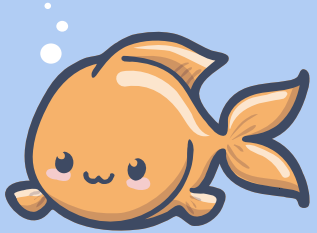
Biosensors Final Project

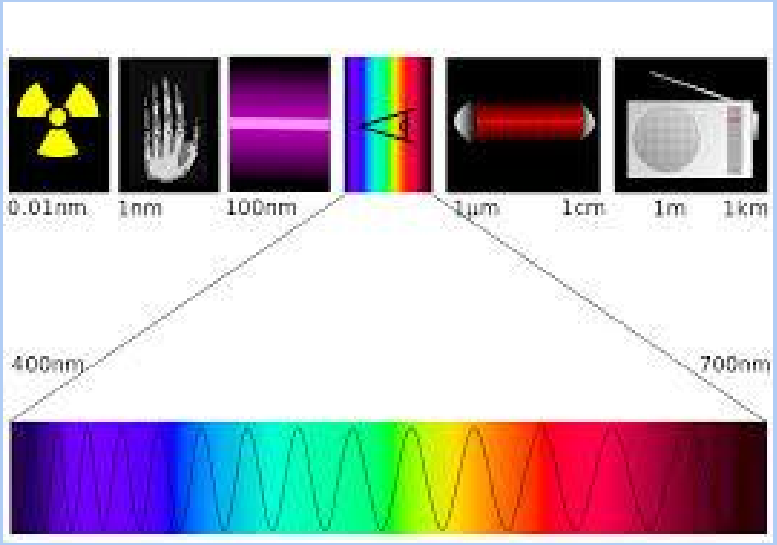
Finding Guppy

Nina Guérin - Daphné Guénée - Nicolas Larrouy

@Findingguppy



Are *Poecilia reticulata* attracted to specific wavelengths ?



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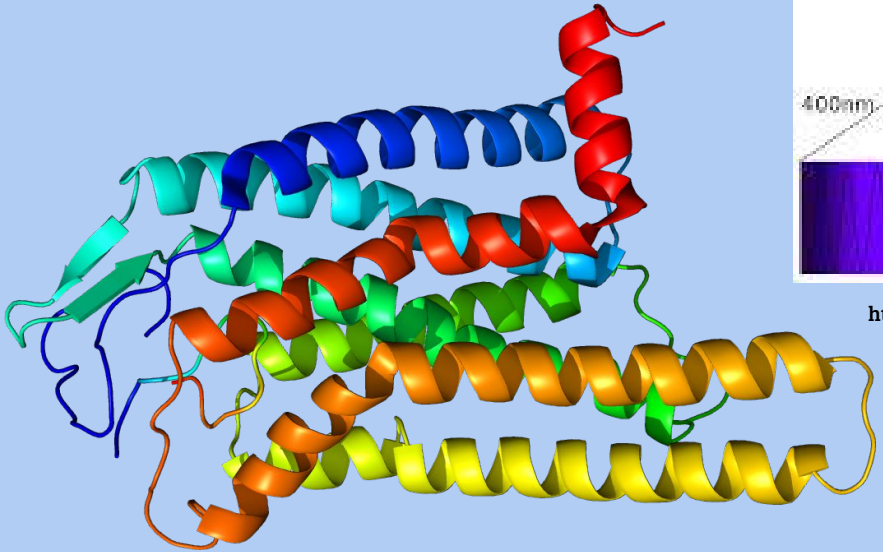

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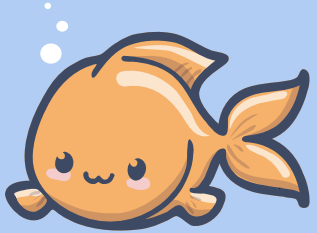
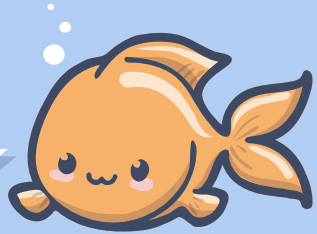


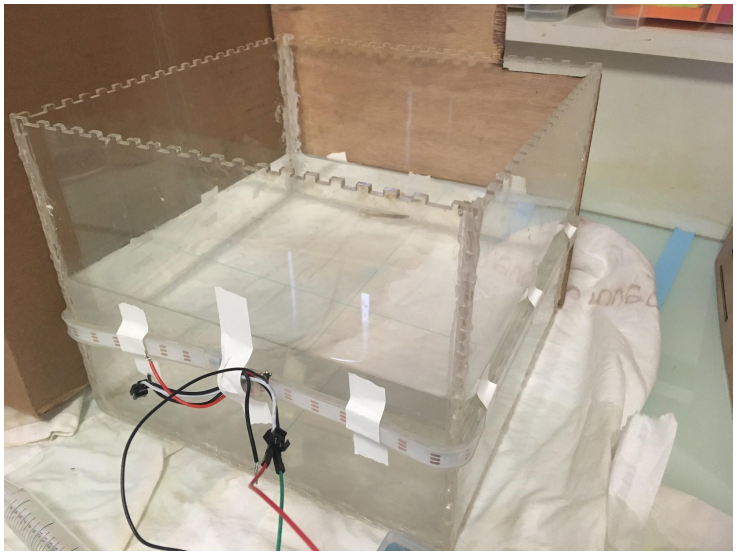
Poecilia reticulata aka Guppy

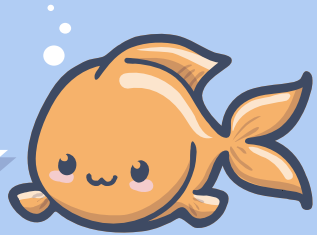
- Tropical fish
- Easy to buy and sustain
- Male to female ratio
- 6 opsins
- Sensitive to long-wavelengths
- Importance of UV for choosing mating partner



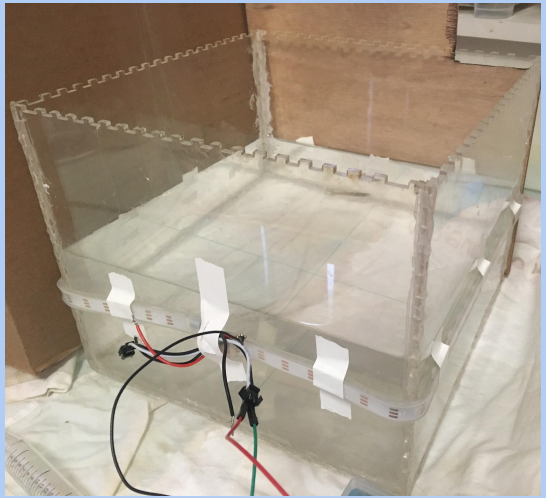
What do we Have to answer our question ?

- 4 guppies: 3 females and 1 male
- 1 Aquarium
- 1 Adafruit Strip LED
- 1 DIY aquarium





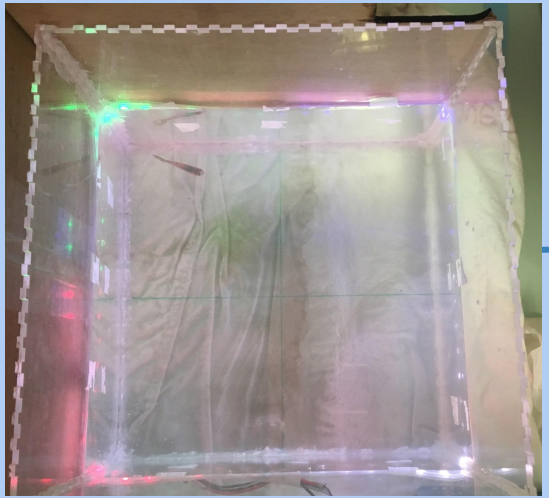
We compared their behaviour with no light and with LED turned on



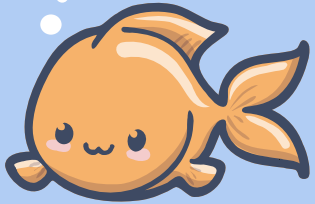
5 min of accommodation

2 min Lights off

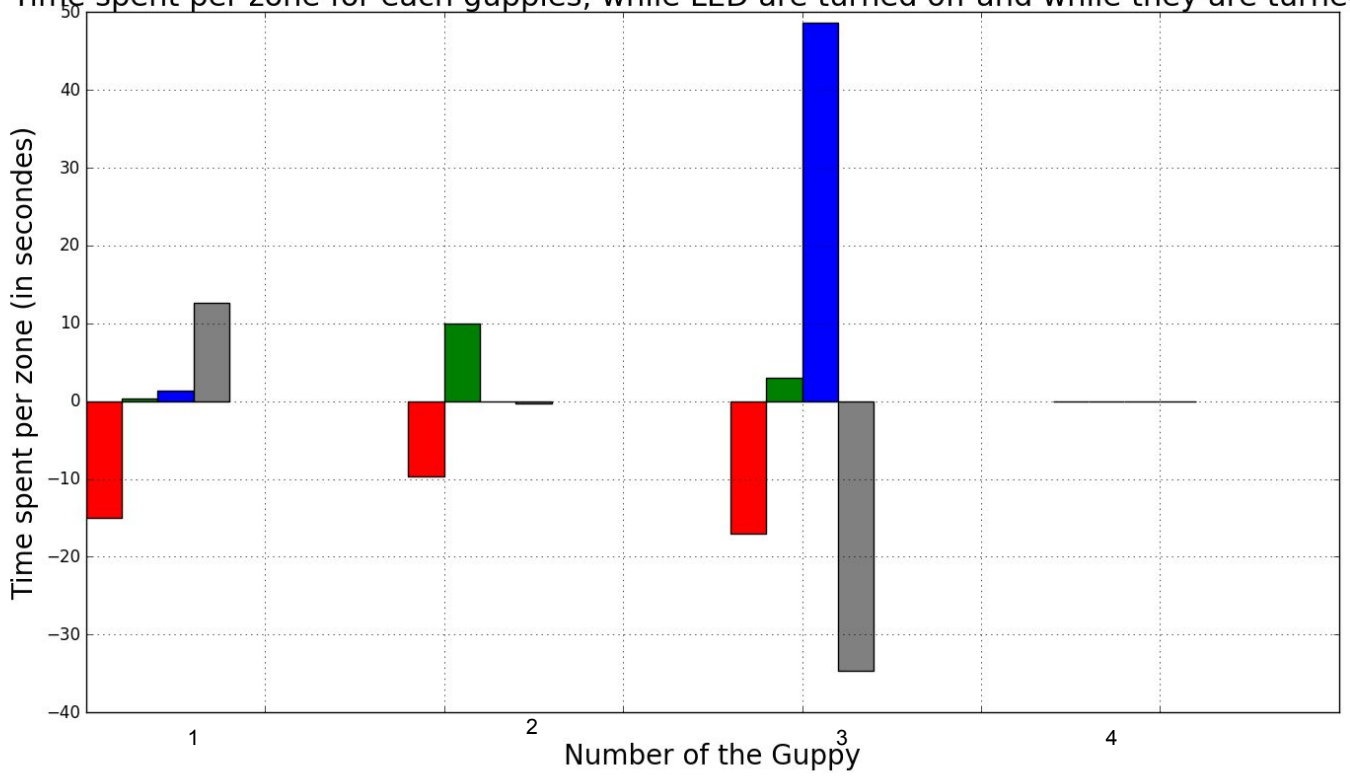
x 3

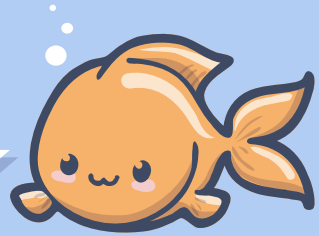


2 min Lights on

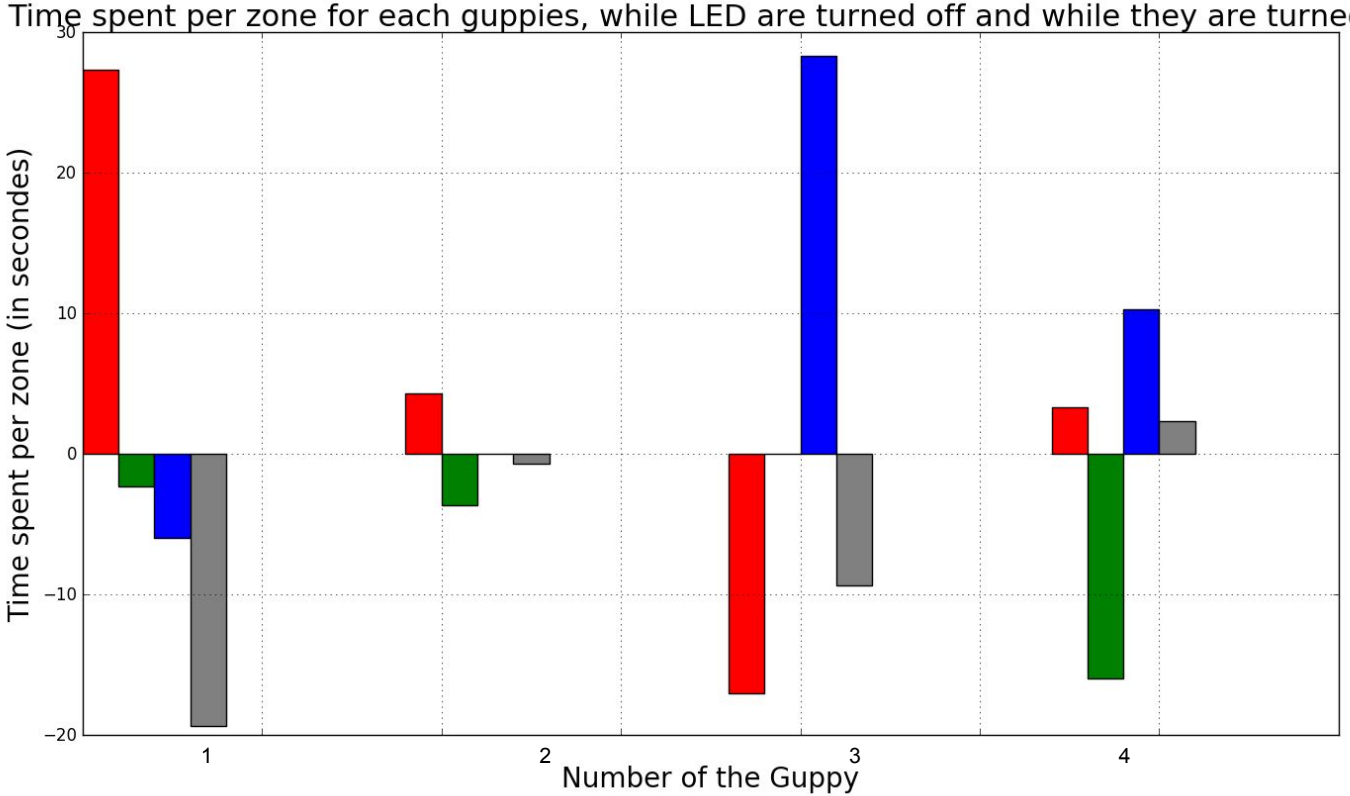


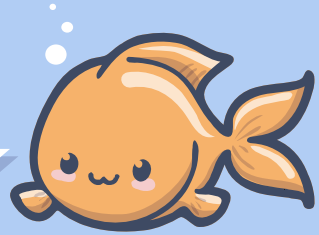
Not a lot of movements...



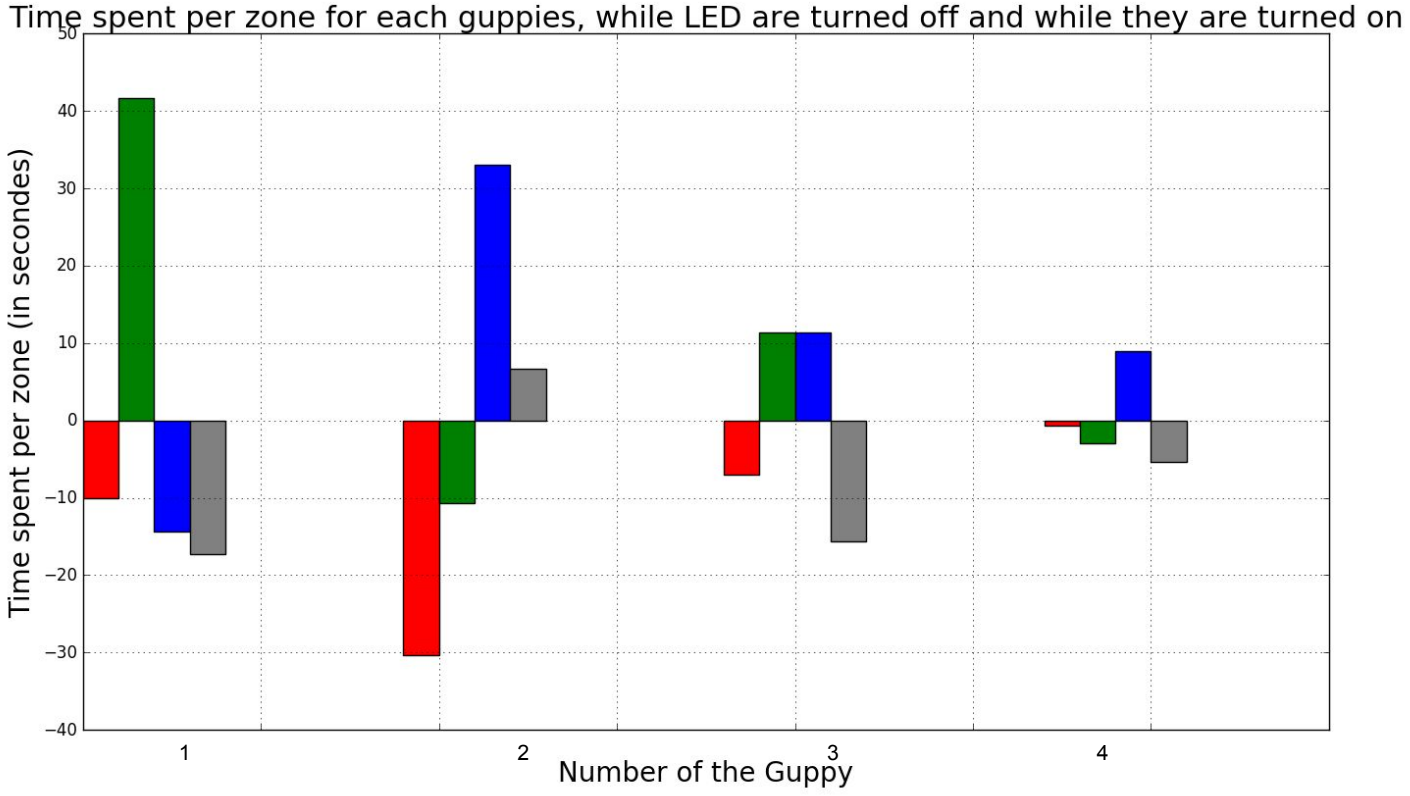


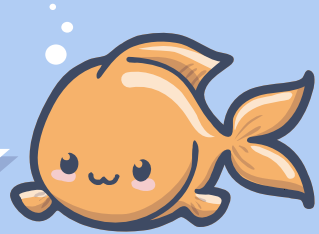
Still not a lot of movements...





They are more active after being fed

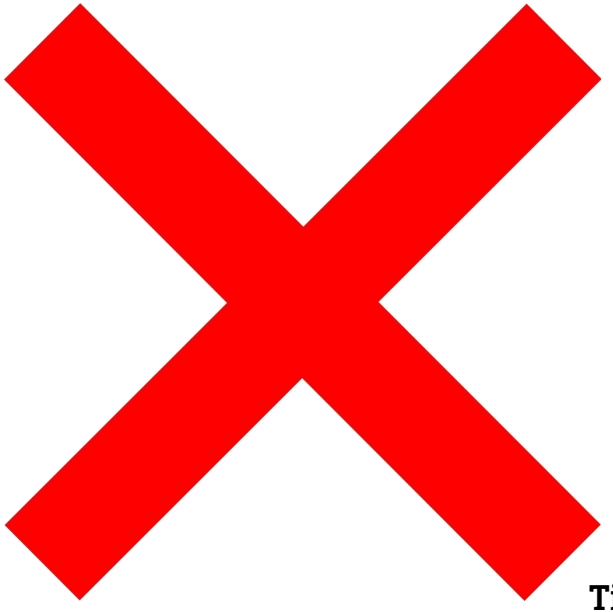




Results not conclusive & lot of bias

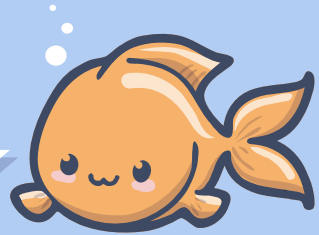
No significative data

Aquarium



Light exposure

Time measurement



Perspectives : Reconduct the experiments !

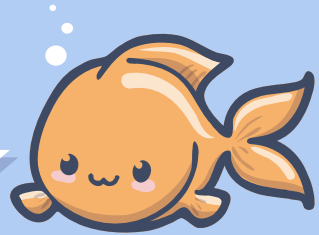
More Fishes !

No leak DIY Aquarium !

Eliminate the noise like surrounding sound & vibrations !

More wavelengths !

Test the lights one by one !

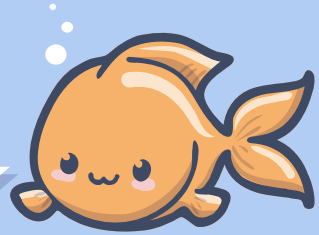


Special thanks !

Tamara for making this project possible and for all of her help throughout this week and this month !

Ivan, *Kevin*, *Lucy* & *Alice* for their guidance !

Louise D for the Adafruit device !



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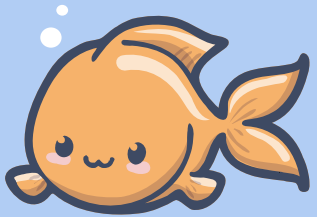
Finding Guppy

" Thank you for your attention !"



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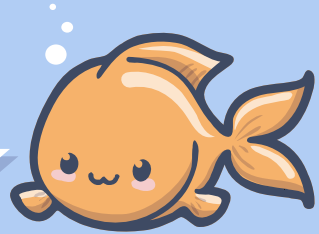

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