Captain Gear Saves the Day!

Final Draft

Cast

Captain Gear- Vishnu
Team Geared Up! Side Kick 1- Pranav
Team Geared Up! Side Kick 2- Ritvik
Team Geared Up! Side Kick 3- Chloe
Teacher- Kenzie
Standardized Test 1- Jonathan
Standardized Test 2- Neil
Jack (Student 1)- Ananya
Student 2- Mihir

Scene Open-

Students march in class with heads down, looking miserable. A stern looking teacher dressed in grey, looks mean and bored. Teacher is marching with two "standardized test" scantron sheet villains. The "standardized tests" will be dressed as scantron sheets, but by the end of the skit they will throw off their scantron sheets to reveal themselves as examples of the kit robots.

Teacher (in a mean voice): Now sit in your seats,
Don't move! Don't think!
(points to Jack) Just memorize facts, Jack!

Jack (stands up): But teacher, we're sad and bored! We don't need more tests!

Everyone: WE NEED SOMETHING NEW!!!

Play Music- "Another Brick in the Wall" Pink Floyd

Jack and Entire Class (sings): We don't need rote memorization,
We don't need no thought control,
Need new approaches in the classroom
Hey! Teacher! Try this PBL!

Teacher (thoughtfully): Hmmm, you're right! I'm bored too!

Captain Gear: (jumps into the scene): Never fear! Here's a solution from Captain Gear!

Student 2: Look, it's famed roboticist and superhero Captain Gear! It looks like he's with his sidekicks, students from Team Geared UP!

Captain Gear: I see that you and your students are suffering from a lack of creative solutions to engage elementary students in robotics education. Why, I remember when I was a wee, little sprocket, I longed to build robots and tinker all day long. Unfortunately, it looks like your class is stuck in the rote memorization mode!

Teacher: Yes, you see my students and I want to be more engaged in our learning and we want to learn more about robotics. The U.S. Department of Education calls for all students to be skilled in STEM to enable success in the 21st century economy, but it's difficult to find ways to support elementary aged children in meaningful STEM lessons! **Captain Gear and Team Geared Up!, how can we improve robotics education for elementary school aged children?**

Sidekick 1: Do not fear! We have studied this problem extensively. In addition to our online research, we met with Principal Chris Knott and administrators from Loudoun County Public Schools. From our numerous conversations with school faculty, we discovered that Loudoun County Public Schools **does not** have a project based learning, robotics curriculum for elementary school students.

Jack: But how is Project Based Learning better than direct instruction?

Sidekick 2: Many studies, including those from the Buck Institute for Education have found students who learn in classrooms using project based learning outperform their peers in control groups that received direct instruction from textbooks and lectures.

Student 2: If it's so great, why aren't we learning hands-on robotics lessons at our school?

Sidekick 3: At this time, the only robotics programs available to elementary school students in Loudoun County are summer camps and a few after school programs that families have to pay for. Unfortunately, these few programs are expensive and not part of the school curriculum. Many families can't afford the cost of these programs and that is one of the reasons we created our innovative solution!

Jack: So what's your solution?

Captain Gear: Holds up the kit… We made this in the Gear Box! Our Craft-A-Bot Kit is the first of its kind, and can be made with recyclables, and even 3D printed pieces! With our kit, there are no limits on your creativity because it is infinitely customizable! In addition to that, we provide FREE robotics workshops to teach students, parents, and educators how to use the Craft-A-Bot kit! We will help you build the robot of your dreams!

Teacher: But how is Craft-A-Bot different from all the other kits people can buy? How is this (points to kit) an improvement?

Sidekick 1: Well, by spending the past months analyzing existing solutions, we have determined that while there are a number of robotic kits on the market focused on elementary school aged children. Moreover, all of these kits are very expensive! They range in price from $90.00 to $350.00 for the Lego Mindstorms EV3 kits. Educators and families find these prices to be too high and would like a more affordable option. Unlike all the other kits on the market, **our kit is less than $10!!!**

Student 2: So how does it work?

Sidekick 2: We designed Craft-A-Bot to include two motors, tethered remote control, 3D designed snap connectors, wheels, and an online library of 3D designs to print and integrate into your robot. Even the cardboard box the kit comes in can be upcycled into your robot! The box has cutout templates intended for you to use! (holds up box and points to templates on packaging).

Standardized Test 1: How is that (points to kit) innovative?

Captain Gear: Our Craft-A-Bot Kit uses 21st century technology and is innovative because it is the only **open source, low cost, standards-aligned, robotics kit designed exclusively for elementary school aged children**! Our kit will also invite everyone to our website where folks can **download free 3D printable pieces** from our resource library! An added bonus is that users will also be able to **upload their own designs to our library** to share their ideas **with the world**!

Standardized Test 2: But what about us?!? (*points to other Standardized Test 1*) What about standardized test scores???

Sidekick 3: Well, our kit aligns with the Virginia Standards of Learning and the Next Generation Science Standards Framework for elementary school students. Our Craft-A-Bot Kit, with a Project Based Learning focus, enables kids to learn STEM more deeply all while making real-world connections! **This kit can easily be used as part of the core curriculum in the classroom, or as enrichment outside of the classroom**! It's a win-win solution!!!

Teacher: Wow! This is a great idea! How can we get this to learners all over the world?

Sidekick 1: I'm glad you asked! In addition to sharing our project with school administrators, and experts in the field of robotics, we've also conducted robotics workshops at Rust Library in Loudoun County. From our library outreach with students and families throughout the county, we confirmed that there is a tremendous need for our kit!!!

Students start to interact with kit.

Standardized Test 1: This is fun!!!

Standardized Test 2: And I'm learning so much!

Everyone (together): We wish every child could learn this way!

Teacher: Thanks Captain Gear and Team Geared Up! for saving the day! You are our heroes! (clasps hand to heart)

Sidekick 2: We would like to thank you for watching our presentation. A big thanks to Dr. Peixoto, Tosin Adetoro, Principal Chris Knott, and Loudoun Schools Administrators Odette Scovel and Pat Herr for meeting with us. We would also like to thank Rust Library, and families throughout Loudoun County for letting us share our research and Craft-A-Bot Kit with them.¶

Everyone: Thank you!