



**Team 8755 A/B**  
**Whale- CPCA**  
**CORAL PARK CHRISTIAN**  
**ACADEMY**



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WHALES CPCA 8755B  
Coral Park Christian Academy

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ABS Atlantic Bearing Services (Miami)

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FUNCTION**

CAMILA  
JOSHUA  
SAMUEL : **ENTRY DATA**

CAMILA : **PHOTOGRAPHER**

ALEX  
AARON  
TYLER : **SUPPORT**

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• **COACH:** Mrs. Hernandez

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## Company Presentation

### ABS Atlantic Bearing Services

An engineering company with more than twenty years of experience providing the highest quality parts, services, and solutions.

Among other things, they produce Gearbox, Services of Repairation, mechanical parts (bearing), and Reverse engineering.

### Why did we choose this company?

We chose this company to do the online challenge, because it is a technology based company, it has years of experience, it is extended for more than 100 countries, all of their workers are technicians and engineers, and they were willing to help us.

### Mission We Completed:

We were taught about the design of the engineering process for the repairing of a bearing. From where the client reports the problem, up to where it is resolved. For a second mission, we compared their process to our process in making our robot.

# Process

## #1 Define the problem

how?

how they identify their problems.

they don't do

designs because they only repair the bearing

### DIFFERENCE:

first, we analyze the game's challenges of different years, and the tasks the robot has to accomplish.

## #2 Brainstorming

if  
Who?  
Where?

The engineering department analyses the problems and propose some solution.

Notes: All of them are engineers

### DIFFERENCE

The entire team has a meeting to share ideas. All the ideas are compared and valuable.

## #3 Research

where? how?

They use the standards, textbooks and professional personal experience.

They consult the information of the internet

### DIFFERENCE: NO DIFFERENCE

We used YOUTUBE videos as research, mechanisms of other VEX robots, and we used inspiration from robots from competitions we have gone to, and our own ideas.

## #4 Develop Ideas

who? Taking into account from the data they get they propose different ideas

Of all our ideas, we used the most simple and functional ones.

ABS Company

8755 Robotics Team (CPCA)

## #5 Choose Best Ideas

Who?  
how?

The chief of the department chooses the best ideas.

ABS company

### DIFFERENCE:

8755 Robotics Team (PCA)

The members of our team choose the best idea for each task the robot has to do. Our coach supports us with their experience.

## #6 (prototype) Build model

Where?

They do not build prototype, they give repair service, but they test the solutions.

This service takes place in parts of the world, China, Italy, Venezuela, Spain, and Latin America.

### DIFFERENCE:

We built a prototype of the different mechanisms. If they work, we combine them and make the robot.

## #7 testing evaluate

Quality control?

All the tests they do it in their workshop.

### DIFFERENCE:

We test the robot and check if something is wrong. If there is a problem, we try our best to fix it.

## #8 Make ~~improvement~~ improvement.

After they tests they try to improve the bearing.

### DIFFERENCE:

After every competition we analyze what didn't work and we improve it.

## #9 Final Result.

ABS they give it to the client

8755 Team

We take the robot to the competition and compete with it.

The process returns to #1 like a cycle.

What resources did you utilize to learn about professional  
in this career?

We saw:

- Disassembly of a Gearbox
- Their workshop
- Endoscopy and vibration analysis
- Many storage facilities.
- Reverse engineering

How has participation in VEX Robotics prepared you  
for a future career?

**Camila**

Camila (Girls Team Captain): "I don't think I want this as a future career, but it's pretty interesting seeing all the parts of the robots we need to fix, and then later fixing them."

**Samuel**

"It has prepared me by learning and practicing teamwork and knowing more stuff about robots."

It has also helped me to solve problems."

"It has helped me to know about robots and engineering."

**JOSHUA**

It has also help me to resolve problems and to do teamwork" 3









