



Chinook salmon face a new threat — too many anchovies

Jocelyn Davis
TURNER ACADEMY

Who would have guessed ... the Chinook salmon population is endangered due to anchovies. The Chinook salmon population decreased in 2022. This happened because they had a huge craving for anchovies.

The salmon's diet suddenly changed to only having anchovies rather than eating squid, herring, or shrimp. There is an excess of anchovies along the California Coast. When the anchovies came to the coast, they introduced the salmon to a new food source. This new food source is dangerous for the salmon, because of the

thiaminase anchovies have in their bodies. It is dangerous for the salmon to eat them because this lowers the thiamine in their body, which can be fatal. There are ways you can tell the off-spring's thiamine levels are too low. These ways are: the fish have swimming problems, they randomly start

spinning in a corkscrew like pattern until their death. You can save the salmon if they are in tanks by adding a special thiamine to the water. This is a new danger to our Chinook salmon. Scientists will continue to investigate and try to find ways to solve this problem.



AALIYAH COX/VINEWOOD ELEMENTARY SCHOOL

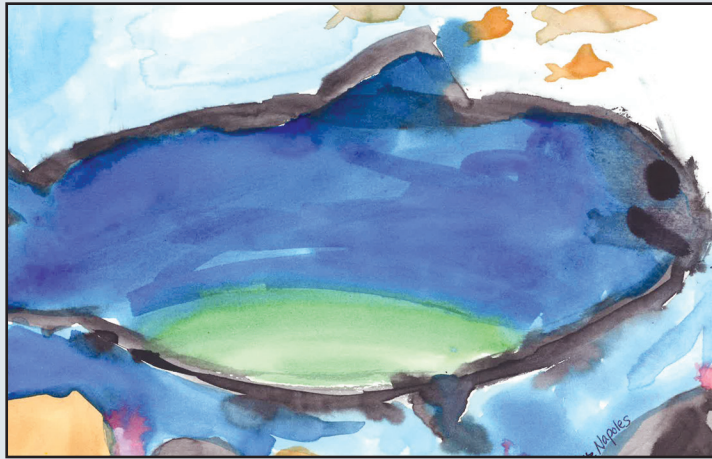
A bird's view: Interview with a Sandhill crane

Aaliyah Cox and Brenna Adam
VINEWOOD ELEMENTARY SCHOOL

Brenna: Hey there, Mrs. Sandhill Crane! Thanks for coming by. I have a feeling you were dancing back at home.
Sandhill Crane: Hey, Ms. Interviewer, of course! I love getting interviewed. Your feeling is correct, I was dancing!
Aaliyah: Now let's start off with the questions. What are some of your predators?
Sandhill Crane: Well, this is a tough topic for me, but coyotes, raccoons, and common ravens are my predators, and they are very scary.
Brenna: Augh, that does seem scary. Are you endangered, and if so why are you

endangered?
Sandhill Crane: Yes, I am endangered, due to habitat loss, wetland loss, urban development ... Humans hunt me, and since I nest in wetlands, I need people to try not to destroy them.
Aaliyah: Well, moving on from that tough topic ... What are your habitats?
Sandhill Crane: Yes, I would appreciate moving on. My habitats are prairies, marshes, fields and tundras.
Brenna: Wow, that's interesting! Well, I assume you get hungry, so what do you like to eat?
Sandhill Crane: I do get "hungee"! When I get hungry, I usually eat plants and grains, but sometimes I also eat invertebrates or even small mammals, am-

phibians and reptiles.
Aaliyah: Yum! Now the most important question: What can we people do to help you flourish through life?
Sandhill Crane: Some things to help me flourish would be to stop hunting as much, and don't mess with natural habitats.
Brenna: OK, we will try to! Thank you so much for teaching us and the world all of this important information, and thank you for your time. It's much appreciated, and now you can go back to dancing!
Sandhill Crane: No problem. I hope this helps us Sandhill cranes, and other special animals! I am definitely going back to dancing!



JULIETTE NAPOLES/VINEWOOD ELEMENTARY SCHOOL



GENESIS NAPOLES/VINEWOOD ELEMENTARY SCHOOL

Inside the ecosystem: Interview with a Delta smelt

Juliette and Genesis
Napoles
VINEWOOD ELEMENTARY SCHOOL

Interviewers: Who is your main predator, and how do you keep safe?
Delta Smelt: The striped bass and the largemouth bass are my predators, and I keep safe by the plant filter, the water column, and suspended particles help hide

me.
Interviewers: What do you normally eat, and where do you get your food?
Delta Smelt: I normally eat planktonic copepods, cladocerans and amphipods, and I get my prey in the San Francisco Estuary where I live.
Interviewers: What is the lifespan for a healthy Delta

smelt?
Delta Smelt: It's a one-year lifespan.
Interviewers: What is the importance of the Delta smelt?
Delta Smelt: We have often been a reliable ecological indicator that shows how healthy the Delta is, because we are a big part of the food chain, and if we are healthy, our environment is

healthy, too.
Interviewers: Are you endangered?
Delta Smelt: Yes, we are listed as endangered under the Federal Endangered Species Act. Some of the problems we face are too much salt, not enough water flow, toxic substances, changes in water temperature and disease.

Dr. Cathy Nichols Washer
former superintendent, Lodi Unified School District

Farewell, Dr. Washer: An interview with Lodi Unified's outgoing superintendent

WOODBIDGE ELEMENTARY SCHOOL

The fifth and sixth graders of Mrs. Willis's class at Woodbridge Elementary recently had the privilege to chat with Dr. Cathy Nichols Washer, Lodi Unified School District's outgoing superintendent, who will be retiring after this school year. This is what we discovered about Dr. Washer:

Can you please tell us what a day in the life of the Lodi Unified School District's superintendent looks like?

Dr. Washer does not have a "typical" day. Many days her plans get thrown out the window due to meetings, emergencies, complaints, or legal issues. She spends a lot of time talking with board members and parents about issues surrounding the district. Every day is a different day, but she enjoys visiting schools and classrooms.

How long have you served as Lodi Unified's superintendent? What did you do before your time here in Lodi Unified?

Dr. Washer has been with Lodi Unified for 15 years. Before that, she served as the superintendent in Manteca

Washer continues on Page 2

I have greatly appreciated the watershed education programs over the past 15 years including Storm Drain Detectives, mural projects, and the Mokelumne Current. Through these efforts, students at different stages in their educational career work together for a common goal. Elementary, middle and high school students have the opportunity to be involved in high interest, engaging activities that have a lasting impact. Thank you, City of Lodi, and thank you, LUSD teachers, for supporting the watershed education programs that have taught students California's Environmental Principles and Concepts. Many of the activities require after-school hours work, and teachers have put in a great deal of time and energy to make them successful. I appreciate the guidance given by Kathy Grant, City of Lodi, to ensure that the programs are high quality. I hope this continues well into the future as it is critical that students learn about issues that will impact them now and in the future. It is encouraging to know that the youth in our communities are concerned about the environment and want to make a difference for the future.

Wild art: Students portray the animals of the Mokelumne River watershed



ELLA DELGADO/BORCHARDT ELEMENTARY SCHOOL



SAMREEN KAUR/SUTHERLAND ELEMENTARY SCHOOL



ELIAS RAMOS/HOUSTON ELEMENTARY SCHOOL

HELPING THE WATERSHED

Giant Garter Snake

By Sophia Sotelo Diaz
REESE ELEMENTARY SCHOOL

Giant garter snakes are car-nivores
Indigenous to San Joaquin County
Anthropogenic biome
Nearly extinct
Tadpole eater

Grows from 94-165cm
Adults commonly eat bull-frogs
Red, yellow or orange stripes on their back
Thamnophis gigas is it's sci-entific name
Endangered reptile in San Joaquin County
Rice agriculture is one of its habitats

Semi-aquatic venomous snake
Near fresh water
Also live in marshes
Keeled scales help it hide from predators
Eats fish as an adult

Watershed poem

Izabella Nunez
BECKMAN ELEMENTARY SCHOOL

Water water everywhere,
The screaming wind,
The sailor ready to go,
We're all sitting down,
Alert to know the rules.

The boat rocking could
barely stay still,
I'm feeling seasick,
"Be careful, don't slip and
fall," they say,
The growling sea all
around us,
Just us watching the salty
dark sea below us,
The comfort of each
other.

Water water everywhere,
"Hold on now, we're al-most
there," they say,
"Get into groups so we
can get to the activities"
The staff say.

As waves crash and
smash,
The creatures tumble,
The magic of the sea,
What goes on in the
ocean, who knows?
The mermaids may live,
The plankton float,
As we put a net in the
water,
We wait a couple of min-utes,
As plankton crash in the
net,
We take the wet net out of
the water,
We go to a room with a
microscope,
We research to see what
type of plankton it is.

After all that's all I re-mem-ber,
From this glorious trip
we had.

Ocean

Aaliyah Chavez
BORCHARDT ELEMENTARY SCHOOL

Ocean water is deep
Creatures such as crabs,
sea snails and shrimp
Elegant crabs with hard
shells
Always changing tide
Nature is beautiful

Poem

Kaitlyn Hidalgo Herrera
ELKHORN ELEMENTARY SCHOOL

Oh Mokelumne Current,
You bring me joy, and
you don't annoy.
We all change and so do
you.
We all have ups and
downs,
Your current does too.
Your beautiful, colorful
salmon,
I watch them, they calm
me.
I'm no longer lonely.

Littering ... a problem at Heritage and the world

Juan Bueno
HERITAGE ELEMENTARY SCHOOL

Room 15 kids found out a problem that is not only happening at Heritage Elementary but the whole world. The problem is litter-ing. You might think it's not a

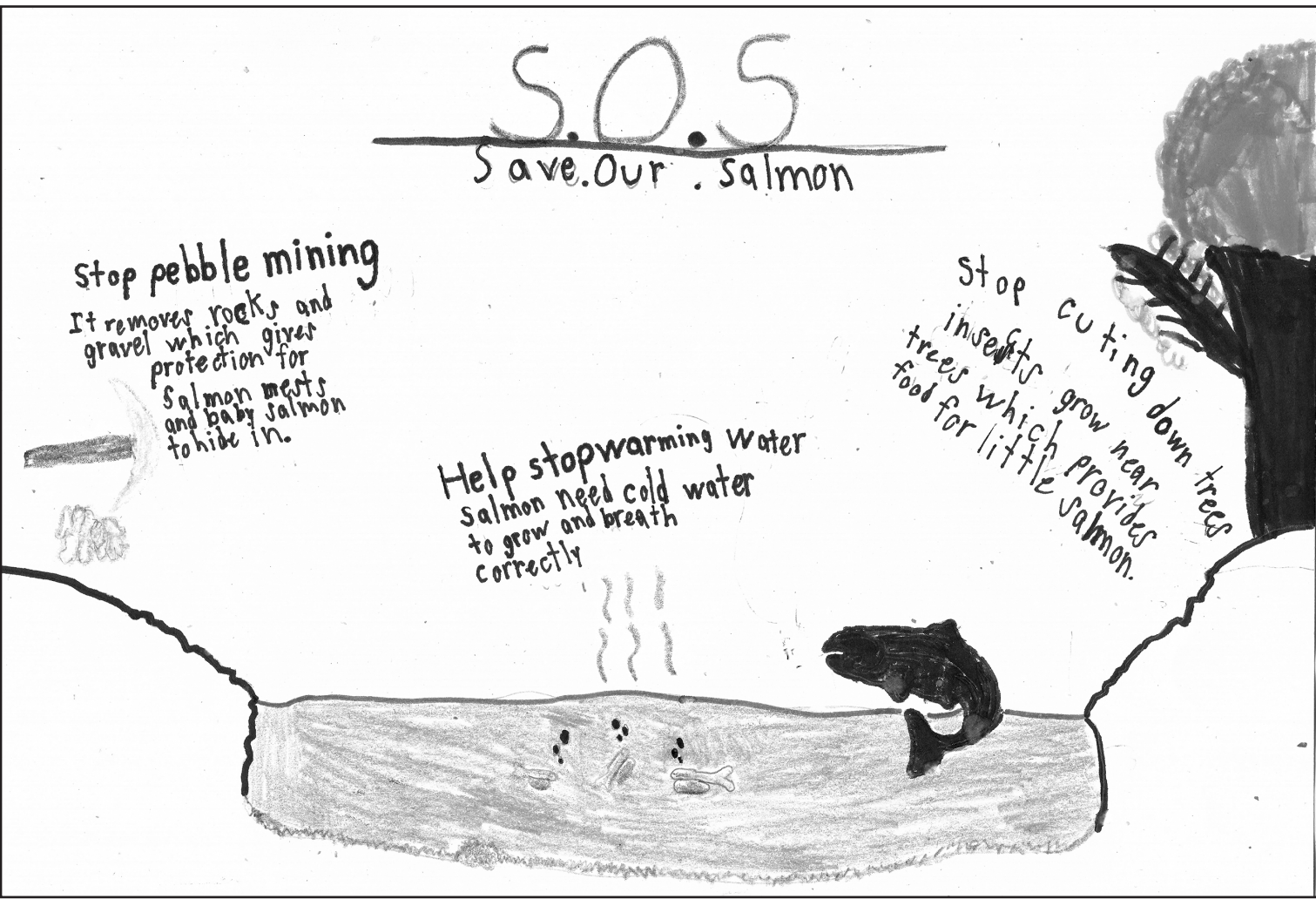
big problem but it is. Littering can cause any animal, includ-ing those that live in the sea, to die.

So, our class found out that kids have been littering and they did an experiment. They picked up trash but with a little fun. Room 15 went on a

scavenger hunt. They found litter that could be recycled and they picked up the trash. They filled a bag to see how much people litter at Heritage Elementary. The bag was al-most overflowing.

They picked up all kinds of trash like face masks, candy

wrappers, spoons, napkins and water bottles. The chil-dren thought this was fun be-cause they said, "It's kind of like a race, running to get trash off the ground." I still can't believe we picked up trash to not only help our school but the world!



JOSHUA EDDY/REESE ELEMENTARY SCHOOL

Washer

Continued from Page 1

Unified. She also has been in other leadership positions, in-cluding principal, in Stockton Unified. Dr.

Washer was even a teacher in Sacramento.

What accomplishments are you most proud of while serv-ing as Lodi Unified's superin-tendent?

Dr. Washer is most proud of the improved safety measures put into place in the district. These include drills, fences and gates, buzzers to enter cam-puses, and collaboration with police, fire, and ambulance ser-vices. Dr. Washer is also proud of the emphasis on reading in the early grades (kindergarten

to second grade).

As a young child, what did you want to be when you grew up? Did you ever imag-ine you would be the leader of a school district?

Dr. Washer wanted to be a teacher and played teacher while reading to her younger sister while growing up. She did not even know what a superintendent was — even after becoming a teacher!

Can you please share with us your fondest memories of your time in Lodi Unified?

Dr. Washer loved going into first and second grade class-rooms and reading to the students. She often left them books to take home and even dressed up as different charac-

ters. Dr. Washer is passionate about early literacy.

What are your plans in your well-deserved retirement?

Dr. Washer is a new grand-mother and plans to take care of her granddaughter while her daughter goes back to work.

Can you please tell us about your family and pets?

Dr. Washer has a husband, a daughter, a granddaughter, and two step-children. She also has a 14-year-old dog named Cookie. Over the years, Dr. Washer has had many cats, fish, and dogs.

What is your all time favorite book and why?

Dr. Washer's favorite book

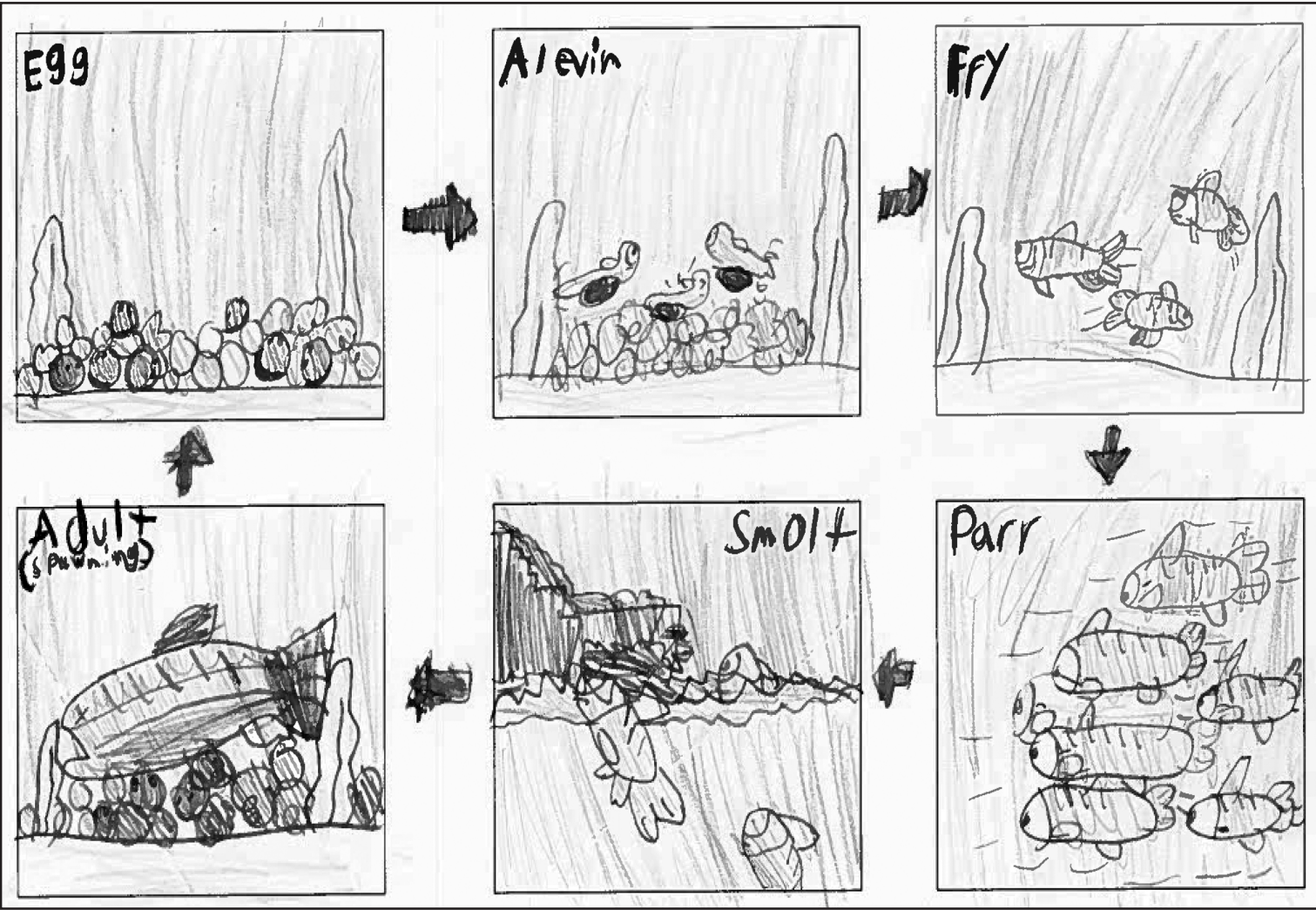
is "James and the Giant Peach." She loves the theme of friendship and the mystery and magic of the various char-acters. Dr. Washer said that no matter what you are going through in life, having a good group of people around you makes it easier.

What advice would you give to the new superintendent, my dad, Mr. Young?

(Asked by fifth-grader Anna Young.)

Dr. Washer's advice to Mr. Young is to always be true to yourself and don't let anyone change you. You are smart and prepared and will make great decisions for Lodi Unified.

Thank you for your service, Dr. Washer! Best wishes in your retirement.



JULIAN PINILLOS/TURNER ACADEMY

The students of Beckman, Borchardt, Elkhorn, Heritage, Houston, Reese, Sutherland and Vinewood elementary schools, as well as Turner Academy, would like to thank the following sponsors for their support:



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WILD ART



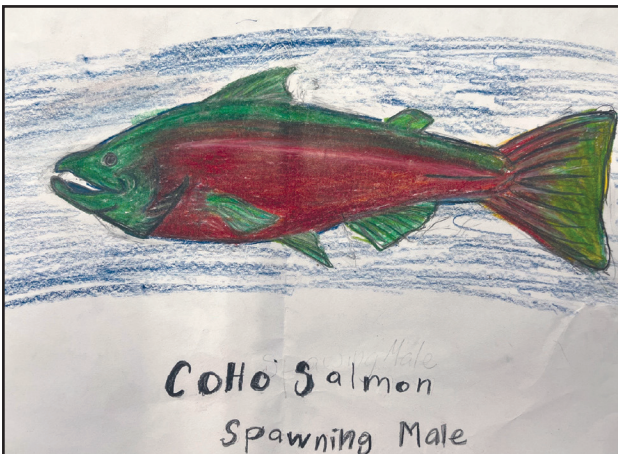
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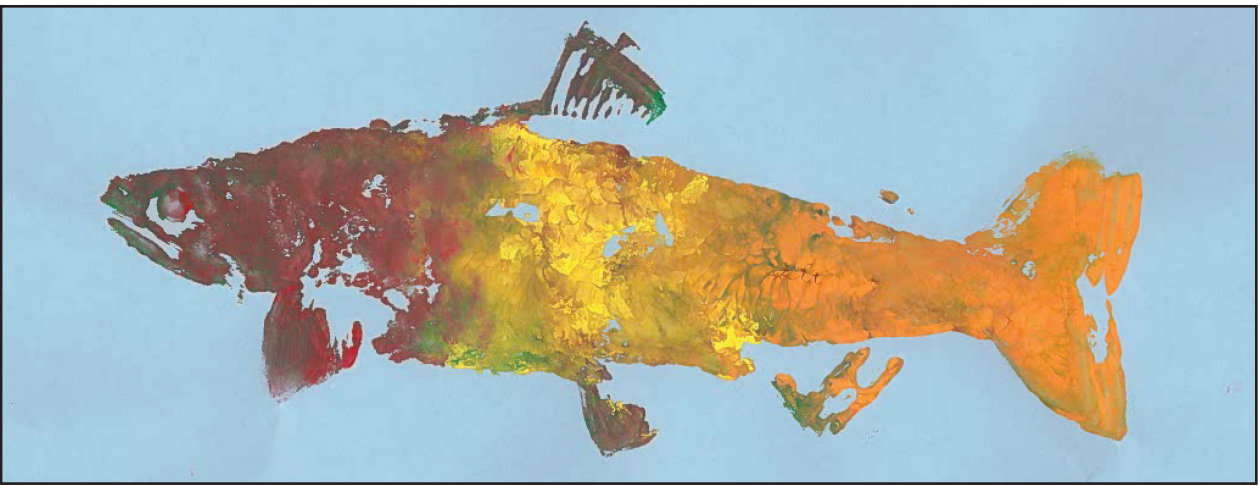
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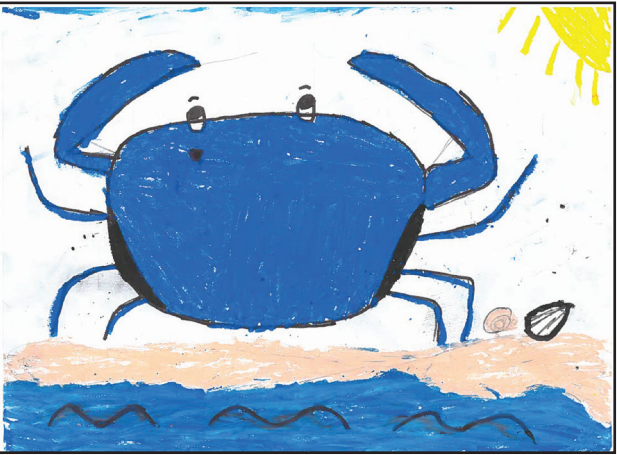
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VICTORIA WHITE/SUTHERLAND ELEMENTARY SCHOOL



ALEXA ALVARADO DE LA CRUZ/BORCHARDT ELEMENTARY



MADISON PUGA/SUTHERLAND ELEMENTARY SCHOOL



VIDA GONZALES/VINEWOOD ELEMENTARY SCHOOL



BROOKLYN MIXON/VINEWOOD ELEMENTARY SCHOOL

MARINE SCIENCE INSTITUTE

The MSI field trip was the best day of my life

Aaron Tejero
BECKMAN ELEMENTARY SCHOOL

The best field trip I went to was to San Francisco Bay aboard the MSI in October. They also came to our school on another day and brought animals. Let me tell you about

my field trip
First, we looked at plankton under a microscope. We got to touch a bat ray. We caught fish but we couldn't touch them. Also, from the bottom of the last minute show sea I put mud on my face. We touched fish and they put them in buck-

ets and we went into stations. Everyone saw a bloodworm.
Next they came to our school and they brought dead birds and fish. Also we went to stations so we could see other animals and fishes. They taught us about the birds. We didn't know some facts about

the birds. I learned that some swim and some fly. I was happy they came to us at our school.
This was the best trip of my life. I got to go on a long trip with my friends and learned a lot of new things I never knew about. Thank you, MSI.

Learning about the Starry Flounder with MSI

Alayah Mae Virgil
BECKMAN ELEMENTARY SCHOOL

I learned so much while the Marine Science Institute staff was at my school!
One thing I learned is there's this fish called the "Starry Flounder." The Starry Flounder is a fish that is basically a normal fish at first, then after a while, it spends its life on the bay floor on its side.
Now, it would be pretty hard to live with your eye stuck in the sand, so the Starry Flounder shifts its eye to the other side of its head, so it has two eyes on one side — pretty interesting.
If you want to learn more interesting facts about animals or birds and more, you should go to the MSI. It is a great place to learn and have fun!

Finding out all about the Brandt Cormorant

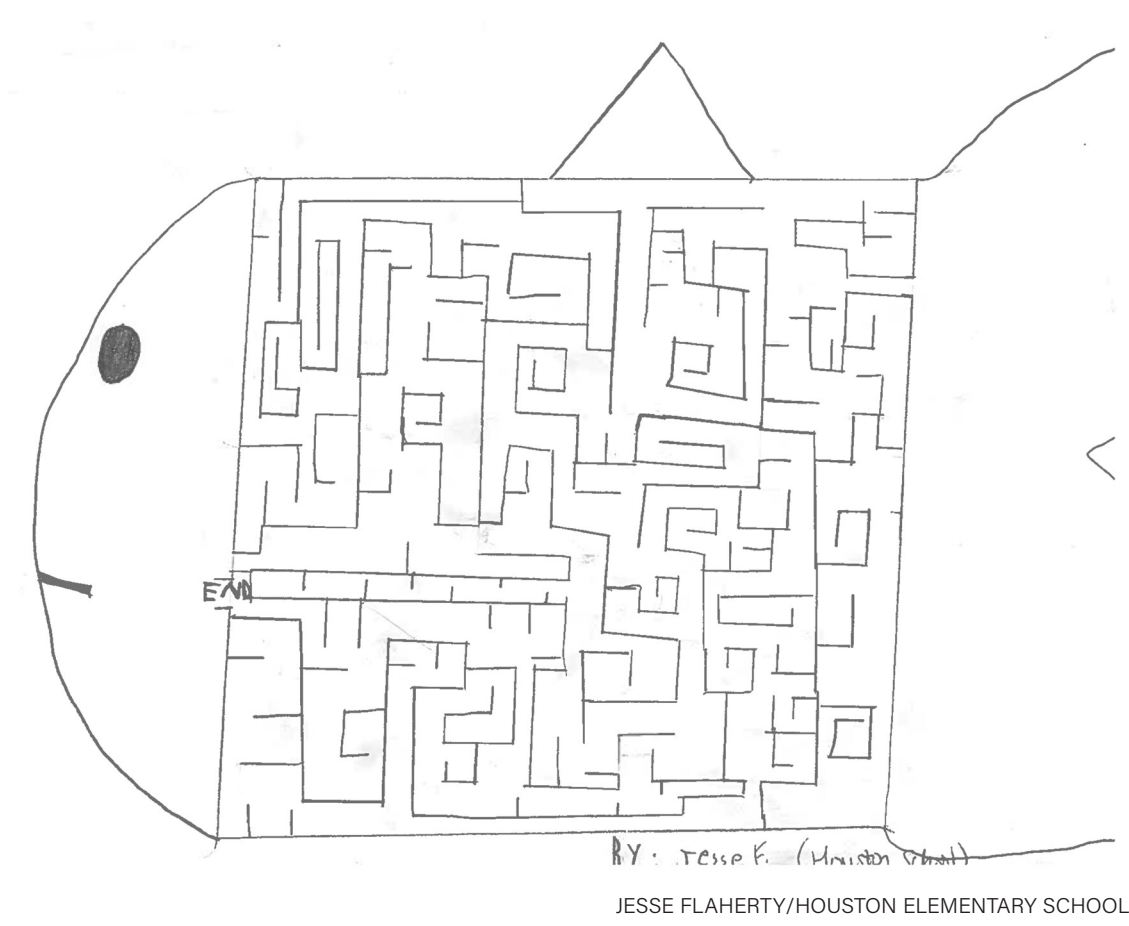
Joshua Davies
BECKMAN ELEMENTARY SCHOOL

Did you know that the Brandt Cormorant is a bird that eats a variety of fish, including shrimp and crabs? This was one fact I learned about when the MSI staff came to my classroom and taught me about some of the marine life in the San Francisco Bay.
The Brandt Cormorant, also known as the Phalacrocorax Penicillatus, was the one bird that stood out the most during the presentation because of its cool features. Not only does it eat a wide variety of fish, in order to get those fish he has to dive deep in the water to get them.
The Brandt Cormorant can swim down to 200 feet underwater because of its special webbed feet! Its feet are webbed at an angle and look like diving fins that humans can wear.
I learned a lot from this presentation and suggest it to all classes.

Students learn about ocean animals from MSI presenters

Bryan Barron
BECKMAN ELEMENTARY SCHOOL

Has MSI come to your school before? They came to my school with fish and birds.
The Starry Flounder was one fish that I saw and it was my favorite. It is also known as spotted corsairs.
The Starry Flounder is flat and when you touch it with two fingers it feels slimy. Its eyes are not like most fish and are found only on one side.
The Starry Flounder can be different colors and it can have different patterns, too. It also has the ability to blend into rocks and the bottom of the bay.
In conclusion, I had fun learning about the Starry Flounder and I hope the Marine Science Institute staff come back.



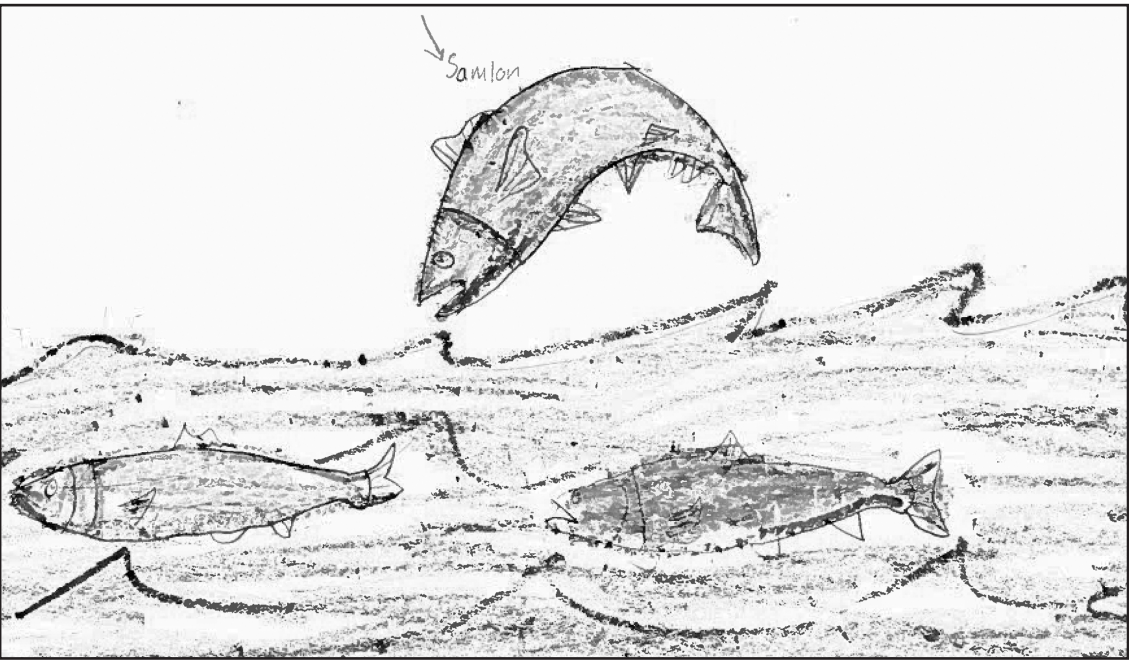
Aboard a research vessel in the S.F. Bay

Edward Ruiz
BECKMAN ELEMENTARY SCHOOL

My classroom went on a field trip to MSI in San Francisco Bay, and they also came another day to our classroom. They brought animals. Let me tell you about it.
First, we went on the boat called the Robert G. Brownlee. We caught fish in a big net

and then the staff put them in buckets so we could touch them. In one of the stations they put mud and we saw a bloodworm and we put mud from the bottom of the ocean on our faces. Another station they put a drop of water in a microscope and we saw plankton.
Next they went to our classroom and brought stuffed birds

and they bought the birds on fishes and buckets. I learned that the birds that had webbed feet are good at swimming and good at catching fishes.
In conclusion, this was one of my best field trips because we went to San Francisco Bay and went on a boat and they went to our classroom and showed us about different animals.



Studying fish and birds in the Bay with MSI

Blakely Perez
BECKMAN ELEMENTARY SCHOOL

Have you ever touched a fish? Well, on April 10, I got to see a fish and touch them. I also got to see some dead birds, but they were alive at some time, but it was a great experience.
I got to touch some fish. I was so scared to touch them but I did it. In fact I touched

every single one of them, but one of them didn't let me touch him but I did it. My favorite part of the fish is when I got to scoop up the sea snails. It was a great experience. It was a lot of fun. I wish I could do it again.
I got to see some birds. It was my favorite station because when I was observing the bird I saw something that was different. One of the fish had

land feet and the other one had webbed feet. I thought about it and it turns out the birds with webbed feet could float while the others could not. Another way you could tell is the wings cast and others.
In conclusion, it was so much fun. I wish everyone could have the same experience as me or better. I think you would enjoy it.

Bat rays, the bay floor and more in San Francisco Bay

Marcelina Valdovinos
BECKMAN ELEMENTARY SCHOOL

On my field trip on the MSI boat, I learned a lot of new things. I learned about bat rays, the differences between the bay water at the top versus the bottom of the bay, and about the mud on the bay floor.
One thing I learned about was the bat ray. I got to touch a bat ray! It was smooth, but it had a type of slime on the bat

ray's body. The slime looked clear but it was blue or black. I thought bat rays were called stingrays, but I was wrong. I learned the slime on bat rays protects them from getting sick.
Next, we studied the water in the bay. We took samples of the water at the top and the bottom of the bay. We took the temperature of the water, looked at the plankton found, and measured the salinity of the water. We also caught big

and small fish in a net that was dragged behind the boat. We counted and measured the fish we caught and then released them back into the bay.
At the end of the day, I had a great time on the MSI boat learning about the bay. My favorite part was when I was able to touch the mud that we pulled up from the bottom of the bay and put it on my face. I would highly recommend this field trip to other people!

Brackish or fresh water? Finding out more out in the field

Daniel Serrano
BECKMAN ELEMENTARY SCHOOL

The Marine Science Institute boat in my opinion is one of the funnest field trips a class can experience!
On the boat you can learn about all of the different things about the San Francisco Bay. One thing I learned was that

the water in the bay is called brackish water. That is what you call water when freshwater and saltwater mix together.
We also collected samples of the water so we could talk about the difference between the top water and bottom water temperatures.
My favorite part of being

on the boat was putting a big net in the brackish water. I learned how to safely put the net in the water and how to pull it back into the boat. We pulled a lot of unknown fish up and examined them.
Being on the MSI was super fun, and I recommend you experience the trip.

Ocean

By Brooklyn Valenzuela
BORCHARDT ELEMENTARY SCHOOL

Only salt water
Crabs in tide pools
Each crab has 2 pinchers
All are different
Nutrients everywhere

Poem

Judah Kolber
ELKHORN ELEMENTARY SCHOOL

From egg to Alavin to tiny
Salmon fry
standing in the Mokelumne
River by
the rushing waters straight
from Camanche
I wave goodbye to my little
ward
As she swims to the sea
toward
A life in the ocean for a few
years at least
As long as she avoids a
hungry beast
Goodbye and Farewell,
on your journey down the
Mokelumne

Bay

By Dilshaan Singh
BORCHARDT ELEMENTARY SCHOOL

Brackish water
Animals at the bottom of
the bay
You will see bay inverte-
brates

Salmon Cinquain

Hannah Daher
ELKHORN ELEMENTARY SCHOOL

Chinook
Wild, happy, and free
How they came from small
eggs
Oh how they are free in the
wind and speed
Lucky

Ocean

By Bellany Razo
BORCHARDT ELEMENTARY SCHOOL

Ocean water is salty
Crabs live in a shell
Each sea snail has a shell
A crab has two pinchers
No fresh water in the
ocean

ODE

Amrit Samra
ELKHORN ELEMENTARY SCHOOL

Oh salmon yes salmon
the ones that we released,
the ones that we cherish.
Oh salmon and those
sweet memories you were
all so different and all so
unique how I long for you
each day. Please come back
to me I never did want you
to leave please please please
come back to me.
Why did you leave me
and go to that river, the
Mokelumne River? You
must be so big now so much
different. I might not recog-
nize you. Bye sweet salmon
are you having a good time
please tell me you are,
please tell me you remem-
ber those days in my class
the days when you were
just an egg just a fry how
I wish to see you now bye
salmon bye.

Poem

Le Khanh Ha Phan
ELKHORN ELEMENTARY SCHOOL

Mokelumne River as clear
as the air
The color? I don't where
The salmon? There
The current flows with the
wind like me getting a little
scare
From a salmon that is
there.

Starry Flounder and Chameleon Goby fish facts

Alan Cabrera Gutierrez
BECKMAN ELEMENTARY SCHOOL

There was a presentation in the classroom about birds and fish found in the San Francisco Bay. I was able to touch three fish and one snail.
One of the fish, called a Starry Flounder, has two eyes on just one side of its head. When I touched it, he felt slimy.
There was another fish called the Chameleon Goby. They call him a Chameleon Goby because his eyes move in different directions like a Chameleon and when there's a predator trying to eat him he is able to camouflage into his surroundings so he isn't seen.

MARINE SCIENCE INSTITUTE

Salmon Ode

Nathan Kith
ELKHORN ELEMENTARY SCHOOL

Salmon has some great features,
As they are some of the most amazing creatures.
Their leaps in the water are filled with excitement
As if they had just won an achievement.

You may have found some salmon in the rivers,
But now they're in the ocean, wearing silver.
They use a combination of different types of water.
They are called estuaries, now they're stronger.

Going upstream, they are swimming well,
You may not even notice how they don't smell.
They are now out of exhaustion,
And now they have to meet their own misfortune.

People catch salmon all around the world.
You can now eat them once they're served.
The importance of salmon can have its limits,
Like the ecosystem and some spirits.

Poem

Zack Teng
ELKHORN ELEMENTARY SCHOOL

Salmon
So very amazing
From gray to a bright red
Comes and goes around the waters
A fish

Bobcats

By Ace Beltz
REESE ELEMENTARY SCHOOL

Bobcats can run 34mph
Other names for a Bobcat are Red Lynx and Wild Cat
Biggest threat is being hunted by humans and habitat loss
Color of fur is brown, red, black, white, tawny, and beige
Average litter size is 3 kittens
The average lifespan of a bobcat is 10 years
Squirrels are a bobcats top prey

Crab

Alexa Alvarado de la Cruz
BORCHARDT ELEMENTARY SCHOOL

Crabs in tide pools
Really strong
Are always pinching
Bay crabs are different than ocean crabs

Bat ray facts

Kaiden Lial
BECKMAN ELEMENTARY SCHOOL

I saw a bat ray at the MSI (Marine Science Institute) field trip. I learned that bat rays are slimy and wet to escape predators.
Bat rays also camouflage sometimes so predators can't see them.
Bat rays are very slimy and funny animals. Some bat rays can slip away when you try to touch them and will do their best to hide when you try to touch them. The people at the institute calmed down the bat ray so my classmates and I could touch it.
I recommend going on this trip so that you can learn more about the Bay Area and different types of fish.

More about Starry Flounders

Nosheen Bibi
BECKMAN ELEMENTARY SCHOOL

When the MSI presenters came to my classroom I learned that the Starry Flounders can live in brackish water and freshwater. The Starry Flounder is unable to live in over-salinated water because their cells have trouble regulating salt levels in their body.
I also learned that some birds have webbed feet to help them paddle or swim through the water. One bird that has unique webbed feet is the Brandt Cormorant. Their feet allow them to dive up to 200 feet underwater to catch fish and other food!
I am so glad I was able to have these presenters come into my classroom. I learned a lot.

Fish get cancer? A classroom visit with MSI

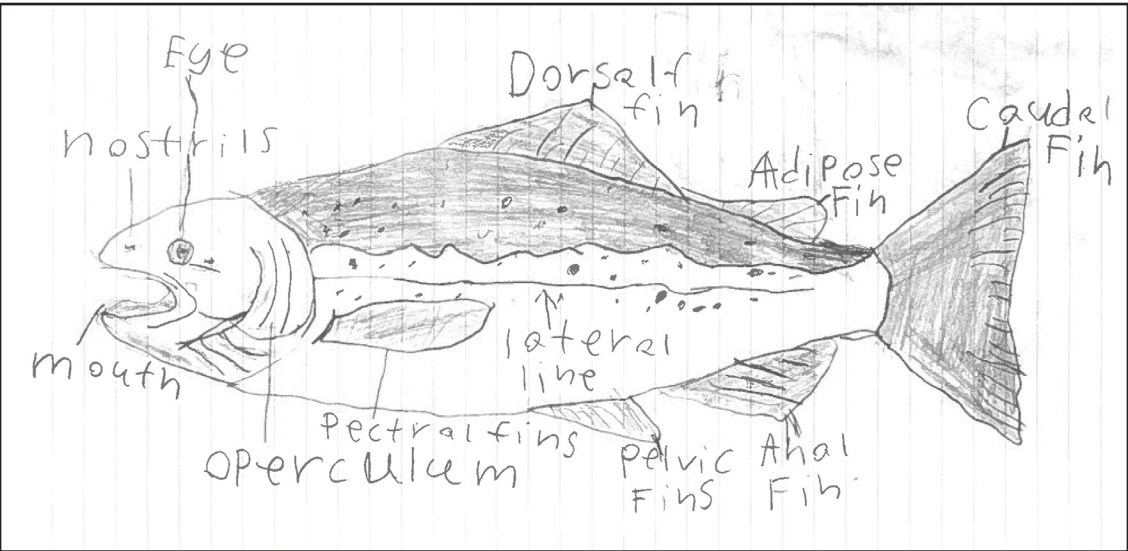
Mariah Lawson
BECKMAN ELEMENTARY SCHOOL

I learned a lot of things from the MSI presentation. One thing I found interesting is that fish can get cancer.
The classroom presentation focused on types of birds and fish. They also told us about

the river system, where we live.
When we got into groups of four, we went to the station with the fish first. The first thing we did was get into four groups. Next we read and touched the four different young fish. The fish were

slimy and gooey.
In our next rotation we learned and looked at four different birds. The first bird was super big and buff-looking. I learned that these birds were actually real; they were just stuffed with a special stuffing so that people can learn about

them.
One of the birds was a duck, and I love ducks, so this was my favorite rotation. The duck eats lots of things. I learned that it can dive 35 feet and hold its breath for 25 seconds. In the end, I really enjoyed the MSI Class Presentation.



JOSEPH MARCOTTE/HOUSTON ELEMENTARY SCHOOL

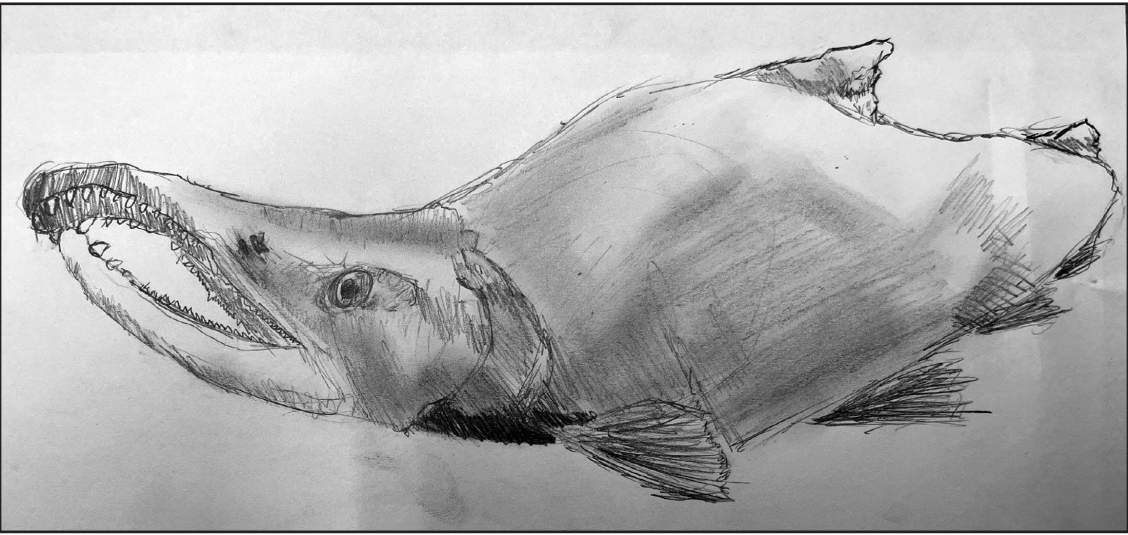
Learning spider crab facts on the research vessel

Camila Farfan
BECKMAN ELEMENTARY SCHOOL

My experience aboard the MSI research vessel was very cool! Want to know why? I saw spider crabs. It was very cool to see how long and spiky their legs were.
I learned that spider crabs walk slowly depending on

how big they are. If they are big they walk slower than the smaller spider crabs because the smaller spider crabs have less weight on them.
Spider crabs live on the bottom of the ocean that is called the seafloor. When adult spider crabs are ready to spawn they migrate to shallower waters about 160 feet.

Did you know spider crabs are venomous, but usually spider crabs don't have a big enough mouth to pierce through your skin? Spider crabs usually eat dead fish or algae.
Those are some interesting facts and things I learned about the spider crabs.



MATEO REYNA/REESE ELEMENTARY SCHOOL

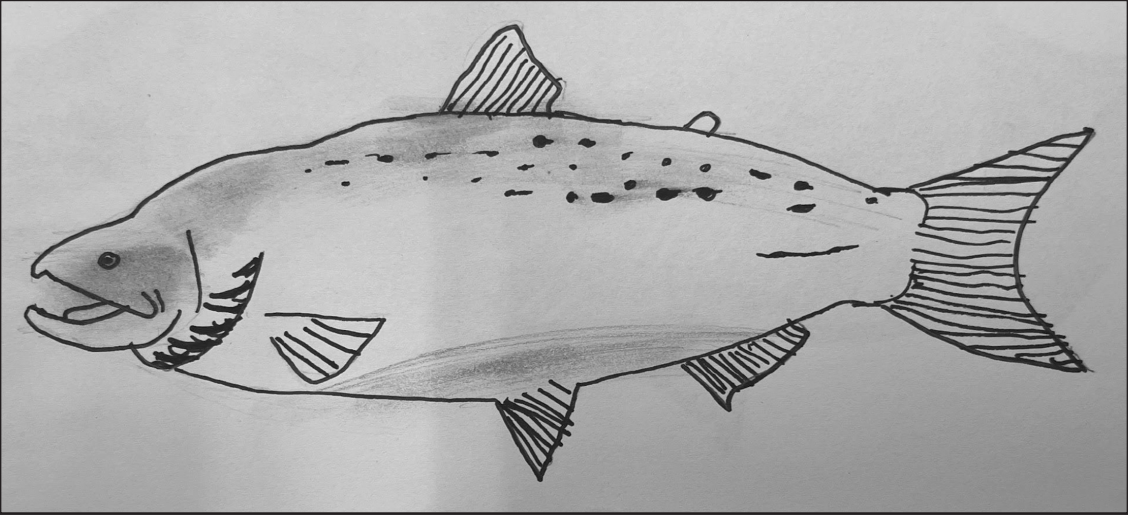
From salt to plankton: What I learned on the MSI trip

Raymond Manriquez
BECKMAN ELEMENTARY SCHOOL

On the field trip to the San Francisco Bay, I learned many things. Those things included measuring the density of the water and figuring out that deeper water has more salt and

density then shallow water.
I also learned that lots of marine life stays in the San Francisco Bay while they are growing up because it protects them from big predators. When the fish get big enough they migrate towards the ocean.
One cool fact I learned was

that plankton produce 70-85% of the oxygen on Earth depending on the season and temperature.
This was a very exciting experience and really helped me understand a lot more about marine life, and I would recommend this trip to others.



BRYSON CASPER/REESE ELEMENTARY SCHOOL

MSI presenters share facts about birds with Lodi students

Joan Hernandez
BECKMAN ELEMENTARY SCHOOL

Have you been on a science field trip? I have, and it was in the classroom. Some people from MSI, the Marine Science

Institute, came into my class and taught me about birds.
I really enjoyed this presentation because I learned cool facts about four different birds and why some have webbed feet.

For example, I like the duck that was brown and black; it can float on the water and when they turn upside down to get food their body won't go under the water.

Jelly fish, bat rays and more on the MSI boat trip

Iyani Dubea Brown
BECKMAN ELEMENTARY SCHOOL

Dear MSI team, thank you for coming to our school. I was really grateful for you coming. I learned so much about fish and birds.
Also, we went on the boat on October 24, 2022, and discovered plankton hermit crabs and our team even caught a moon jelly. It was so cool. We also caught a bat ray. It was fantastic. We also caught more, but I can't remember. It was such a great visit. I would go again. Thank you so much for coming to our school. I hope you guys come again.

Next, we also spent two hours on the bus and we were in the ocean for four hours on the boat. When we were on the ship we saw moon jelly, and there were four rotations. The four rotations were looking at plankton from the ocean, digging up mud from the bottom of the ocean, learning about fish we caught and measuring the temperature of the ocean water.
In the station where we caught fish we touched fish like a bat ray, moon jelly, banana tail fish, and more. Also, we learned about plankton.

MSI science field trips are double the fun

Xavier Gonzalez
BECKMAN ELEMENTARY SCHOOL

Have you ever been on a science field trip? Well I have. The science field trip I went on was located in the San Francisco Bay, called the Marine Science Institute or MSI.
They also came into my classroom and that is what I am excited to share with you about. I learned about birds which had some interesting facts that I didn't know. Did you know that some birds have webbed feet, while others don't? I didn't. I learned that webbed feet help the birds swim and catch their prey.

There is one bird called the Brandt Cormorant that can hold its breath for up to seven minutes underwater in order to catch its prey.
In conclusion, I loved the birds because their ability to dive in the water was cool. Also the Brandt Cormorant was awesome. I mean, being able to hold your breath underwater for seven minutes is something I wish I could do!
I would highly recommend this trip to other people.

STORM DRAIN DETECTIVES

What exactly do Lodi’s Storm Drain Detectives do?

By Reese Ouimette
REESE ELEMENTARY SCHOOL

One Tuesday every month, some of the kids in my class walk to Lodi Lake to participate in the Storm Drain Detectives program. We get to test the water using professional equipment and record all of the information on a sheet of paper. Many other schools do the same. Then we compare our results with one another, and we come back again a month later.

One big part of the Storm Drain Detectives process is testing for dissolved oxygen, or D.O. This is the amount of oxygen dissolved in the water. D.O. is important because some aquatic animals and organisms need D.O. to survive. Too much or too little could be harmful, and potentially permanently damage any thriving ecosystems.

To test the amount of D.O., we use the CheMet kit and the D.O. meter. Both are effective and give us a lot of knowledge about what

the lake is currently like.

Another one of the main parts of our Storm Drain Detectives testing is looking for E. coli. My classmate and I do this every time, because we find it fascinating.

After we have gone to the lake, we take home a water sample with us. The next day, we mix water with a solution and follow a very precise procedure. Then, we put it in an incubator to let it set.

After 24 hours, we look for any E. coli that has shown up. After 48 hours, we do the same. Normally, we will find two to three E. coli colonies (a colony is one dot of E. coli).

Storm Drain Detectives is so much more than you would expect. We are helping our community and the planet at the same time.

It is a great program, and I have learned so much about our watershed on these trips. For example, everyone lives in a watershed. We can’t survive without water, after all!



LUCA MARTINEZ/REESE ELEMENTARY SCHOOL

Storm Drain Detectives test site #8 at Lodi Lake.

More about the Storm Drain Detectives

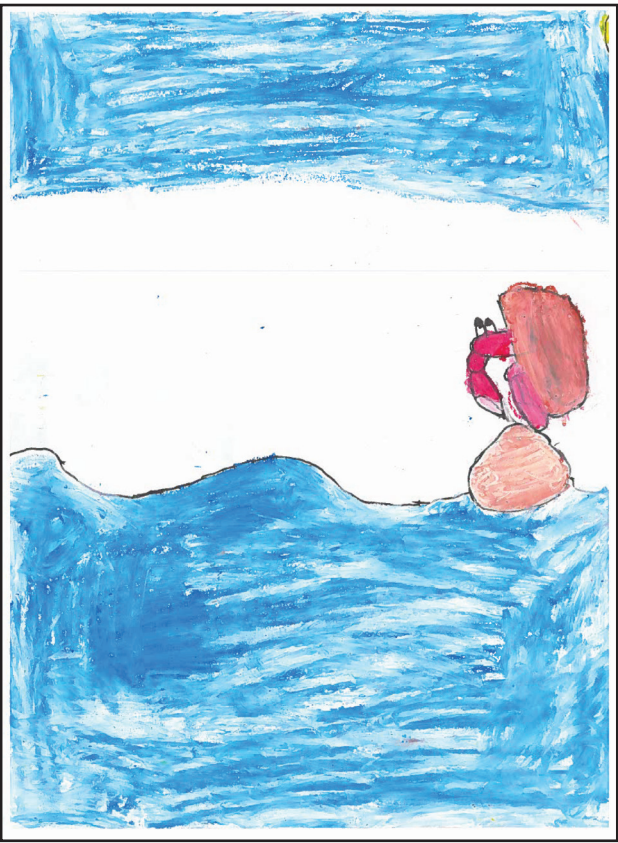
By Cruz Martinez
REESE ELEMENTARY SCHOOL

What is Storm Drain Detectives? Storm Drain Detectives is a program that students in Lodi Unified participate in. It started in 2000, and we monitor the water in Lodi Lake and the Mokelumne River. We monitor dissolved oxygen, nitrates,

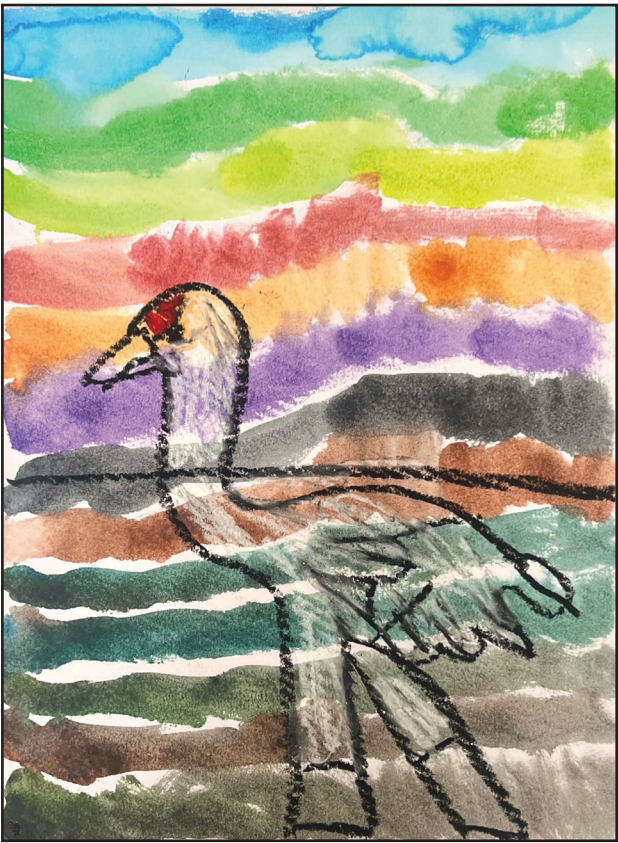
electrical conductivity, potential hydrogen (pH), and other things like temperature and trash.

I have been doing it since I was a baby, when my mom pushed me around in a stroller. I am also doing a science project in which I will study how temperature affects dissolved oxygen in the water.

Wild Art



BELLANY RAZO/BORCHARDT ELEMENTARY SCHOOL



AVA KREIN/HERITAGE ELEMENTARY SCHOOL



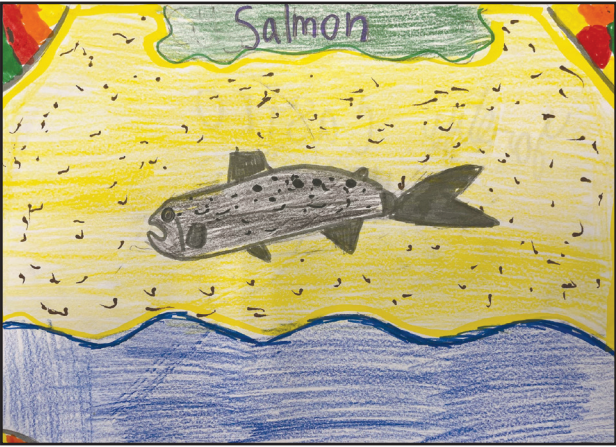
AVNEET KAUR/BORCHARDT ELEMENTARY SCHOOL



DANIELLE HADUCA/BORCHARDT ELEMENTARY SCHOOL



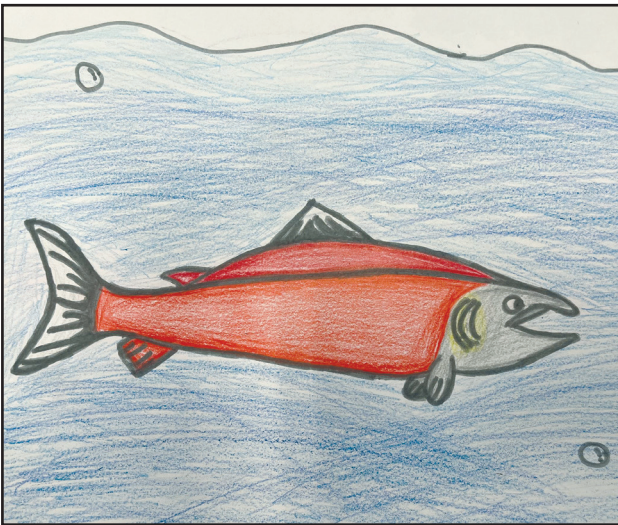
WILLIE BURRELL/TURNER ACADEMY



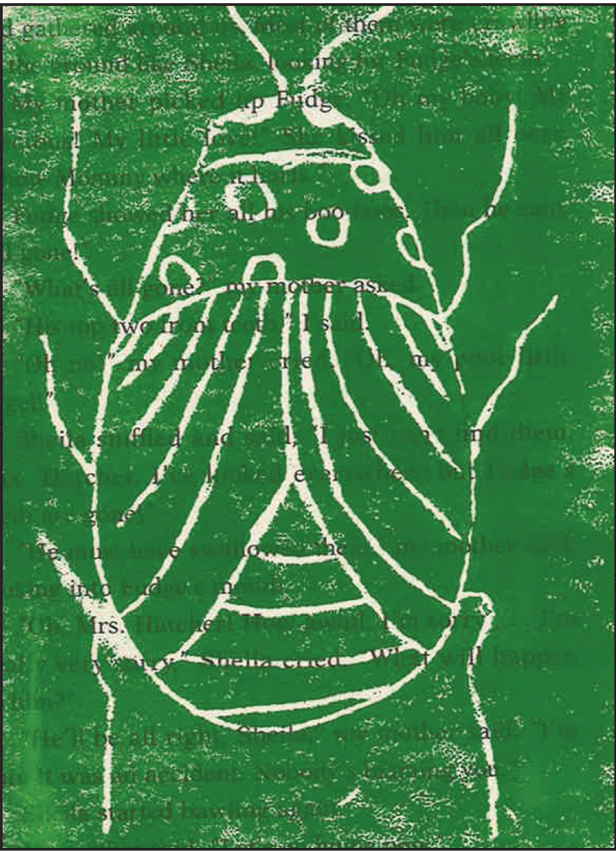
YARETZI CASTRO/REESE ELEMENTARY SCHOOL



JESSICA NUNEZ/BORCHARDT ELEMENTARY SCHOOL



BROOKLYN PITCHFORD/REESE ELEMENTARY SCHOOL



ABYGAYLE REED/VINEWOOD ELEMENTARY SCHOOL

SALMON IN THE CLASSROOM

Students see salmon in their natural habitat on Mokelumne field trip

Victoria Ramirez
BECKMAN ELEMENTARY SCHOOL

My math teacher, Ms. Jacinto, took us all on a field trip to the Mokelumne River for the first time. It was incredible. I learned a lot about salmon.

First, all my classmates and I were following the guide, and we each got a salmon fry.

I chose Kimberly to be my partner, and we named our salmon Strawberry, because when she was born she looked reddish peach, so that's why we named her that. Kimberly

and I went to the river and released the salmon. It was so sad, but I'm happy that she was healthy and living a good life.

Then, we all went by a little tent where we saw a dead salmon. It was weird! They told us about a salmon's body, like how it works. What was most interesting to me was that a salmon breathes out through their gills and not in! It's so confusing, yet amazing.

We also learned that when salmon have babies, they make a nest out of rocks and

flap their tails really fast to clean the nest. I also learned that the possibility of all the babies surviving is very low, most likely only five out of thousands of babies will survive!

It's so sad, but what's even more sad is how hard their life is.

Next, we played a game to see how hard a salmon's life is. We had to run really fast so the predators wouldn't catch us.

Then we had to go through obstacles, like jumping through wheels, and we had

to be careful because there were fishers. We were trying to grab fake food while the fishers were trying to catch us.

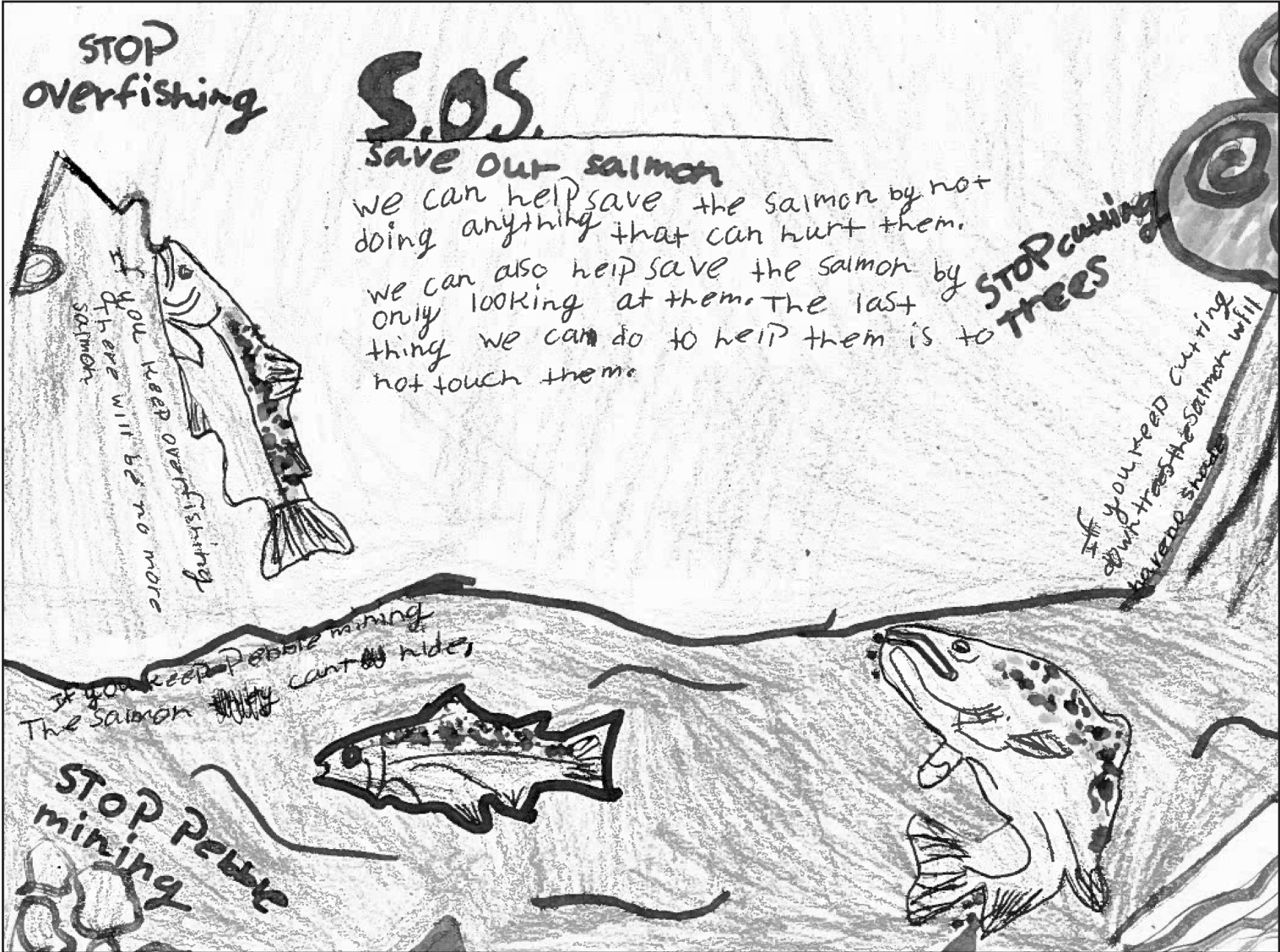
After the game, we got in line for each of us to grab a little cup of salmon food to feed a bunch of the salmon. It was really fun feeding the salmon. I made sure to give a little bit to each part of the group.

Also, we went inside a building and sat down. A guide gave us little cards with pictures of plants on them and things about the plant. Then, she gave us each a paper to fill out.

We had to put a check mark if we had seen the plant card.

There were two sides: native, which means it's supposed to grow there, and non-native, which means somebody planted that plant there and wasn't supposed to.

To sum it up, this field trip is one I will never forget. It was really fun and it was all possible because of my math teacher, Ms. Jacinto! So I'd like to thank her. I learned a lot about salmon, things I never knew before, so I'm glad I went.



EMMA NELSON/REESE ELEMENTARY SCHOOL

My experience visiting the Mokelumne River with my classmates

Stephany Ochoa
BECKMAN ELEMENTARY SCHOOL

Have you ever been to the Mokelumne River with your classmates? I have, and let me tell you my experience!

I went to the Mokelumne River with my whole class. Once we got there, there was a tour guide and another teacher from my school came with us. She was Ms. Jacinto, the one who planned the field trip.

You might be wondering, "Why would we go to the Mokelumne River?" Well, a while back, she got these salmon eggs and she had them until they were out of their eggs, and since they can swim around freely it's time to put them back in the river!

So, once we walked close enough to the river, a worker explained a bit about the salmon and stuff like that. Meanwhile, some other workers were each putting salmon in a tiny container, and one of the workers told us to get partners.

I partnered with my friend, Salma, and a worker gave us a salmon that was in a container for us to hold. We decided to name the salmon Olive since we really didn't know the gender of the salmon.

There were many other areas we explored there at the Mokelumne River, but there was this one station where we got fish food and got to feed a bunch of fish.

There was another station where a tour guide took me and some of my classmates on a walk and we learned about the plants and animals that lived there.

It was such a great experience to go on with my classmates.

Did you know salmon could have scoliosis?

Sophia Ortiz
BECKMAN ELEMENTARY SCHOOL

Do you know what scoliosis is? If you don't, scoliosis is a back disorder that will make your spine rotate.

Recently I went on a trip to the Mokelumne River to drop off some salmon that we were taking care of. One of the fish

we were taking care of had scoliosis. Let me tell you more about this back disorder called scoliosis.

We were very nervous when we saw the salmon with scoliosis. It was new to all of us, but thankfully as long as the conditions aren't too bad they can still live.

What causes scoliosis in a fish are usually vitamins C and D and some amino acid deficiency.

I also have a family member with scoliosis, but of course, she is healthy and has a good life with two of her kids and her husband. I hope this article helps you understand scoliosis more.

Best parts of the Mokelumne River field trip

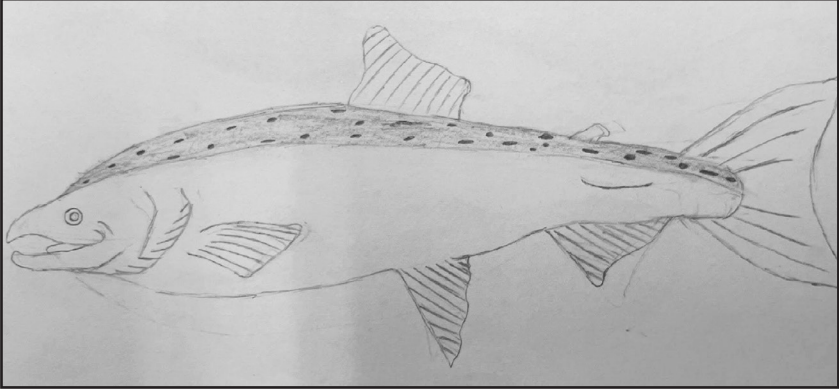
Liam Bravo-Ramirez
BECKMAN ELEMENTARY SCHOOL

My favorite thing about my field trip to the Mokelumne River is that we were able to see lots of fish and name ours.

Ms. Jacinto gave each of us a salmon fry to share. My friend, Estevan, and I named ours "Andrew Tate" (not harm if you do not like him). And we let it go!

It was sad, but the fish swam really fast! It was like Sonic!

We were able to touch a rotten boy fish, he was a lousy fish. It was gooey, and



VALERIE ALVAREZ DEL VILLAR/REESE ELEMENTARY SCHOOL

the reason they were gooey was that they use that goo to make sure there are no parasites that can touch them. (You learn something new every day!)

We also played a

game that was the life cycle of a salmon. It was really hard to hit someone, and most of the time I couldn't move!

There were also a lot of fish to feed in the water. They were

jumping for their food that we were dropping in, I almost was bit a couple of times.

Lastly, we were able to team about different trees, plants, and other species.

A day of activities: What we learned at the Mokelumne

Jermiah Kelley
BECKMAN ELEMENTARY SCHOOL

At the Mokelumne River, my class and I did a lot of activities. Some of them were more interesting than the others. I'm going to tell you all about them.

First, when we got off the bus, we met our guide for the day, then we got our own salmon fry from Ms. Jacinto so we could release them. I named mine "Jermiah the Third."

Then we went to go play a game, it was about the life cycle of a salmon. First you had to do five jump ropes, then you had to make it through two people trying to tag you, then you made it to the ocean where they had these little blocks that represented years of life.

You had to collect four blocks, or years, and at the same time there are fishermen guarding the years. If they touch you with little foam

poles, you're out!

But if you make it past them, you have to jump over a rug, it was like jumping over a river or stream, then after that you're safe.

After the game, we went to go feed fish in the water. There were a bunch of trout over by me, but everybody else went too far where there were barely any fish.

These are my favorite parts of the Mokelumne River field trip.

What we saw on our Mokelumne nature walk

Naomi Alvarado
BECKMAN ELEMENTARY SCHOOL

When I went to the Mokelumne River, it was so fun! I had a really nice time there.

My favorite thing was when we went

on a nature walk and learned new things about plants, like native and invasive species.

I think one of the most fun parts of the Mokelumne River trip was the nature walk.

It was very relaxing because it was quiet, and I don't know about you but walking in the quiet is so relaxing.

On the nature walk we were hoping to see other animals, not just salmon. We were hop-

ing to see animals like rabbits, insects, and many more.

What we did see was evidence of beavers and birds, and we saw bees. That's what I liked about the nature walk.

Poem

Supreet Pandher
ELKHORN ELEMENTARY SCHOOL

One egg died
Which made some kids cry
One salmon had a disease
While the others were at ease
All kids loved them
It was hard to say good-bye to their friends

My Salmon, Toast

Emma Okoreeh
ELKHORN ELEMENTARY SCHOOL

Oh Toast, my salmon,
As I love to see you grow
and enter the big river
I observed you during observations, you were quite the kicker
When I released you, a shiver of sadness pushed through me
I decided to let it go remember I'm going to miss you, be free
I hope you grow to be a big salmon someday
So when you grow up to be that big, I wish you good luck since you're away

Goodbye

Aly Welch
ELKHORN ELEMENTARY SCHOOL

The salmon are here
But soon the salmon will leave
They will go downstream
The ocean will soon greet them
I wish there was no good-bye

Poem

Preston Phan
ELKHORN ELEMENTARY SCHOOL

Salmon
So colorful
They are so beautiful
And they come in many sizes
Salmon

Ode to my salmon, Delta

Jennica Lam
ELKHORN ELEMENTARY SCHOOL

Oh Salmon, Oh Salmon.
I have named you Delta because it is something that matters.
I hope you never forget me as you climb up your ladders.
You may think about me in your sleep.
I hope my memories are yours to keep.
I will always miss your beautiful tail.
I know you will always have a good temper, even when you fail.
I remember you as an egg
I remember you being fed.
Oh Salmon, Oh Salmon
You are mine.
Just don't forget you are as shiny as a dime.

Poem

Nathan Tagupa Acain
ELKHORN ELEMENTARY SCHOOL

Salmon.
Anadromous,
with various species,
wading through the clear blue waters,
freely.

Poem

Alaina Nguyen
ELKHORN ELEMENTARY SCHOOL

A beautiful sight

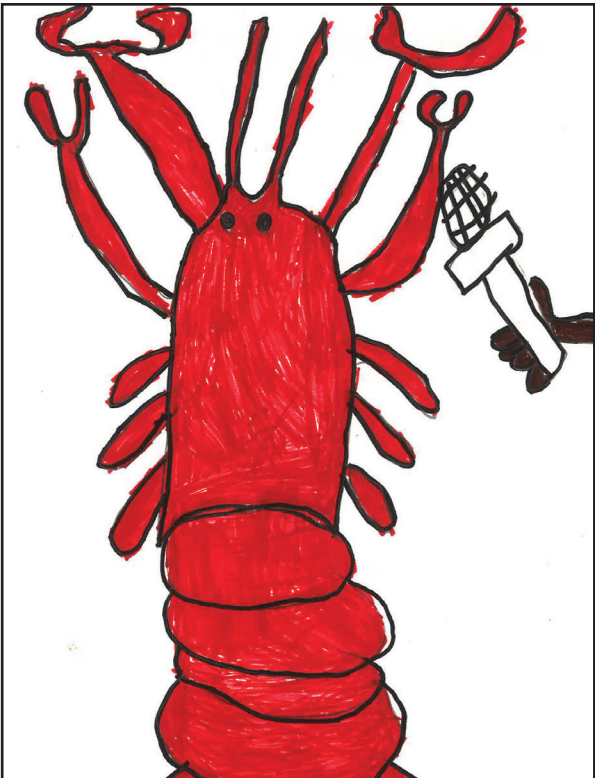
A salmon has hatched.
He emerges from the egg.
A sight to behold.

Poem
Ethan Nguyen
Elkhorn Elementary School
Salmon
Salmon,
You risk so much
In hope, that one day, you
Create the next generation again

View past editions of the Mokelumne Current

Visit www.lodiwatershed.com.

AMAZING ANIMALS



MASEN SMITH AND EDWIN MUNOZ/
VINEWOOD ELEMENTARY SCHOOL

Marsh madness: An interview with a crayfish

By Masen Smith and Edwin Munoz
VINEWOOD SCHOOL

Interviewers: What habitat do you live in?
Crayfish: We live in freshwater swamps, marshes and rivers. We are bottom feeders and help the rivers by cleaning up the dead stuff on the bottom. We are crustaceans which means we have exoskeletons to protect our bodies. When we grow we have to shed our exoskeletons and form new ones.
Interviewers: Do people like to catch you?
Crayfish: Yes, they trick us by putting

food in traps. We swim in but can't get out. People like to fish for me in large quantities and boil and eat me. Yikes!
Interviewers: If you had a game, what would it be called?
Crayfish: Fortnite epic Crayfish edition for PlayStation 56.
Interviewers: What do you think about current pollution problems?
Crayfish: I think people should stop throwing their trash in the water because it harms my kind and other animals' habitats. Also, stop using so many chemicals on your crops. They are killing us!



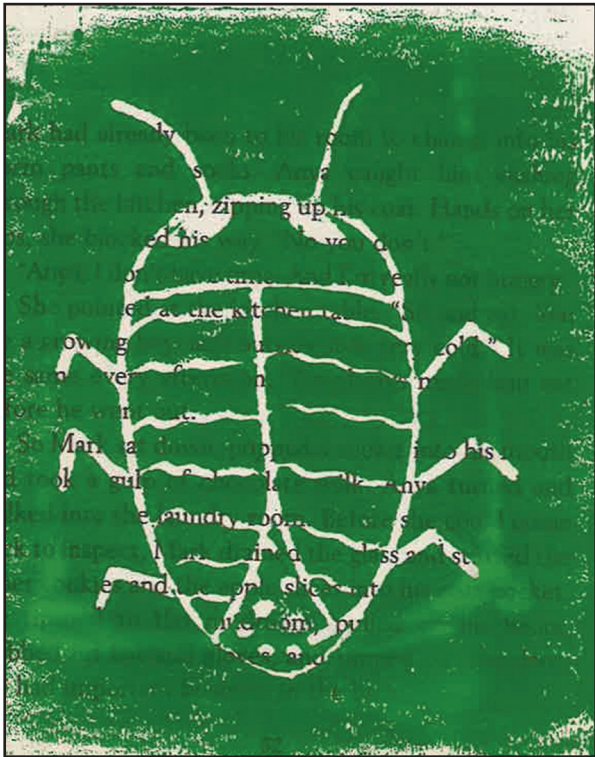
SAVINO OCHOA, MICHAEL EVANS AND JAX THAMES/
VINEWOOD ELEMENTARY SCHOOL

Winging it: An interview with a wood duck

Savino Ochoa, Michael Evans and Jax Thames
VINEWOOD ELEMENTARY SCHOOL

Interviewer: Can I ask you a few questions?
Wood Duck: Yes, you can ask me some questions.
Interviewer: What is special about your kind?
Wood Duck: We need large bodies of water that are lakes. We also live in trees and rivers to be able to survive. We like living in a mix of a water habitat and a forest habitat.
Interviewer: Why are you called a wood duck?
Wood Duck: We use wooden covers for nesting. That's where we get our name

from. We also live in trees.
Interviewer: How would you describe what you look like?
Wood Duck: I'll say I look like a duck with a World War II helmet, and my feathers have colors like a red wood shade, tan and a sharp dark green.
Interviewer: What states do you usually live in the most?
Wood Duck: I live mostly in Florida and Texas, which is part of the United States, I also live in some parts of Canada. We live in some parts of Canada because after living in the hot South, we go somewhere cooler. And, of course, I live in California!



GIANNA TOLEDO/VINEWOOD ELEMENTARY SCHOOL

Predator life: An interview with a gray fox

Brooklyn Mixon and Madeline Kennedy
VINEWOOD ELEMENTARY SCHOOL

Brooklyn: What is your favorite food and why?
Mr. Gray Fox: I like small mammals such as mice and birds, but I could never say no to some tasty plants or juicy fruit!
Brooklyn: Good to know!
Madeline: What is your ideal place to stay?
Mr. Gray Fox: An ideal place to stay is probably along streams and rivers. Also, overgrown fields are nice. I do love hollow logs or trees!
Madeline: Now I know where to find you!
Brooklyn: What threatens you? How can we help?
Mr. Gray Fox: Habitat loss is a great threat to us fellow foxes. You guys can help by not destroying natural habitats, and instead help by planting trees and other plants.
Brooklyn: Thanks for telling us.
Madeline: Do you have any sorts of predators, and if so, who?
Mr. Gray Fox: Yes, even though it is hard to believe, I do in fact have predators. They include bobcats, coyotes, great horned owls and golden



MADELINE KENNEDY/VINEWOOD ELEMENTARY SCHOOL

eagles.
Madeline: Interesting! How do you guys fit into the food chain?
Mr. Gray Fox: We Gray Foxes are secondary consumers. This means we are omnivores.
Brooklyn: Cool!



AALIYAH CHAVEZ/BORCHARDT ELEMENTARY SCHOOL



EOIN KILGORE/HERITAGE ELEMENTARY SCHOOL

What's the buzz? An interview with a dragonfly

Alese Rabara and Emma Coyle
VINEWOOD ELEMENTARY SCHOOL

Speaker 1: Hello Dave. We are going to be asking you a couple of questions. Let's start off with a simple one: What predators are you most intimidated by?
Dave the Dragonfly: I am very vulnerable, so I would have to say fish or frogs, but I am very scared of both.
Speaker 2: What's your favorite food, man? I'm sooo interested in that stuff now!
Dave: The flies are the juiciest, so I would have to go with that. But the mosquitoes are so plump I can't pass them by.
Speaker 1: Why is the dragonfly population going down?
Dave: Well, 16% of the world population of dragonflies is in danger of extinction because of the loss of swamps and free-flowing rivers. Agriculture and urbanization is causing our habitat loss.
Speaker 2: Where is your hangout spot?
Dave: I love the swamps, marshes or rivers because I love to find my delicious bugs in that area. Now I'm getting hungry!
Speaker 1: How can humans help



EMMA COYLE/VINEWOOD ELEMENTARY SCHOOL

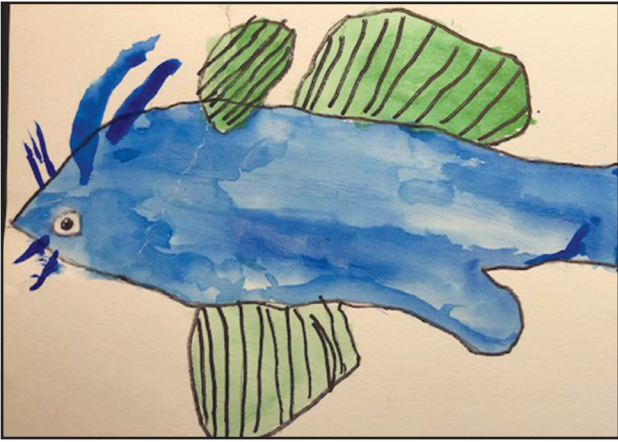
increase the population of dragonflies?
Dave: Well, I'm going to die anyway because we dragonflies don't live very long, but I know that they should add water treatment plants and stop littering because the dirty water is very bad for dragonflies. Also, they should use less pesticides because they are harmful to us and the food we eat.
Speaker 2: Well, Dave, thank you for those ... rather interesting responses. See you soon! Well, folks this is the end of the segment, now to Lydia and the talking weasel!

A large-scale life: An interview with Mr. Catfish

By Ezra Nino and Blake McCosker
VINEWOOD ELEMENTARY SCHOOL

Interviewer 1: What do you need to survive?
Mr. Catfish: I need fresh water, salt water and brackish water. I eat small fish, crayfish, clams and frogs.
Interviewer 2: Who are you worried about?
Mr. Catfish: These are the following predators I am worried about — bigger catfish, alligators and

humans.
Interviewer 1: What is your habitat?
Mr. Catfish: My habitat is rivers, lakes, streams and ponds.
Interviewer 2: What are your whiskers for?
Mr. Catfish: My whiskers are for detecting food, I use them like a human nose.
Interviewer 1: How long do you live for?
Mr. Catfish: At the most, I can live up to 60 years.



BLAKE MCCOSKER/VINEWOOD ELEMENTARY SCHOOL