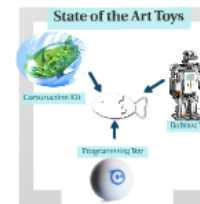




**Goal!**  
Arouse children's curiosity & enthusiasm for technology



### The NEW Art of Playing

- Learn about
- Mechanical structures
  - Programming
  - Physics in the water

**Product Presentation**

### Target Market

- Final Consumer: Kids between 8 and 12 years
- Consumer: Parents
- Customer: Toy Companies
- Price: 50€

### Outline

1. Motivation & Goals
2. Product Presentation
3. Prototype
4. Conclusions

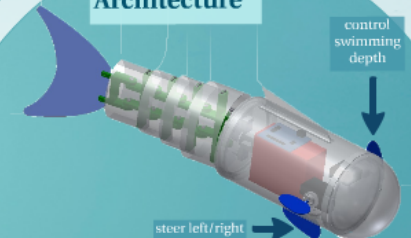


## Biologically inspired Swimming Robot

### Conclusion

- BRO-FISH**
- Our toy enables children to learn while they play
- Innovative tail mechanism is contribution to scientific field

### The Prototype Architecture



### VIDEO



### Innovative Tail Mechanism



### References:

- <http://www.mindblog.org/files/Fish-Swimming.jpg>
- <https://www.kidsworld.com/blog/wp-content/uploads/2013/12/mimetic-fish-1.jpg>
- <http://www.biorxiv.org/content/10.1101/000000>
- <http://www.biorxiv.org/content/10.1101/000000>
- <http://shop.simplicy.ca/products/sphere-2-0-robotic-fish>

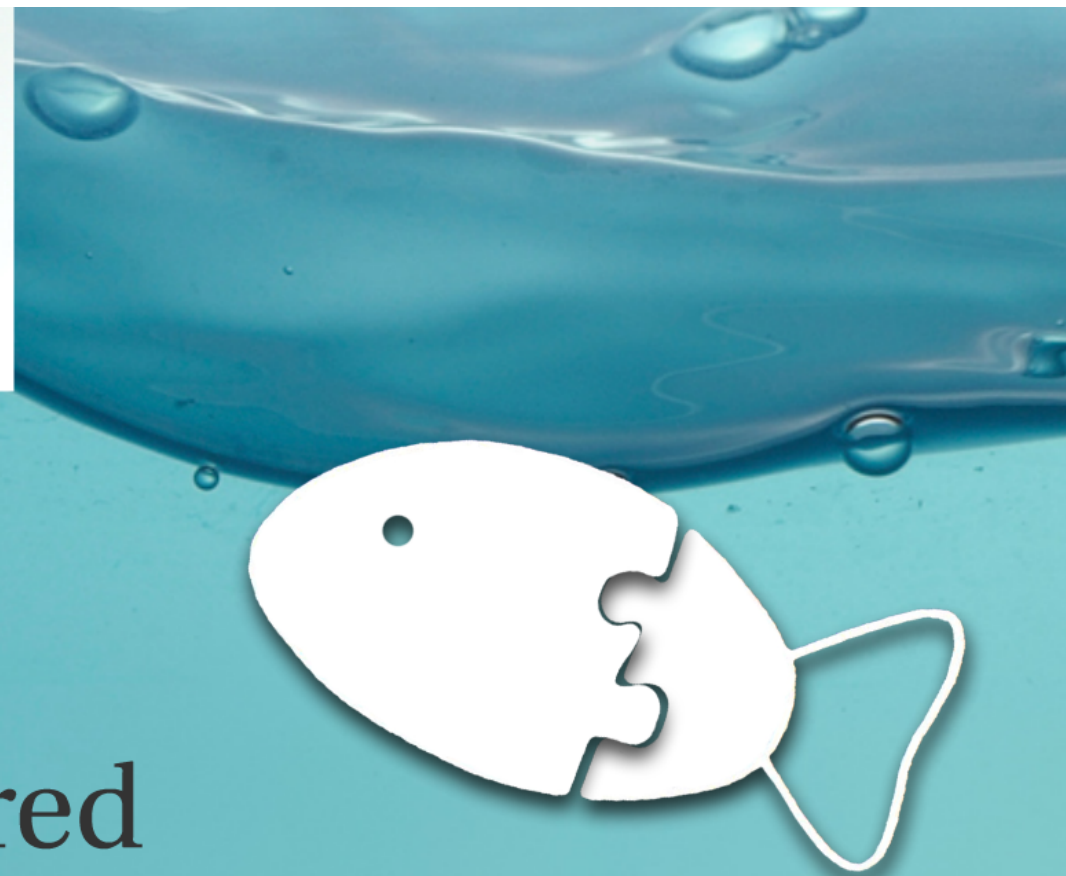
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# Outline

1. Motivation & Goals
2. Product Presentation
3. Prototype
4. Conclusions

# WHY?

Biological Inspiration



Global energy shortage

Critical ocean issues

# Goal!

Arouse children's curiosity & enthusiasm for technology

# Goal!

Arouse children's curiosity & enthusiasm for technology



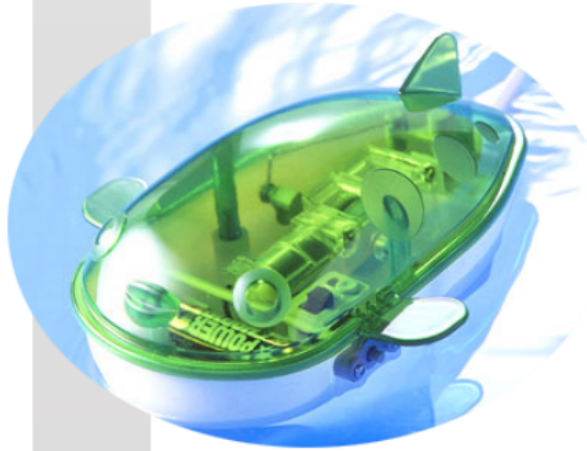


**Educational Toy**

# **BRO-FISH**

- Construction Kit
- Fish-like movement
- Customizable parts
- Teaches in several fields

# State of the Art Toys



Construction Kit



Robotic Toy



Programming Toy



# The NEW Art of Playing

Learn about



- Mechanical structures
- Programming
- Physics in the water

# Target Market



Final Consumer:

Kids between  
8 and 12 years

Consumer:

Parents

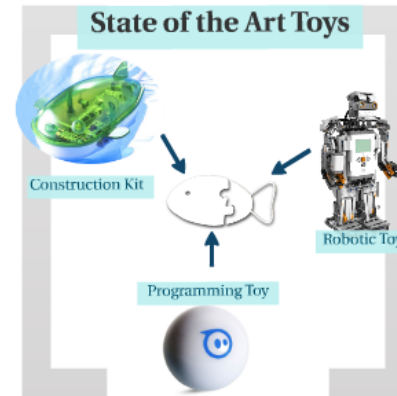
Customer:

Toy Companies

Price:

50€

Curiosity &  
Technology



Product  
Presentation

## The NEW Art of Playing

Learn about



- Mechanical structures
- Programming
- Physics in the water

## BRO-FISH

- Construction Kit
- Fish-like movement
- Customizable parts
- Teaches in several fields

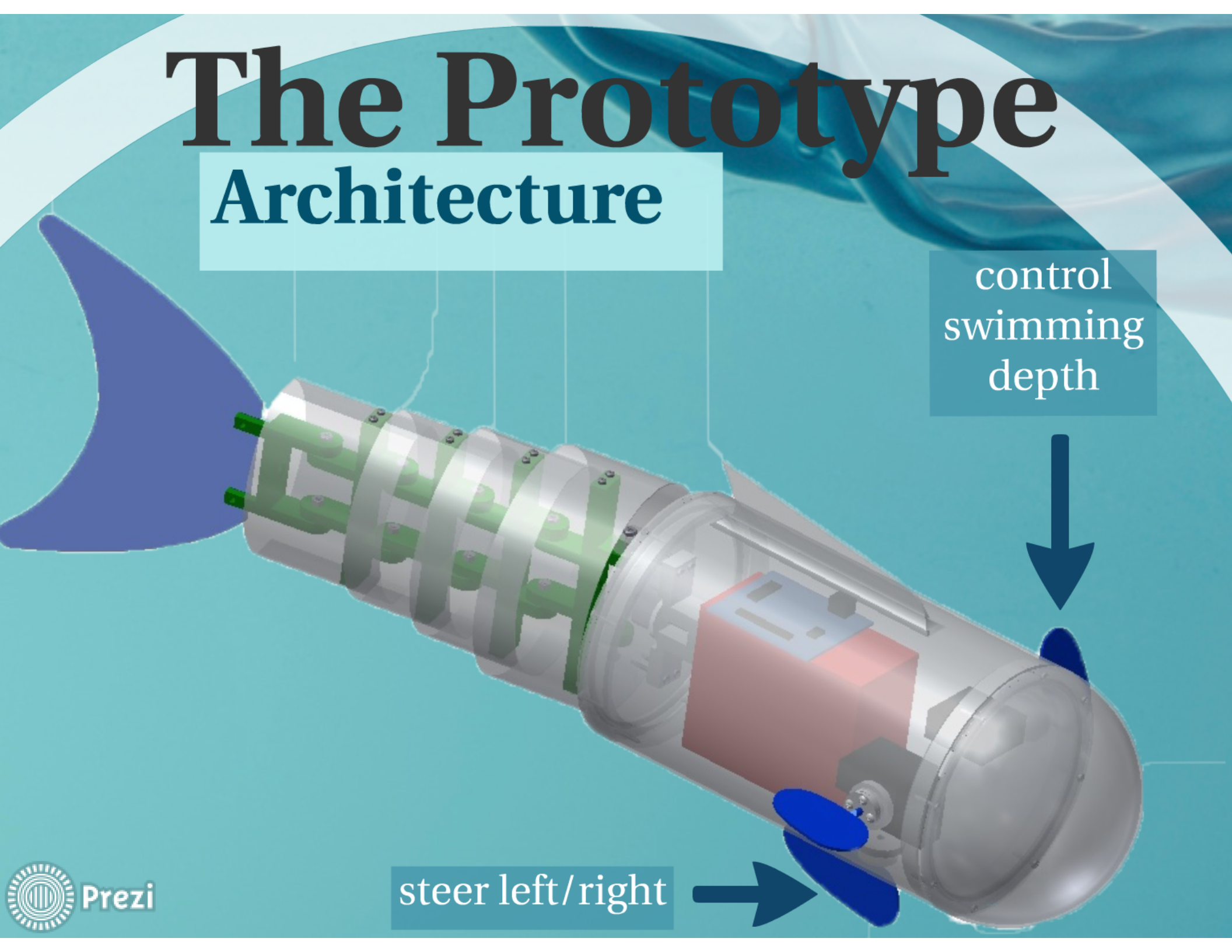
## Target Market

Final Consumer:	Kids between 8 and 12 years 
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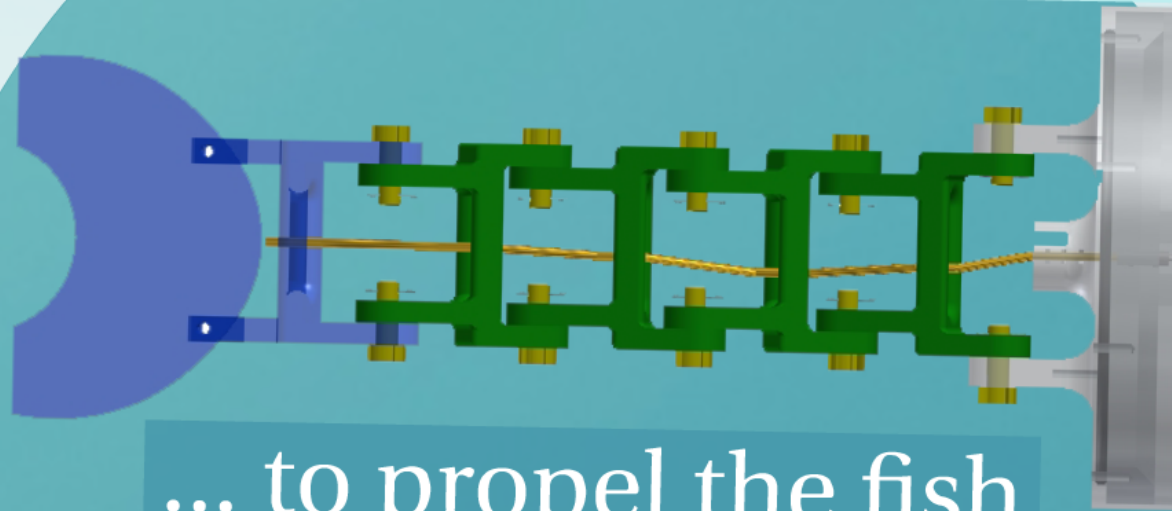
# The Prototype Architecture

control  
swimming  
depth

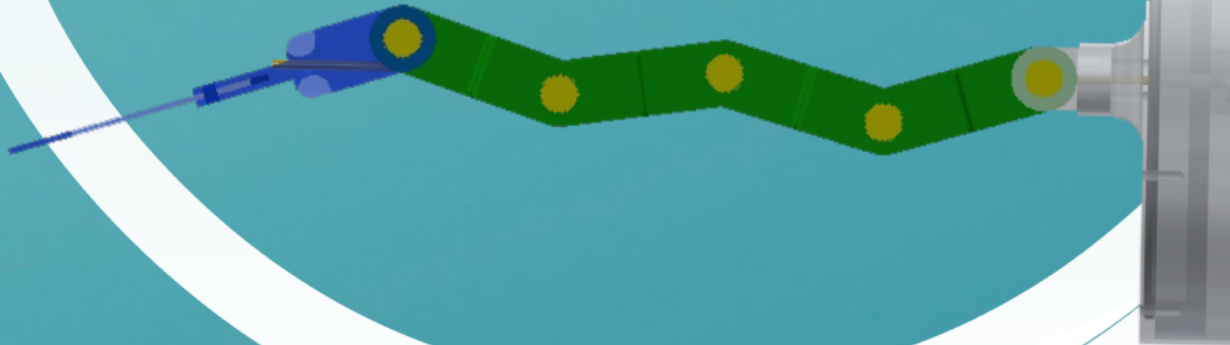
steer left/right



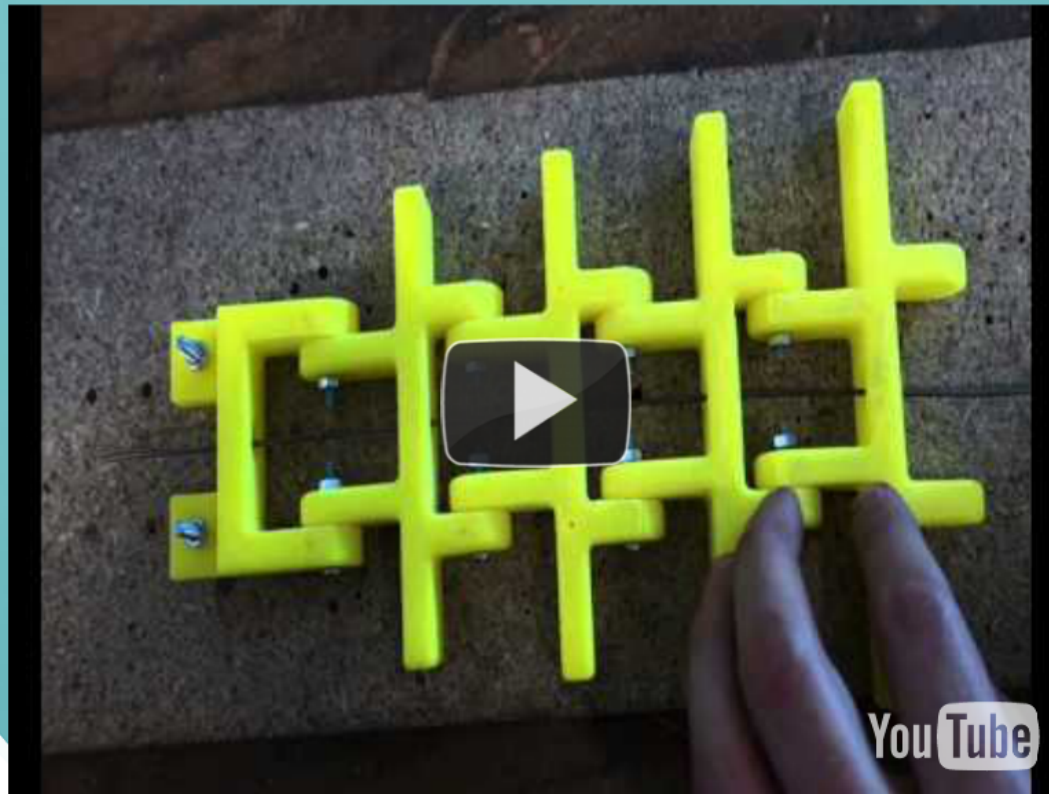
# Innovative Tail Mechanism

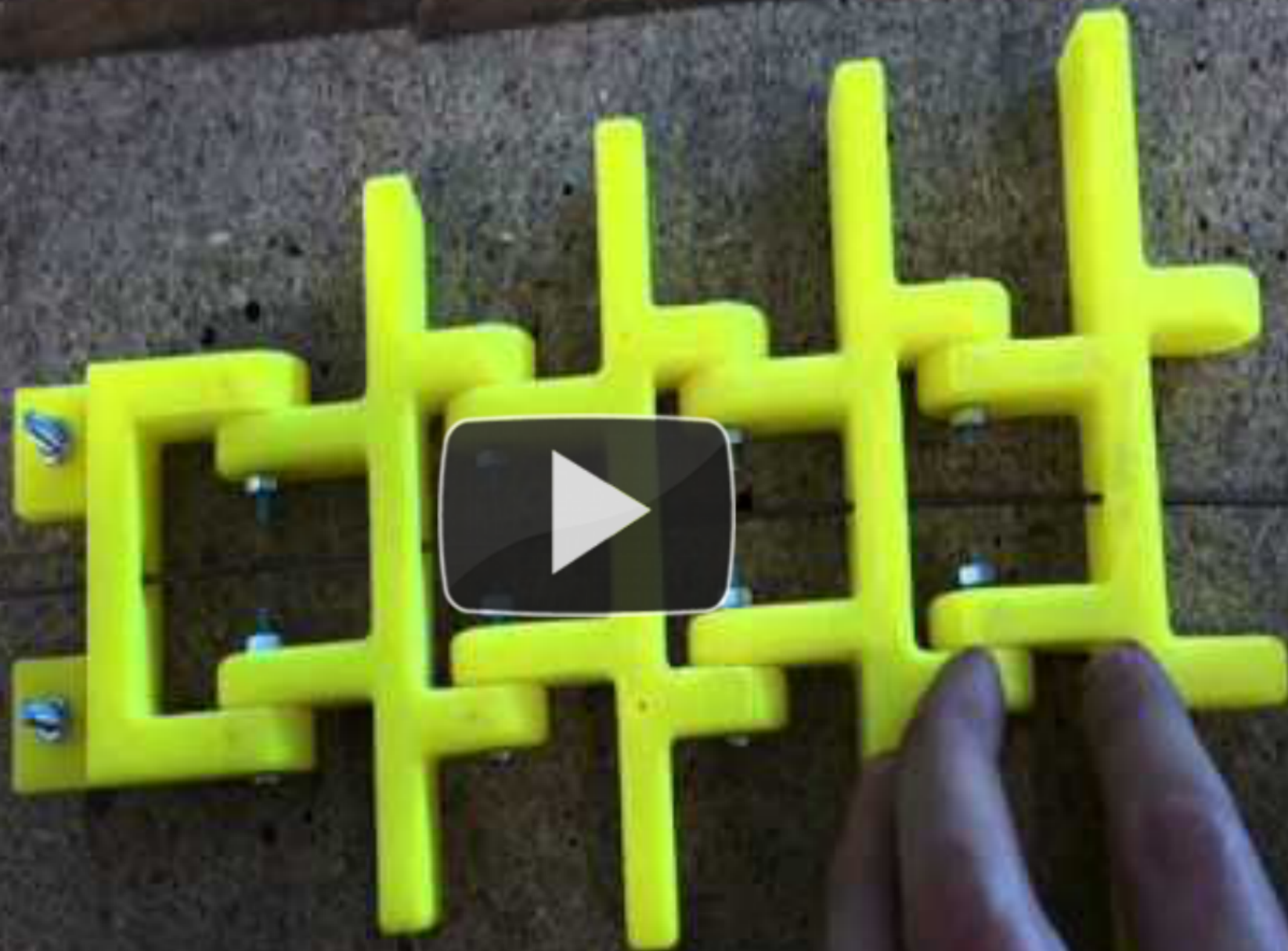


... to propel the fish



# VIDEO





# Conclusion

## BRO-FISH

Our toy enables children to learn while they play

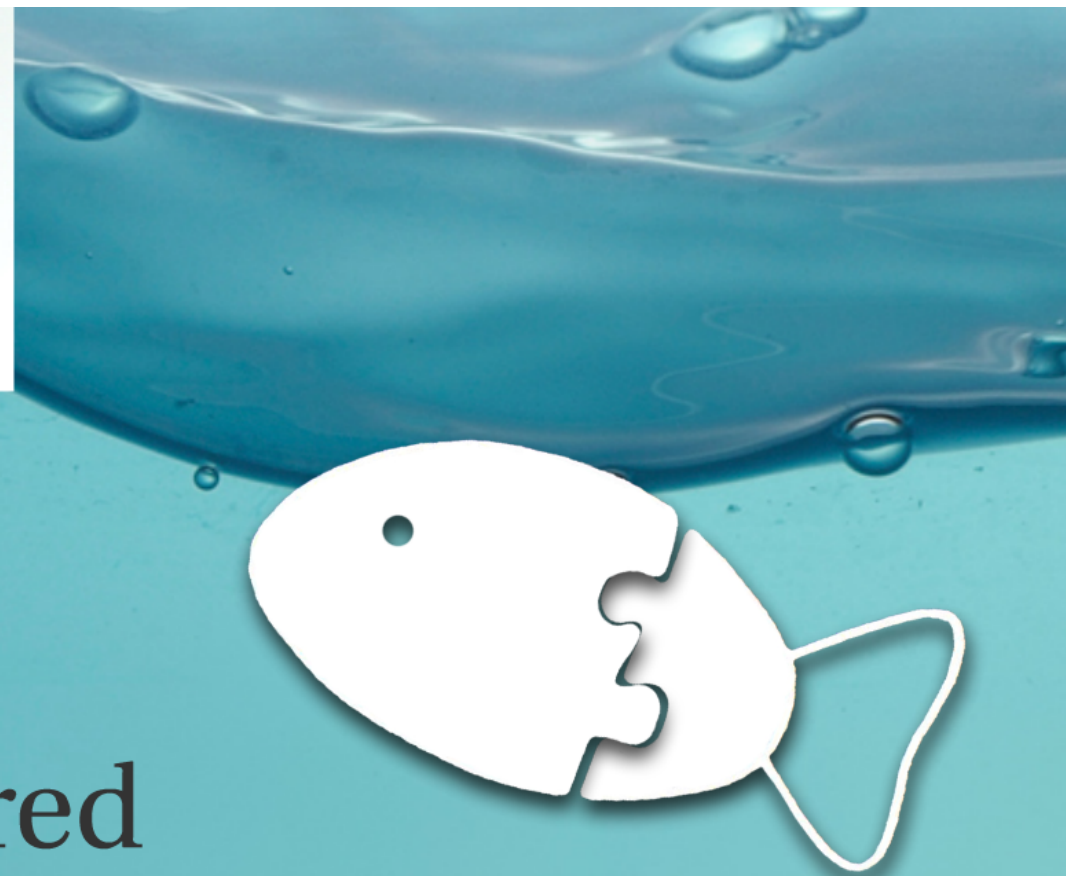
Innovative tail mechanism is contribution to scientific field

## References:

- <http://www.mfablog.org/Blue-Fish-Swimming.jpg>
- <https://www.zeldassong.com/blog/wp-content/uploads/2013/12/robotic-fish1.jpg>
- <http://mindstormnxtreviews.com/>
- <http://www.robotshop.com/en/tamiya-mechanical-blowfish-robot-kit.html>
- <http://shop.simply.ca/products/sphero-2-0-robotic-ball>



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