, how they migrate upstream, etc.) and the annual fluctuations of native fish (what effects of non-native fish and river

development having). are Furthermore, they will expand the study area and conduct frequent surveys because fish species also use the surrounding environment of the study site.

By Ayano Kishimoto





The members of the science club won the Wakayama Environment Prize.

Photo by Yusuke Taniji

New Maple Seed-shaped Wind Turbines

The Super Science High School (SSH) initiative is being implemented Wakayama at Prefectural Koyo High School. This initiative aims to nurture chemical engineering personnel with both independence and science communication skills. Students in the environmental science course will engage in a variety of problem exploration activities in mathematics, physics, chemistry, biology, and

disaster prevention throughout their six years of junior high school and high school. In the high school regular course, students explore issues about the environment through the SS KECRe initiative throughout their six years of high school.

We interviewed a group of physics members seminar who are researching maple seeds. They are conducting an experiment to apply the mechanism of maple seeds falling

Newton! After conducting various experiments and continuing their research, they discovered that a model of a wind turbine that imitated the shape of a maple seed would start spinning at a smaller wind speed than those used in conventional wind power generation. They guess that this is due to the fact that, unlike usual wind turbines, maple wind turbines may be driven by a combination of two forces: drag and lift. If this is correct, it may be

possible to generate a large amount of electricity from a small amount of wind, thereby promoting the use of wind power in Japan. Through SSH, They learned the importance of learning from failures to succeed. They also said that they realized the importance of not giving up right away in the middle of their research, but to cooperate with teammates.

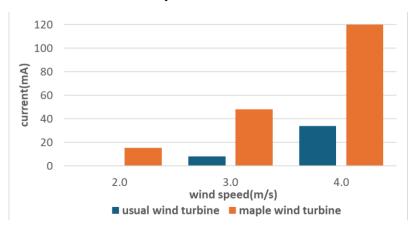
_____ By Rina Mishima



wind power generation. It all started one day when one of the members maple saw seeds spinning and falling from a tree and came up with the idea of applying it to a wind turbine. Yes, just like

Experiments being conducted outdoors

Photo by Misuki Nakao



A wind turbine the shape of a maple seed generates a larger amount of electricity

Figure by Rina Mishima