Global Problem Solvers: The Series
Season 2: Storm Force

Storyboards
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Episode 2.1: The Storm

THE ATLANTIC OCEAN
OFF CAPE VERDE, AFRICA

KELILE:
Hey Adrien, Beela, you guys notice anything weird about the wind?

BEELA:
My ultrasonic sensors show that it's moving in a circular motion. It's like a giant carousel.
ADRIEN:
I'm not sure I can hold on much longer. Woah! Uh team, a little help over here?

KELILE:
Wow, the water is really warm. You OK Adrien?

ADRIEN:
I might have twisted my ankle when the wind knocked me over.

BEELA:
I'm sending my wind data up to the airship. Putri, what do you make of it?
PUTRI:
The wind pattern is typical of what's called a tropical depression. That depression can turn into a hurricane as it crosses the Atlantic Ocean.

SATOSHI:
A windstorm turns into a hurricane? How's that work?

CRISTINA:
Check this out. My friend Ivy Stormcatcher has a popular show on the internet about the weather. She just uploaded a video from the United States.

IVY:
Hey gang. It's me, Ivy Stormcatcher. I am visiting my grandmother in Tampa, Florida. Unfortunately, my trip was interrupted by a hurricane! It hit a couple days ago, flooding homes and taking out power.

IVY:
Think of a hurricane like an engine, fueled by warm, wet air. As warm air fuels this engine, new air swirls in to take its place. What starts as a light swirl can grow into a powerful spin as it crosses the ocean.
IVY: If winds in this storm reach 74 miles per hour or faster, you have a hurricane.

CRISTINA: According to reports, the hurricane that hit Tampa sustained winds of over 130 miles per hour.

PUTRI: I wish there was something we could do to help.

IVY: Cristina? It's me Ivy!

CRISTINA: We were just watching your last video. Are you and your grandmother OK?

IVY: We're fine, but things here in Tampa are a real mess. Also, my phone's dying.

CRISTINA: OK, tell me what you need.

IVY: Well, the community has really come together to rebuild after the hurricane. There's still a big problem though. You see, the schools ... and the teachers ... that leaves the kids ...
CRISTINA:
Ivy, you’re breaking up. Are you there? Ivy’s phone battery ran out. She was saying there’s a problem with the schools.

PUTRI:
We must first go to Tampa to identify the problem.

CRISTINA:
I’ll check in with the rest of the team.

BEELA:
Hi Cristina. It seems like Adrien twisted his ankle. Thankfully Kelile had his first aid kit.

KELILE:
My grandmother taught me an old African saying: Shields are not made on the battlefield. You must always bring the right tools in case of emergency.

ADRIEN:
Was your grandmother a medic? This feels great!
BEELA:
Let’s keep that first aid kit close by. I have a feeling this won’t be our last emergency.

PUTRI:
Beela, we are needed in the United States. A major hurricane hit Tampa, Florida. The schools have a problem, although we’re not sure what it is.

BEELA:
We’ll be right up, Putri. This sounds like a job for ...

PUTRI:
Global Problem Solvers. Let’s go!

TO BE CONTINUED...
TAMPA, FLORIDA
UNITED STATES

IVY:
Thanks for coming so quickly guys. It’s been a crazy few days here. This middle school has been closed since the storm.

KELILE:
Did rainwater enter the building?

IVY:
Rainwater flooded the school's gym. Principal Diaz will shed some light.
CRISTINA:
Uh, do you see what I see?

IVY:
Don't worry guys. With rising waters from the storm, alligators seek higher ground just like humans.

CRISTINA:
We better get inside the school.

PRINCIPAL DIAZ:
Hey guys! Come have a seat.
IVY:
Principal Diaz, these are some of the Global Problem Solvers I told you about.

KELILE:
Nice to meet you, sir. Why are all these computers here?

PRINCIPAL DIAZ:
When the storm was approaching, we moved the school's computers to the highest classroom. Of course they're just taking up space until we restore power and internet.

CRISTINA:
When will students return to class?

PRINCIPAL DIAZ:
Uh, not for a while. We don't know when the power will come back on.

IVY:
If kids can't return to school, the community can't return to normal.

PRINCIPAL DIAZ:
Sometimes it just doesn't Ivy. After a storm like this, schools can close and families move.
PUTRI:
I know Huti. It looks like Tampa will take months to rebuild. Yes, Satoshi.

SATOSHI:
I just spoke with city engineers. They say that so many trees are down the power company can't get its trucks to repair power lines.

BEELA:
I'm at the power company. They must first get electricity to hospitals, fire and police stations. It could take weeks before the entire grid is up and running.

PUTRI:
Cristina, have you guys arrived at the local shelter yet?

CRISTINA:
Yes Putri. There are many families who have moved here as a result of the hurricane. There are kids of all ages. Some must be Principal Diaz's students.
MS. KIVEL:
I'm sorry, do you work for Principal Diaz? I teach sixth grade at his middle school. Do you know if he needs help starting classes again?

STUDENT:
Look at me Ms. Kivel! I'm a hurricaaaaane!!

MS. KIVEL:
I'm willing to volunteer.

KELILE:
Tell us what you would need to run a class.

MS. KIVEL:
Whew, I'm so glad you asked. I need three things: one, a PLACE to teach my class; two, POWER, so we have light; and three, INTERNET, so the class can access coursework and collaborate.
**KELILE:**
We have identified the problem. We have consulted experts.

**CRISTINA:**
Now, it’s time to formulate a solution.

**ADRIEN:**
Let’s get back to the airship to brainstorm some ideas.

**IVY:**
Hi grandma? Oh no. I’ll be right there. My grandmother’s cat got out of the house. She’s very worried.

**ADRIEN:**
I hope you get there before the alligators do. What?
TO BE CONTINUED...
**Episode 2.3: The Solution**

**IVY:**
Bucky? Here, kitty, kitty, kitty. Grandma, it’s getting dark. Without the streetlights working, I’m not sure we’ll find him.

**GRANDMA:**
Oh, Ivy. You’ve always been my problem solver. I know we’ll find Bucky. I just love to see how you get us there.

**IVY:**
Remember the last time Bucky got out? I installed a communication device on his collar.
GRANDMA:
Oh, but the internet’s been out since the hurricane. There’s no way to track the device.

IVY:
Hmm. Let me call my friends. They’ll have a solution.

BEELA:
I see the cat, Ivy. He is three doors down from your current location.

GRANDMA:
Bucky!

IVY:
Thanks Beela! Bucky found the one house in the neighborhood with a generator. It has power, and as a result, fresh milk.
PUTRI:
OK, Global Problem Solvers. We need a solution that gets students back to class while their schools recover from the hurricane. Any ideas?

ADRIEN:
Wait a minute. Do you guys remember when I wiped out while windsurfing? After I twisted my ankle, Kelile's first aid kit helped me walk again. Let's say we created a first aid kit, but for classrooms.

CRISTINA:
That's a terrific idea Adrien! The kit will include lights so teachers and students can see.

BEELA:
And also tools to give them access to the internet.
SATOSHI:
Everything would be stored inside a case that’s rugged and stormproof.

KELILE:
Allowing teachers and administrators to create classrooms anywhere.

PUTRI:
I love it! Pop-up classrooms. But from where would the kits get power?

ADRIEN:
Ugh airship, lower the window blinds!
Satoshi: That's it! What if we used the sun to power the kit?

Beela: So a ruggedized kit that includes lights, internet hardware, and solar panels?

Putri: Global Problem Solvers, we have a solution. Let's drop in on Ivy to see what she thinks.

Ivy: So these pop-up classrooms would use solar power?
**CRISTINA:**
Yes. That way they would not drain the local power supply, if one exists.

**IVY:**
It’s an awesome idea. But the hurricane wiped out many roads in Tampa. How can we pick up supplies for these kits?

**GRANDMA:**
As I said Ivy, I always know you'll reach your destination. Seeing you get there is the fun part.

**IVY:**
Thanks Grandma. There's a company that makes solar panels in East Tampa. That should be our first stop.

**PUTRI:**
Let's split up. Cristina, Satoshi, Kelile, Ivy, go to the solar panel company. Adrien and Beela, start putting together tools for the kit.
ADRIEN:
Wait, where’s Huti?

GRANDMA:
Looks like Bucky found him!

TO BE CONTINUED...
**Episode 2.4: The Technology**

**ADRIEN:**
I borrowed this generator from your neighbor. We can use power from it to build tools for our emergency classroom kit.

**BEELA:**
Then teachers can use the kit to restart their classes, even when a storm has taken out power and internet.

**ADRIEN:**
I am retrofitting this internet router to operate on solar power.
BEELA:
That router can connect to cellular networks, which still appear to be up and running.

BEELA AND ADRIEN:
What'd you say?

BEELA:
It's a good thing our kit will use solar power. That generator is too noisy to run near a class.

IVY:
Ms. Kivel, thanks so much for driving us to the company that makes solar panels in East Tampa. Those panels are essential to power our emergency classroom kit.
**MS. KIVEL:**
My students have been cooped up in that shelter for so long, they’re desperate to return to their normal lives. You know what one of them said the other day? “Ms. Kivel, are you going to still be living with my family after the hurricane?” I said there is no chance in ...

**KELILE:**
Uh, Ms. Kivel?

**MS. KIVEL:**
My car can’t make it over this road. We need a boat.

**SATOSHI:**
That’s it! If this vehicle can’t drive through the water, let’s get one that can. Ivy, doesn’t your aunt serve in the Air Force?

**IVY:**
Great thinking Satoshi. Aunt Sherry—uh, Captain Sherry, please.
CAPTAIN SHERRY:
Reconnaissance flights are scheduled over Tampa at zero nine hundred hours! Hello?! It's so nice to hear from you Ivy. Why yes, I think I can find you a high-water vehicle, especially if it means getting classes up and running. I'll be there right away!

CRISTINA:
Captain Sherry, the solar panel company is just up the road on the left.

BEELA:
Those solar panels are taking a while.... What do you see in the clouds, Adrien?

ADRIEN:
I see an alligator, riding a bicycle?

BEELA:
Wait a minute, that cloud looks like someone we know!
CAPTAIN SHERRY:
Let’s go Global Problem Solvers. Double time!

CRISTINA:
Lay out the panels on the lawn. Let’s wait a little while and see if the sun powers up the kit.

BEELA:
The wattage from the solar panels is too weak. It’s barely enough to power the router!

KELILE:
It must be all those clouds blocking the sun.

IVY:
What if the kit could store energy from the sun, so it still has power when there’s no sunlight?
ADRIEN:
Great idea Ivy! I will add a solar-plus-storage battery to the kit.

SATOSHI:
Those batteries can store up to ten hours of solar power!

KELILE:
I'm worried. We had so much trouble picking up supplies for one kit. How can we deliver kits to teachers who need them across the city?

TO BE CONTINUED...
**Episode 2.5: The Business Plan**

**IVY:**
Cristina, the hurricane has flooded so many roads. There is no way we can get our emergency classroom kits to teachers.

**CRISTINA:**
Ivy, what about your Aunt Sherry? Doesn't the Air Force have more high-water vehicles?

**IVY:**
I checked. They’re all being used to deliver food and water to people in need.

**CRISTINA:**
You’ve visited Tampa many times. Is there anyone here who you think can help?

**IVY:**
Hmmm ...
IVY: When I was young, my grandparents used to take me to Tampa’s “Monster Truck Showdown.” Humongous trucks would race and perform stunts in an arena.

IVY: My favorite truck was called Lightning Bolt. Even then I loved anything that had to do with weather. That truck was unstoppable, like a storm!

IVY: Those monster trucks can drive through anything. And with the hurricane cancelling the Monster Truck Showdown, maybe its trucks are available. They could deliver our emergency classroom kits to shelters across Tampa.
PUTRI: Great idea Ivy. But how would we pay for the trucks, drivers, and fuel?

CRISTINA: That's where my entrepreneurial spirit comes in. I am hoping the Monster Truck Showdown will see the value in helping us. As their trucks deliver our kits across Tampa, they will also be advertising for the showdown. Once the showdown starts up again, attendance will skyrocket.

SATOSHI: Now we need Florida's Department of Education to buy our kits. Then we have a pretty strong plan.

CRISTINA: I will craft a business plan to build, sell, and deliver the kits. We can use it to pitch both the showdown and Florida's education commissioner.
PUTRI:
Ivy and Kelile, talk to the showdown’s promoter. Adrien and Beela, talk to the education commissioner. Global Problem Solvers, let's go!

MR. RANDAZZO:
Bone Crusher, meet Executioner! Vrooooom. Woohoo! The crowd goes wild!

KELILE:
Uh, Mr. Randazzo?

MR. RANDAZZO:
Oh, I'm sorry. How can I help you kids? With our city mostly underwater, I've got nothing but time on my hands.

IVY:
We have an idea that might solve your problem. And ours.
MR. RANDAZZO:
Well, OK. Lemme hear it!

COMMISSIONER GARDNER:
I have the electric company on the other line. They say power is still weeks away reaching schools!

BEELA:
Uh, Commissioner Gardner?

COMMISSIONER GARDNER:
Oh, pardon me. Now where did you children say you're from?

ADRIEN:
We came here from Tampa.

COMMISSIONER GARDNER:
Tampa? The hurricane has brought education there to a standstill.
BEELA: Well, we are also here with a solution.

COMMISSIONER GARDNER: Lemme hear it!

PUTRI: Beela, how's it going with Florida's education commissioner?

BEELA: She has agreed to buy a kit for every shelter in Tampa!

PUTRI: That's incredible! Kelile, how's it going at the Monster Truck Showdown?
KELILE:
Uh, pretty good. The showdown has agreed to deliver our kits. Thankfully, they will also provide drivers.

MR. RANDAZZO:
Yeeeee-haw!
PUTRI:
I can't wait. Our first test of the emergency classroom kit, with an actual class!

ADRIEN:
What could possibly go wrong? Whooaaah!
BEELA: So far, so good. Despite increasing clouds, the solar panels are steadily providing power for the class's lights and internet.

KELILE: And an added bonus: Teaching outside allows for fresh air and the sounds of nature!

CRISTINA: Both are very conducive to the learning process.

MS. KIVEL: OK class, is Florida a peninsula or an isthmus?

STUDENT: What'd you say, Ms. Kivel?
**MS. KIVEL:**
I said, is Florida ... a peninsula ... or an isthmus?!

**BEELA:**
What the ... Excuse me! Do you have any idea when you'll be done using your chainsaw?

**WORKER:**
Sorry, but hurricane winds broke these branches. I have to get them down before they hurt somebody! I'll be finished by this afternoon.

**BEELA:**
I suppose we can wait until then. Or not.
KELILE: We have provided power and internet for class, but not a suitable place where it can happen.

CRISTINA: After a natural disaster, a suitable place is not so easy to come by.

SATOSHI: We need to think critically.

STUDENT: I'm a hurricane!

SATOSHI: Ms. Kivel, how does this shelter receive bedsheets and other supplies?
MS. KIVEL:
Trucks delivered them before the storm began. The shipping containers are still outside.

KELILE:
Excuse me, sir. What happens to this shipping container now that it's empty?

AID WORKER:
It stays here until families leave the shelter for their homes. Then the container is reloaded with supplies from the shelter, and a truck pulls it away.

SATOSHI:
So what you're saying is, as long as there are families at the shelter, there's an empty, protected, dry, quiet space right next door?
ADRIEN:
I’m not sure what Satoshi is getting at...

PUTRI:
Great work Global Problem Solvers. That was fast!

BEELA:
Our emergency classroom kit is so mobile, we were able to switch locations quickly.

ADRIEN:
And our solar panels can collect their charge, out of everyone’s way.

CRISTINA:
This was a great test of our technology.

KELILE:
With shipping containers next to every shelter, we have a potential place where the technology can be used effectively.
IVY:
Hello?

MR. RANDAZZO:
Ms. Stormcatcher? Are your emergency classroom kits ready to be delivered? These babies have been idle for so long, they're ready to make kids happy again!

IVY:
Uh, hold on Mr. Randazzo. Global Problem Solvers, are we ready to get these kits to shelters across Tampa?

PUTRI:
Let's go!

TO BE CONTINUED...
Episode 2.7: Birth of a Social Enterprise

**IVY:**
Hello out there all you storm trackers! It’s me, Ivy Stormcatcher. I return live after a massive hurricane in Tampa, Florida kept me busy for a while. I am flying high above the city with my aunt, Air Force Captain Sherry.

**CAPTAIN SHERRY:**
The city is recovering nicely from the storm. Roads are clear, power is back, and schools have reopened.

**IVY:**
While schools were closed, teachers taught classes using an emergency classroom kit my friends and I created.

**CAPTAIN SHERRY:**
Do you know if the kit worked well?

**IVY:**
The Global Problem Solvers are gathering data to answer that question. That is, if they’re not playing video games.
PUTRI:
Beela and Satoshi, you are supposed to be gathering data on the impact of our kit.

BEELA:
We have been Putri. We were just waiting until the school day ends to hear from Kelile.

SATOSHI:
And ever since those monster trucks delivered our kits across Tampa, we can't get enough of the trucks.

PUTRI:
What data have you collected so far?
SATOSHI: Adrien reports that teachers found our kits easy to assemble and operate.

BEELA: Which says a lot, considering technology isn't always so straightforward.

SATOSHI: Cristina reports that parents were happy that classes continued right after the storm. Their children maintained a sense of normalcy during a very chaotic time.

BEELA: Although parents also seem happy to have their kids back at school.

PUTRI: Wait, I am hearing now from Kelile.
**KELILE:**
Principal Diaz says that despite time away from school, students are caught up in their studies.

**PUTRI:**
That is terrific news Kelile. Now we need to spread the word about our social enterprise. A social enterprise is a business—like the one we created around our emergency classroom kit—that attempts to solve a social problem.

**MR. RANDAZZO:**
Hiya, Putri? Mr. Randazzo here, the promoter of the Monster Truck Showdown. You’re never gonna believe this.

**MR. RANDAZZO:**
There was so much excitement seeing our trucks deliver your kits, folks are lining up for our opening event. We’re calling it the “Back to School Bonanza.” Maybe we can celebrate the kit?
PUTRI:
That’s a great way to spread the word.

MR. RANDAZZO:
Perfect. I gotta go. Lots to plan!

MR. RANDAZZO:
Teachers and students, welcome to the Back to School Bonanza!

MR. RANDAZZO:
We have a brand new truck here today. Put your hands together for The Hurricane, escorted by the Global Problem Solvers. They helped restart class while our schools were being rebuilt.

MR. RANDAZZO:
Now it’s time for The Hurricane to fight its first battle. The opponent will be ... the emergency classroom kit!
MR. RANDAZZO:
The kit wins!

PUTRI:
Yes, hello? We’re needed where? India? Team, we have another mission.

PUTRI:
Ivy, your ability to foresee problems makes you indispensable to our team.

CRISTINA:
Old friend, you are one of us now. Welcome to the team!
IVY:
Well then, may I have the honor? Global Problem Solvers, let's go!

TO BE CONTINUED...