

## ***Beach Days - Save the Waves***

The following is a

Panel 2: Ronnie finishes the phone call and says, smiling “*They’re on their way!, They’ll meet us here. You can take them to the sea lion.*”

Panel 3: Nick, Catalina, Ashley, Kai, and Chad

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Panel 1: The other *MMSC* member now says “*These phyto-plankton produce domoic acid which gets passed up the food chain, where the poor sea lions end up getting sick if it gets too much of it.*”

Panel 2: Nick, concerned says “*We play in the ocean sometimes when it's red. How come we don't get sick like the sea lions?*”

Panel 3: ~~The~~ e

Panel 6: Kai now gets to the point and asks his aunt *“Auntie, we were at the beach yesterday and we encountered a sick sea lion. The MMSC showed up and the vet mentioned something about HAB. Can you explain?”*

Panel 7: Dr. Siliva with a sad face replies *“That’s something we’ve been studying for quite some time. We now know that HABs can be caused by nutrients run-off from land.”*

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Panel 1: Dr. Siliva now starts explaining the matter more in depth *“Algal blooms are made up of phyto-plankton, they need lots of nutrients to grow and “bloom” like that.”*

Panel 2: She keeps explaining *“Nutrients from the fertilizers we can use on lawns can actually get washed into the ocean.”*

Panel 3: She continues *“For example, when there’s heavy rain like today, some e*

Panel 4: Everyone is holding their surfing boards and looking at the water, feeling sad. Catalina comes out with an idea and says "*I guess we can go fishing?*"

Panel 5: Catalina asks Nick "*Hey Nick, have you ever fished before?*" Nick replies: "*Once, when I was younger... with my pops.*"

Panel 6: Everyone is still at the beach talking when they hear someone saying "*HEY LOSERS.*"

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Panel 1: The voice came from one of the guys Chad used to hang out with. One of the guys says "*Get out of the way. These are our waves today*" and the other one says to Chad "*Hey Chad! Having fun with the Goonie nerds?*"

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*through the street.” Kai says “Well auntie mentioned that after it rains, a lot of the storm water can’t be processed.”*

Panel 2: Kai continues *“So some of it drains straight down to our beach.”* Catalina says *“Well think about it- most stuff on the road go down the storm drain.”*

Panel 3: Ashley says: *“Who knows what some people throw into these drains?”*

Panel 4: The gang is standing in front of a drain and they see a

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Panel 1 and 2: The game warden says *"These chemicals known as PCBs and DDTs don't break down and still contaminate fish today that feed on things that live on the bottom of the ocean."*

Panel 3: The game warden explains *"Those fish, then get eaten by bigger fish, and those fish get eaten by sea lions or people who end up with a lot of these chemicals in their bodies" - "So that's why we have to be careful and not eat these fish. Because us humans can end up with these harmful chemicals in our bodies."* [Learn more about safe eating guidelines.](#)

Panel 4: The kids are now nervous. Kai says *"Yikes"* and Ashley says: *"So what you're saying is that these chemicals can kill us right away? Like poison?"*

Panel 5: The game warden responds *"No, these chemicals have slower effects on animals and humans."*

Panel 6: The fisherman now disappointed says *"But I love these fish"* The officer says to him *"Don't worry, they can't make these chemicals anymore, but the ones remaining can still make you sick over time."*

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Panel 1: The fisherman angry says *"So if they stopped making them, why do i have to worry about it?"*

Panel 2: The fisherman turns and walks away while saying *"You kids ruined my day. BYE."*

Panel 3: Catalina says *"Thanks officer."* The game warden says to everyone *"Remember kids: Always be careful what you dump down the drain."* Chad says *"Of course! But officer, how do we know what chemicals are bad for fish and for us?"*

Panel 4: Ashley says *"My mom is always careful of what she pours down the drain. She says that there are potentially bad chemicals in many things."* *"Such as things we use every day."* She continues *"For example: bleach, old pills, some toothpaste and shampoo" - "So we try to use less! That will help the fish right?."*

Panel 5: The game warden says *"Remember: It's not just what you pour down the drain. Chemicals also get into the air, which can get into the ocean. Think of all the stinky smoke from ca.001" 9(ic)-2 (h)TJ0 Tc 0 Tw 2yān."*



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Panel 1: Nick, excited, says to the officer “*Which is why we do our best to do our part!*”

Panel 2: The game warden with a smile says to Nick “*Glad to know you kids are contributing to a healthy planet!*”

Panel 3: The kids happily wave bye to the game warden, saying “*Bye Officer Morales!*” Officer Morales replies “*C’ya kids! Enjoy the rest of your day!*”

Panel 4: The five kids are all looking at the ocean from the pier. Ashley, Chad, and Kai are holding their fishing rods. Meanwhile Nick sees something at the distance “*Wow! Look at all the smoke coming out of that boat's exhaust pipe!*”

Panel 5: A large cargo ship can be seen afar.

Panel 6: Kai says sadly “*That seems like a lot of air pollution.*”

Panel 7: Catalina, sad, looks at Kai and replies, “*Yeah, ships and trucks are some of the worst air polluters now – This includes the release of carbon dioxide (CO2) into the air.*”

Panel 8: Nick closing his eyes and says “*I don't want to see that.*”



Panel 5: Ashley, feeling worried, says to the scientists, "*I've been reading a lot about climate*"

Panel 5: Kai smiling says

Panel 1: Chad says to his friends "*Let's pick up some trash before we catch some waves*", while he crouches down to pick up

Panel 5: The lady adds “*Don’t people know that these balloons kill marine life?*”, while she thinks about dolphins coming out of the water to breathe and getting entangled in the strings of the floating balloons.

Panel 6: Chad, annoyed by the situation, says “*YEAH! I had one tangled up around my leg a few minutes ago!*”

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Panel 1: The lady, holding an uninflated balloon that she found on the surface, says “*Makes me so angry- I wish people would stop using these darn things.*”

Panel 2: The lady stretches her hand towards Kai, saying “*Can you take this?*”

Panel 3: Kai, confused, replies to the old lady “*Uhh... Sure? I guess...*”

Panel 4: The lady, then, swims away saying, “*Make sure to throw it in the trash! BYE.*” Meanwhile, Kai holding the piece of balloon stares at the lady while she swims away.

Panel 5: The kids stare at each other confused by the lady’s attitude. Catalina says, “*That was weird...*” Nick also says out loud “*Seriously!?*” Kai confused tells the rest of the kids “*Let’s go catch some waves! I’m starting to get hungry.*”

Panel 6: Catalina, impressed by Kai’s answer, says “*You JUST had a burrito. How can you possibly be hungry again?*”

Panel 7: The kids, finally, continue to have fun in the ocean. Chad says out loud “*WAVE IS COMING!.*”

Panel 8: The kids stare excited at a huge wave just forming in front of them. Nick says of

Panel 3: Catalina, impressed by the colors of the little shining things in Ashley's hair, gets

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Panel 1: The woman tells Kai, *“Well, you probably have eaten plastic too. Problem is we just don’t know how bad that is for most animals, including people”*, referring to the micro-plastic that can get stored in the human’s digestive system.

Panel 2: Ashley says to the woman *“I always pick-up trash I find on the beach, but how could we possibly pick up all this plastic?”*

Panel 3: The woman, while continuing laying on her beach chair with a book on her hands, responds to Ashley, *“We can’t right now, but what we CAN do is reduce the amount of big plastic items that can get into the ocean.”*

Panel 4: Catalina, surprised, tells the woman, *“You know a lot about this stuff.”*

Panel 5: The woman responds to Catalina, *“Of course, I run local beach clean-up efforts, so I have seen literally tons of trash picked up off this very beach over the last 10 years.”*

Panel 6: The woman also adds *“We always need help. Would you kids like to help out?”*

Panel 7: Ashley excited shouts *“COUNT ME IN! I’ll make sure to bring these guys along with me!”*

Panel 8: The rest of the kids smile shyly, while Chad says *“Ya bet! We’ll definitely help!”*

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Panel 1: Kai also tells the woman *“Thanks a lot for inviting us to the beach clean up!”*. He pauses and then says to his friends *“Guys I’m starving can we go eat now? All this talk about fish makes me want fish tacos!”*

Panel 2: Catalina laughing responds to Kai *“Haha! That sounds really good. But first, let’s pick up some trash.”*

Panel 3: Catalina sees a trash container a few feet away from where they are, and says to her friends, *“We can throw it in that trash bin over there.”*

Panel 4: Chad holding a plastic bottle in his hand says *“Yeah! But let’s keep the plastic bottles. My mom collects em’ and takes them to the recycling center for cash.”*

Panel 5: Chad continues explaining that there are common items that can be recycled every day, such as soda cans, plastic water bottles, plastic milk cartons, newspapers, cereal boxes and old electronics.



Panel 6:

Panel 10: Nick laughs out loud at his friends.

Panel 11: The kids laughing enjoy their meal. Chad continues joking and says “*Yeah dude! How are they?*” and Kai responds “*HAHA! They taste great! But let’s make sure we aren’t putting more plastic in the ocean! So we can have plastic-free fish!*”