

IMPERIAL SCIENCE SOCIETY NEWSLETTER

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THIS IS THE IMPERIAL SCIENCE SOCIETY’S VERY OWN NEWSLETTER, SENT TO YOU ON A REGULAR BASIS TO KEEP YOU UPDATED ON ALL THINGS RELATED TO SCIENCE AND THE ISS ITSELF. IF YOU WOULD LIKE TO VOLUNTEER TO WRITE AN ARTICLE YOURSELF, FEEL FREE TO REACH OUT TO ANY OF THE STAFF.

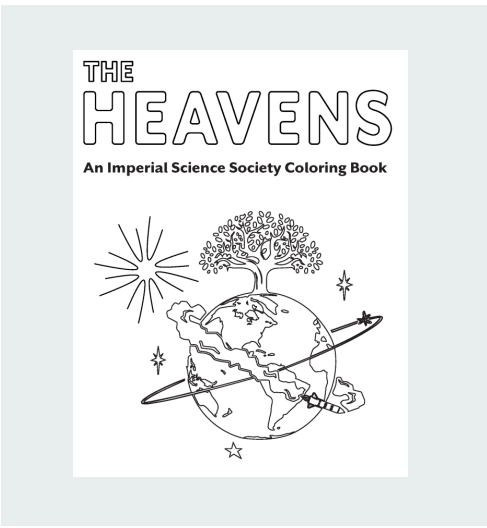
IMPERIAL SCIENCE SOCIETY CREATES SECOND COLORING BOOK

ELLE HENSLEY | ARKANSAS

The Imperial Science Society has just finished creating their second annual ISS Coloring Book. The project was led by Sophomore Saraa Warminski, and the focus of this year’s book was “The Heavens.”

This year, a crew of six took on the challenge of creating a coloring book that features 10+ illustrations as well as multiple word puzzles and activities. Illustrations were created by Senior Aaron Stewart and 7th grader Laurel Barkei, with ideas coming from 7th graders Dorothy Lord, Brooklyn Williams, and Barkei herself. Layout was completed by Warminski and Junior Elle Hensley.

Warminski appreciates the unification of elementary and secondary grades that comes with the coloring book. “The secondary and elementary grades don’t generally have much contact, especially for the onliners, so I think it is really special to get to serve the elementary in this way.” She said her favorite part of



creating the coloring book is layout and “seeing it come to life.”

“The coloring book is an important project for the Imperial Science Society (ISS) because it provides an opportunity for ISS members to participate in a worthwhile endeavor.” said Club Advisor Stephen Coats. “... it allows club members to give back to the school that has so kindly provided them an opportunity to even have a club ... The ISS hopes that the coloring book will ultimately point elementary students to God.”

HANDY HAND-CLAPPING DISCOVERY

MATTIE STEWART | FLORIDA

Have you ever wondered why clapping sounds the way it does? According to snexplores.org, scientists have “finally figured out what’s behind the sound of hand-clapping.”

In an article titled “Physics finally explains the sound of clapping,” Emily Conover describes hand-clapping as the same concept as blowing across the top of an empty bottle. It is scientifically known as the Helmholtz resonance. New experiments with baby powder, to map the flow of air from a clap, have confirmed that when you clap your hands, they become Helmholtz resonators.

A Helmholtz resonator is made by “an enclosed pocket of air with an opening connected by a ‘neck,’” according to Conover. The air that vibrates back and forth within the “neck” creates sound waves; the pitch of the

waves depends on the volume of the air pocket and the dimensions of the neck and opening of the hole.

Yicong Fu, a mechanical engineer at Cornell University, wrote a report on the sound, flow excitation and collision dynamics of human handclaps. His report included information about different types of claps and experimented with tests that “smacked together cupped hands,” Conover reported. Other tests experimented with clapping flat hands and “claps” that involved fingers smacking a palm.

Pitch makes a difference in the Helmholtz resonators because, according to Conover, “bigger air pockets make deeper sounds. And cupped hands produced lower-pitched clasp than flat hands.” Fu said that understanding the physics behind hand-clapping could help

NASA ASTRONAUTS STILL STUCK IN SPACE

ISAAC SMART | ARIZONA

Astronauts Barry E. Wilmore and Sunita Williams traveled to the International Space Station (ISS) in a Boeing Starliner capsule and were originally supposed to return to earth after one week. However, as the Boeing Starliner capsule docked with the ISS, it was deemed unsafe for the astronauts to return.

Because of the problem with Starliner, their trip has been delayed for nearly 10 months. SpaceX had agreed to send up a capsule to bring them back down to Earth, but there were some difficulties with the pressure systems. Because a different manufacturer supplies suits for SpaceX and NASA’s Boeing Starliner, the pressure in the suits of NASA’s astronauts does not match the pressure systems of SpaceX.

Both Wilmore and Williams have observed some slight effects on their health from their prolonged stay in the cosmos. Williams says she has “forgotten how to walk”.

Both astronauts hope to return sometime in March or April of this year.

identify people by their claps and help musicians “fine-tune songs with the perfect hand-smacking beat,” according to Conover.

REACH INTO THE EARTH

DOROTHY LORD | MISSISSIPPI

Located east of the Mariana Islands, in the crushing depths of the ocean, lies the Mariana Trench. The Marina Trench is formed by a gap in the middle of the tectonic Pacific and Mariana plates. The deepest point of the trench is Challenger Deep. Just what exactly is down there?

The Mariana Trench is about 36, 037 feet, or 7 miles deep. If you were to put Mount Everest at the bottom of the trench, its peak would still be 7, 000 feet underwater. At the bottom of the sea floor, the trench has some volcanic activity from a chain of volcanoes, releasing ash and other debris into the water. Along this chain are hydrothermal vents, which release carbon dioxide and liquid sulfur bubbles into the water. Some of the sea creatures that live in this toxic environment have adapted to and can live with the released gases. The pressure of the trench can be extremely dangerous. Normally, pressure is 14 lbs. per square inch. At the bottom of the trench, it is 14, 000 lbs. per square inch.

Despite the pure darkness and freezing temperatures of the Mariana Trench, which are around 34° to 39° Fahrenheit, animals live in the trench—many are strange looking. Some animals that live here are the Mariana snailfish, the barrel-eye fish, sea cucumbers, anglerfish, and macroscopic xenophyophores, which are marine protozoans. Some of the animals that live here are capable of producing bioluminescence, such as the anglerfish, which has a bioluminescent rod at the top of its head that swings back and forth to lure in prey. Through the Mariana trench and its sea creatures, God’s masterful handiwork is shown.

EARTHSHAKING EVENTS AT THE ISS

RYLIE MARCH | OKLAHOMA

Every Thursday at 11:20, a large population of the student body heads into classroom 201 to attend the Imperial Science Society, also known as the ISS. In our last meeting, which was held on April 10, we had our routine current event lecture given. It was prepared and presented by junior, Jean-Philippe Guillaume.



He informed us that on March 28, a 7.7 magnitude earthquake rocked the people of Myanmar—a small, southeast Asian country bordering Southern China. Around 5,000 people died and thousands of roads, network connections, bridges and buildings were destroyed. Unfortunately, Myanmar wasn’t the only place that was affected. China, Thailand, and Vietnam

also experienced repercussions from the earthquakes.

China and Thailand are recovering from possibly millions worth in damage costs, and almost a thousand dead or injured. Vietnam, however, wasn’t hit nearly as hard and is skating by with little damage and one death.

He concluded his lecture by reading Luke 21:11, which says, “And great earthquakes shall be in diverse places, and famines and pestilences; and fearful sights and great signs shall be from heaven.” Guillaume added, “God is trying to wake this world up as we know, and so far, no sign or it appears in this disaster. This earthquake caused tons of damage and killed thousands. It is the worst earthquake since the Turkey/Syria ones in 2023. It is yet another reason to await the coming of Jesus Christ.”