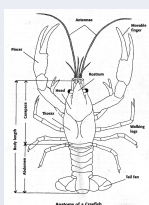


### Introduction

Mr. Wade's 4th grade class wanted to know why there were no crawdads or fish in Flat Branch Creek. We thought the reason was the water was dirty and polluted. Our goal was to inform the Missouri Department of Conservation (MDC) about the water quality in Flat Branch Creek. In the process we learned about the ecosystem and organisms.



### Methods

1. We got 4 tanks for fish and crawdads.
2. We filled 2 tanks with water from Bear Creek and 2 tanks with water from Flat Branch Creek.
3. We caught crawdads and fish at Bear Creek.

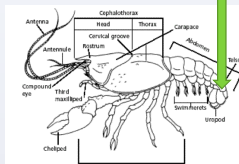


4. We researched to find out what crawdads and fish we had.



5. We weighed the crawdads and fish. We got a cup of water and weighed it. Next we weighed each crawdad and fish with the water. Then we subtracted the weight of the water. This gave us the final weight.

6. We got a needle and marked the **uropod** (the five "flippers" of a crawdad's tail) so we could tell them apart.

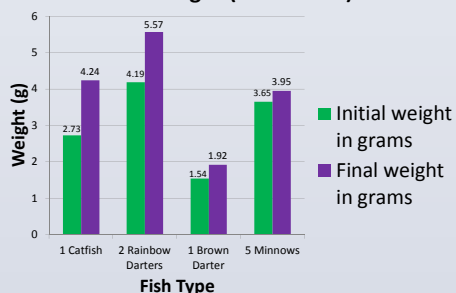


7. We put same amount of fish and crawdads in each tank.
8. We weighed the crawdads and fish in 2 months.

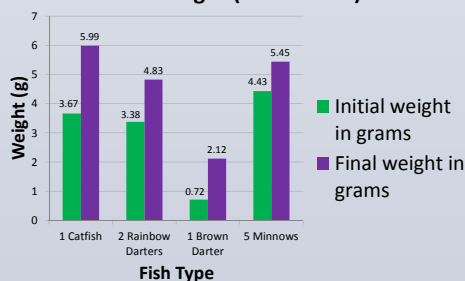


### Results For Fish

#### Fish Weight (Bear Creek)

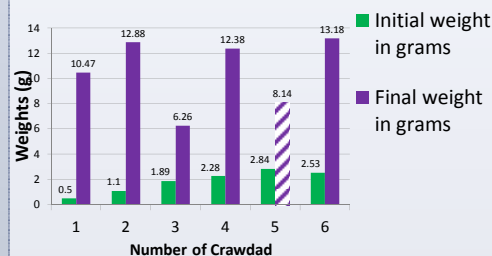


#### Fish Weight (Flat Branch)

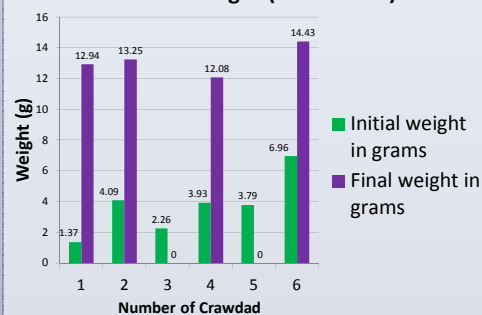


### Results For Crawdads

#### Crawdad Weight (Bear Creek)



#### Crawdad Weight (Flat Branch)



### Conclusions

We found that the water at Flat Branch was not the problem because all the organisms in our experiment were healthy and grew. We think it was a one-time poison that killed them all, then all the bad water got flushed out



### Lessons Learned

We learned how to mark a crawdad for identification in a way that does not permanently hurt the crawdad. We learned that crawdads can become cannibals! We learned how to tell female and male crawdads apart.

### Future Work

We are currently seeing if Little Dixie crawdads can survive in Flat Branch Creek water. We hope to recommend to the MDC that Northern Crayfish from Bear Creek and Little Dixie can survive in Flat Branch Creek. We also hope they will ask us to help with the release since we are the Crawdad Investigators!



### Acknowledgements

We would like to thank Dr. Koppelman for letting us come to Little Dixie to catch the crawdads, for equipment, for visiting our class and giving us all the information we needed. We would also like to thank Mr. K, Dr. Galen and Columbia Pet Center for aquarium supplies.