



#TheBestView

ARISS NEWSLETTER

Mountain View Elementary
Vol. 3: November 17, 2023



#TheSkysTheLimit

Here's What is Happening Around School!



MVES was recognized at the November board meeting for being a CCSD STEM Certified school! Congratulations to all for a job well done!

Our Learning Commons has an ARISS display with books for all grade levels and reading levels. Every week on the morning news, our ARISS correspondent highlights one of these books. There is also a selection of fiction books in the LC that are related to space and ARISS.

Recently we received a new collection that includes two books about radios and the history of radios. Another new book addresses sound in space as well as other questions about sound. A new story book, Give Me Some Space, is about a young girl who wants to be an astronaut and grows up to go on a mission to find life in space. This story will be read during our checkout/story time for a week.

During our fall book fair, Bedford Falls put together a selection of books about all-things-space and the International Space Station with books for all grades and reading levels.

Thanks to our 1st & 2nd Graders for decorating the STEM Lab! Your space pictures are "out of this world"!

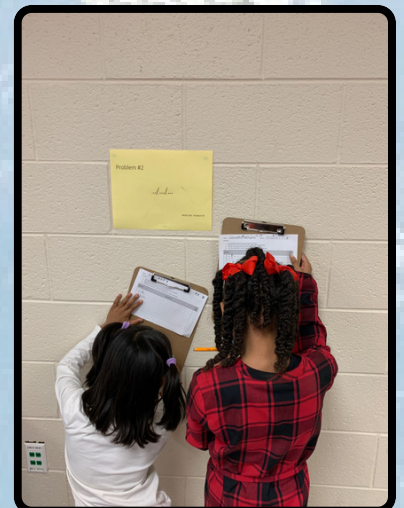
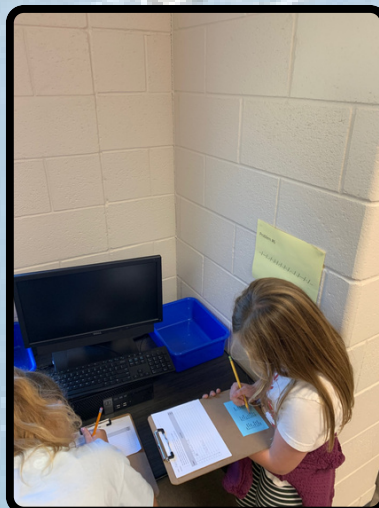


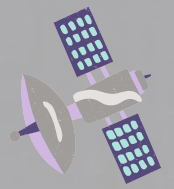
ARRL Teacher Institute Training and Conference



The Amateur Radio Relay League (ARRL) held a teacher conference and training institute for radio and wireless technology – which relates to the ARISS direct contact. Dr. Z spent over 40 hours during the week learning about desk radios, handheld radios, antenna types, wiring, morse code, cyphering, mapping, transceivers, and tracking satellites in space. She participated in building her own antenna system, transceiver fox hunting, learning how to solder electrical components, and how to use a handheld radio with her cell phone to record a slow-scanned television image sent from the International Space Station as it flew over the parking lot. Dr. Z also helped others learn about the Mountain View ARISS educational plan. Overall, the experience was amazing, and the learning was vast.

Upon Dr. Z's return, the students, and teachers, have already begun to implement and experience several of the topics from the training and conference. Because of the path the ISS travels, select homerooms from kindergarten and second grade learned how to track the ISS from an application called ISS Tracker, and then headed outside where they used the handheld radio and Dr. Z's cell phone to record the "sounds" being sent from the ISS over 250 miles above them. Once those sounds were recorded, Dr. Z brought the students back into the classroom, turned on the decoder and an image slowly appeared line by line. In other homerooms, students were taught how radio waves travel and students had an opportunity to listen in on a weather forecast from NOAA. Lastly, students have been learning about Earth's rotation, daylight timing, satellite tracking, and a radio waterfall screen.

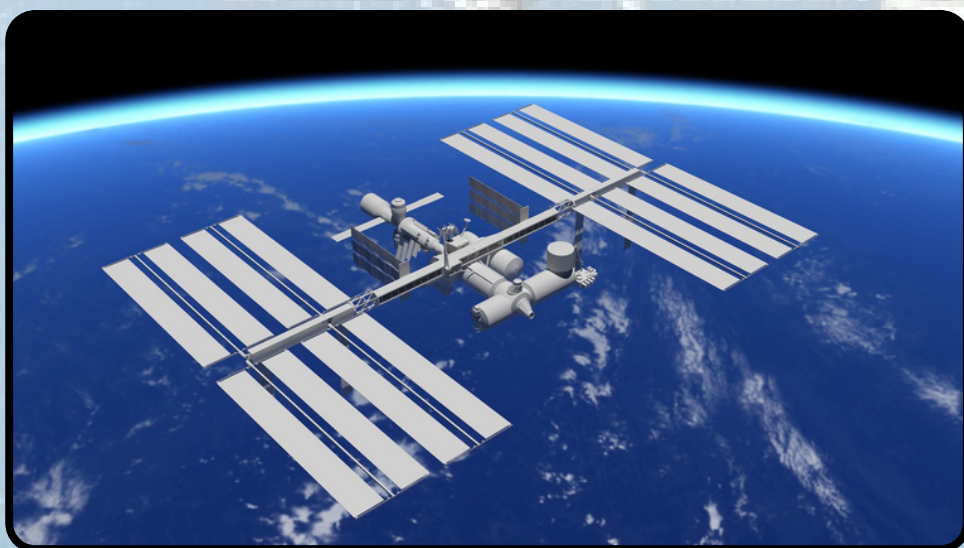




Becoming a Set of Headphones

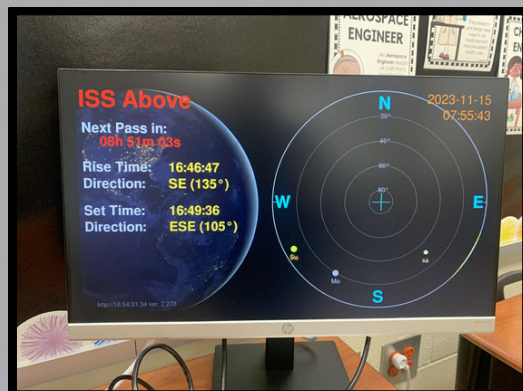
Students, and members of the Building Leadership Team (BLT), used the “humming” of their voice to learn how to cancel out radio signals found within various classrooms. The students, and teachers, asked “wait – we are going to make noise to cancel noise?” ... and so, the experiment started. By watching the screen, students saw the waves on the screen moving in various directions – even though they were sitting so quietly – the waves stayed. They started to realize that there were “things” in the room making noise, things they could not see or hear. So like excellent scientists, they began to search the room, listing all the items making “noise” ...even the classroom lights were turned off when one student said “I hear buzzing from the lights!”

They all sat back down, determined they found all the noise, but unfortunately, the noise still existed. That is when we started to hum, low. Slowly, the noise began to change, the screen was becoming less and less filled with waves. Then suddenly it happened...no waves...all because we were humming at the perfect pitch and tone. We cancelled the noise by making noise! Students (and teachers) were amazed at what just happened and then quickly wanted to try again. We all got the same result...to which Dr. Z said out loud – “congrats, you just became a pair of noise cancelling headphones!”



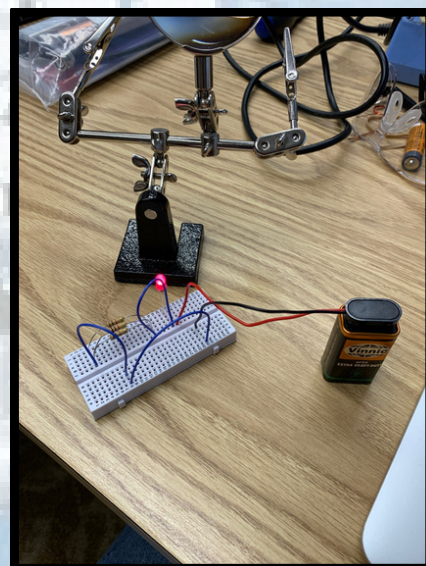
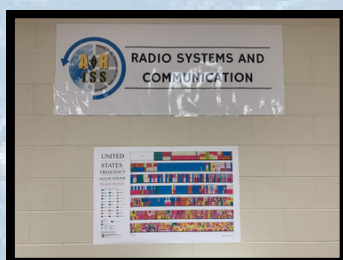
150 Days to ARISS Contact!

There are some new technology additions in the STEM Lab – ISS Above Software, SPARKI Radio Kits, and The GeoChron. Here is some interesting information about each:

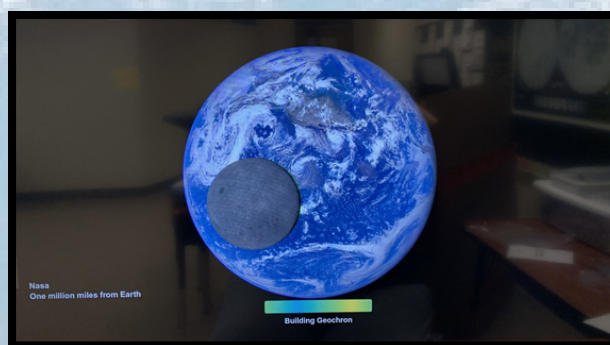


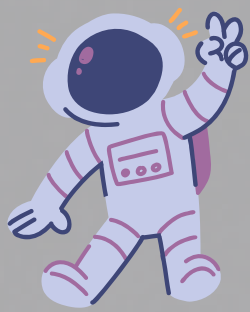
ISS Above Software – designed to track the International Space Station all over the globe. It offers students a chance to relate position of Mountain View to the sun and moon. The software will also let students know how much time will pass before the next fly over occurs, which astronaut crew is aboard, which educational contacts the astronauts have made with students, and all the details of the current flight track such as magnitude, direction, distance, and time of contact.

SPARKI Radio Kits – designed to utilize a software defined radio based in a digital format. Students will be able to learn morse code, read strength of signal, locate potential sources of communication, switch between bands, and listen to NOAA weather...all with the click of a mouse. Students will also learn the importance of radio waves and how antennas collect and distribute the information.

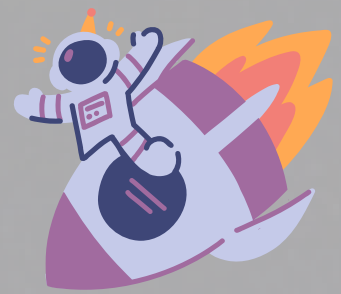


The GeoChron – this is Dr. Z's personal addition to the STEM Lab, a digital world map. The software is coordinated with earth's true rotation and timing. The GeoChron has the ability to showcase airline travel, shipping lanes, earthquakes, volcanic eruptions, air quality, light pollution, HAM radio, precipitation, barometric pressure, wind speed, ISS Tracker, NOAA satellite trackers, carbon pollution, cloud cover and more! The software has four different viewing options...in REAL TIME.





Word Search



Q M A N N E T N A T G X R W C V G I Q O T X L J E T K K C R
D U U L L J V T Q T T M N O X L D N K T L X X I Y N H M A U
J P O A Y Q M S I A D I L I A A K T I I S N U A Y U Z S X C
Q Y H G O C M S E A E U U E F W P E Q K O G H Z E V E S C B
V X M F R N F V D V M A Z E R P A R Y K G A I V W J J I I T
S J S P C H I W Q B A C G G W B X N J K J Q K B E M G R N F
H I U Q C S S C I O O W P P G Z K A W A H V F J W G I A C V
U Q X K R W M A A G Y H O U F R M T R Z Y G K K B J Q Z Q B
G E C H W W M H I H M B Z I Y T S I W M Y C N E U Q E R F X
H W W V N O W B E W L W Q A D V U O S H X B B I A H X H I U
R C T R D C E P C L P Z B P T A W N G M V O K G K D A V I A
S D M U G P L D M H K N A O Q X R A F N L X O H T S F Z F E
U Z L H Y D S X Q Z C T C C M R V L W O S G L O K R P A L F
R E O F A B V T V H L H O A W W U S D J C E B W R D J D B Y
V Z Q D O D T K T T B S H G U C V P D M H C G Z V P M O X P
X B Y U P F Z T L C P A V D A U B A H A B N B R T L Z H U F
H X X B W T M W X O M V J L N I L C O T S V A M U A C W K D
D Y R G P Y D T X T O I L O U K I E G P Z T K L C M Y H M L
T A G F T X Q L A H M S I H H Q D S S U G U R F U N E Y W Y
U R A V U W J D T V I D E C G P G T F N S J J O P B C K N E
K K Z W L H U L Q G A N P Y V B V A A T L V M X N O J O R F
A M P V X L V S N R P E Y U C A J T W D M Q H T H A M M H V
Z U S B A P D Q J H B R U F P R G I O R B I T K S A U Y U M
R Y C M W B F O B R L V F Y R E G O F R T V K T U U E T L U
P D D Q D W E T H H W T W W Q P A N P W V P G O N J R Q C T
B X I Q B J I S L S H S A V X P V F F U Q X Z M Q K Q H Q Y
D Q X D E R P H T R M F Q M U R Q C G E L O W E E J H J E H
A D B C W K H Q F T N S O O B M Q N U K G L C Z S K P I U P
I S S I T Q J V E Z E G T D V N W K P T W Y L R V E Z K I V
N A V R Z O I K P R Y B I H I P K L H F E H F X P K E F Z M

Word Bank

antenna

call sign

ARISS

astronaut

frequency

radio

orbit

international space station

Columbia module

radio waves

ARISS Symbols

Unscramble these ARISS symbol words!

(Solutions on the next page)

1. iifw

4. ytarebt

7. reeqnyfcu

2. oehltobut

5. fnoof

8. glorasiidan

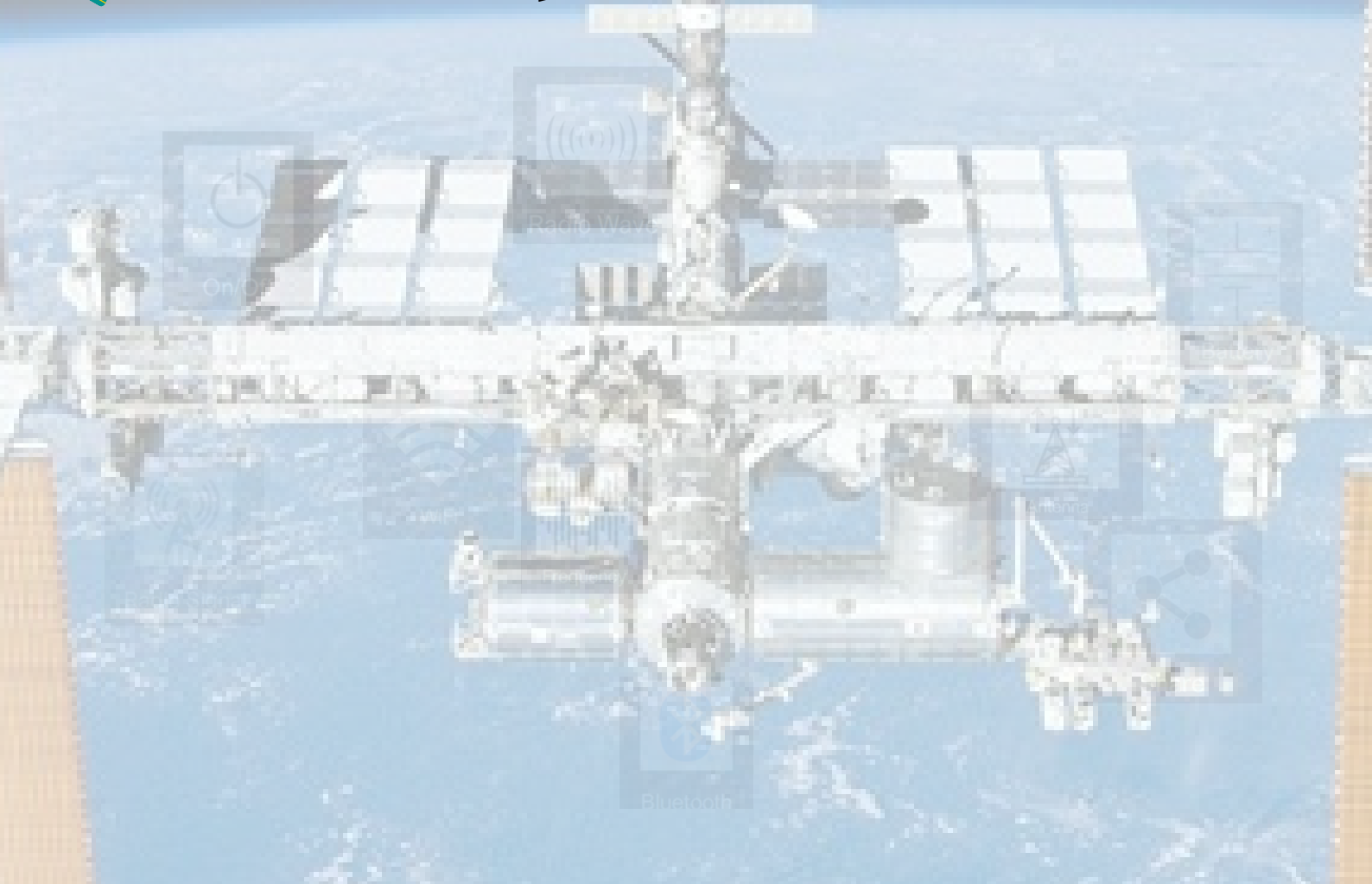
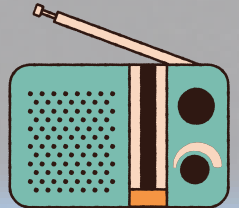
3. heras

6. vdewaaroi

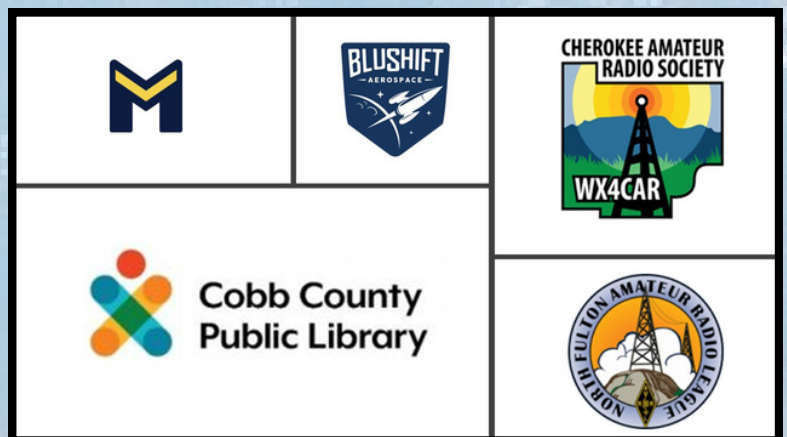
9. etnaann



Can you find nine common symbols used in radio and wireless technology hidden in the picture below?



**Thanks to our
community
partners!**



ARISS Symbols-Answer Key

1. WiFi

2. bluetooth

3. share

4. battery

5. on/off

6. radio wave

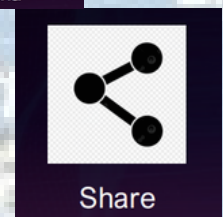
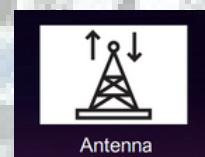
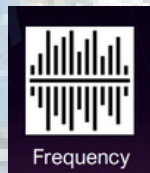
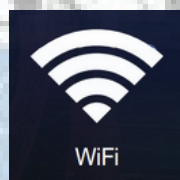
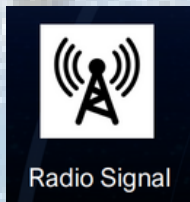
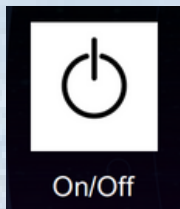
7. frequency

8. radio signal

9. antenna



Can you find nine common symbols used in radio and wireless technology hidden in the picture below?



Check back soon for a special edition of the ARISS Newsletter about "Balloons Over MVES"!