

Summary Table - Longevity Storyline

GROUP 8 - Colleen Taylor, Cassidy Meador, Holly Oliva

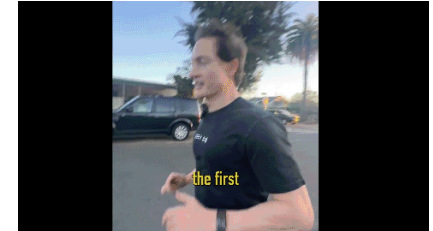
Phenomenon: 100 Animal Lifespans

Guiding question: **What** causes animals to have different lifespans?

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[Initial Model](#)

[Final Model](#)

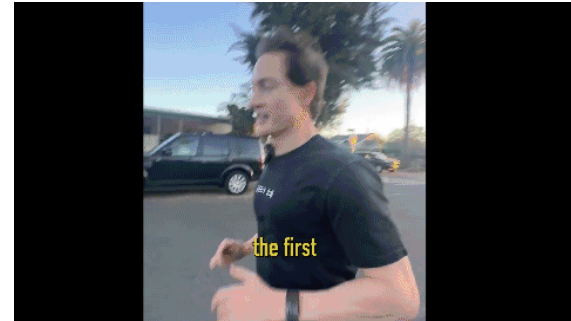


Supporting phenomenon	Link to work	What we did	What we figured out	How does this connect to animal lifespans ?
Tortoise, salmon, sunfish and naked mole rate life cycles	Link	Created a life cycle showing the life of an ocean sunfish, which has an unusually short life-span, and compared to a life cycle of a tortoise (unusually long)	The increased amount of predation could give rise to a higher death rate to a species	If there are fewer predators the animal's lifespan is longer
Salamander leg regeneration	Link	Drew a model showing how a salamander leg regenerates, learned about cell division and differentiation of cells	Limb generation does not correlate to life span but cellular repair does	Cellular repair efficiency leads to longer lifespan
Human reaction time	Link	Did a lab measuring human reaction time by dropping rulers, and learned about metabolic rates.	Decrease in reaction rate correlates with an increase in lifespan. Faster metabolisms tend to have longer lifespans	Reaction rate and metabolism correlates to lifespan.
The Hayflick limit	Link	Learned about the Hayflick limit (how many times a cell can divide) and telomeres. Telomeres are like endcaps and as they shorten, DNA degrades	Short initial telomeres AND short shortening rate tend to have longer lifespans	Telomere length and shortening rate correlates to average lifespan of a species
Suicidal mating	Link	Some species expend so much energy/effort in order to mate and spread their genes that they die after. We investigated how age of maturity relates to lifespan		
Supertasters	Link	We tasted test strips for supertasters and learned about recessive, heterozygous, and homozygous dominant. Recessive can't taste.		

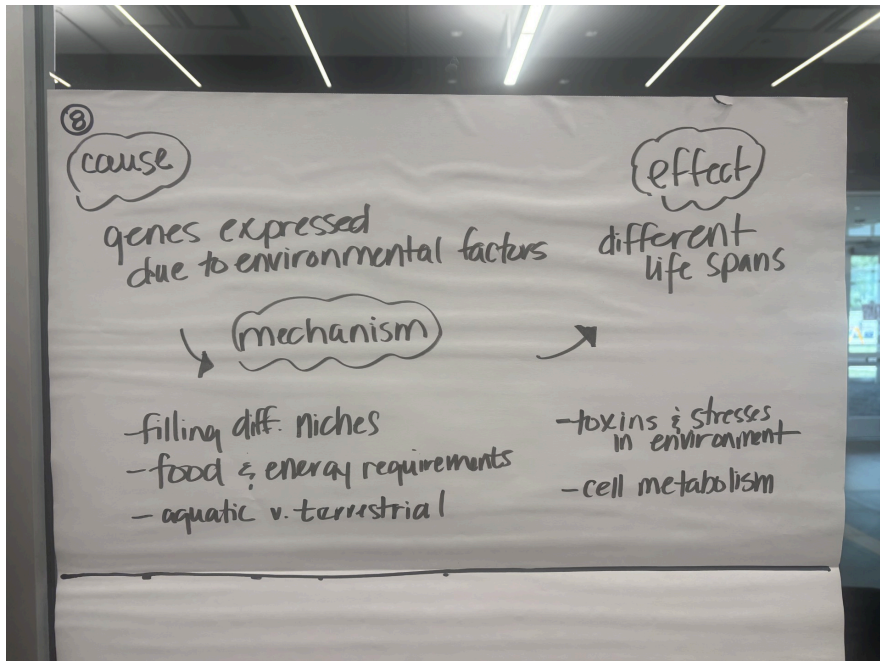
**Turquoise
Killifish and
Bigmouths**

[Link](#)

Create a causal model that answers the following question
What causes animals to have different lifespans?



Initial Model

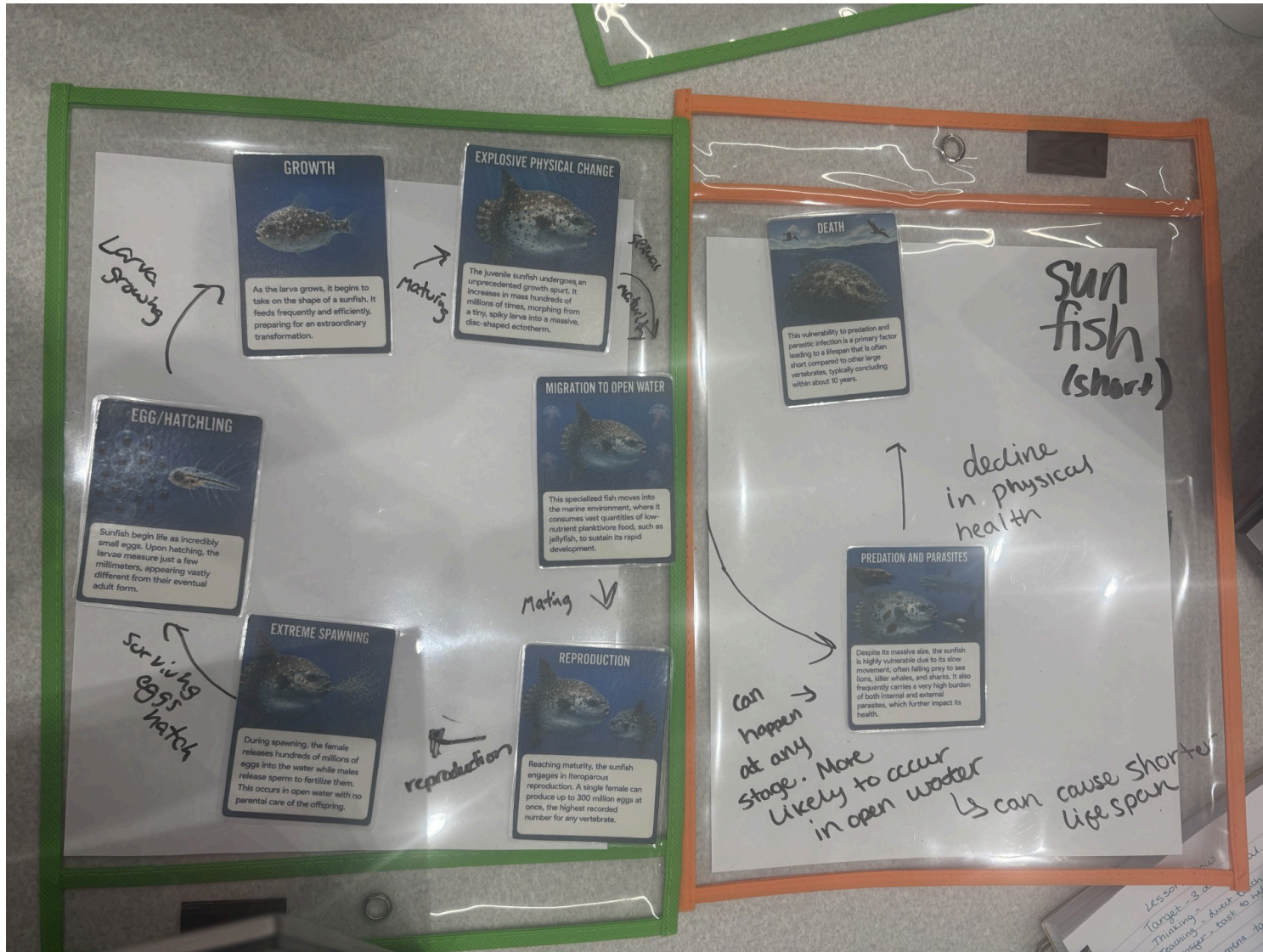


Final Model

Vertebrate Life Cycles

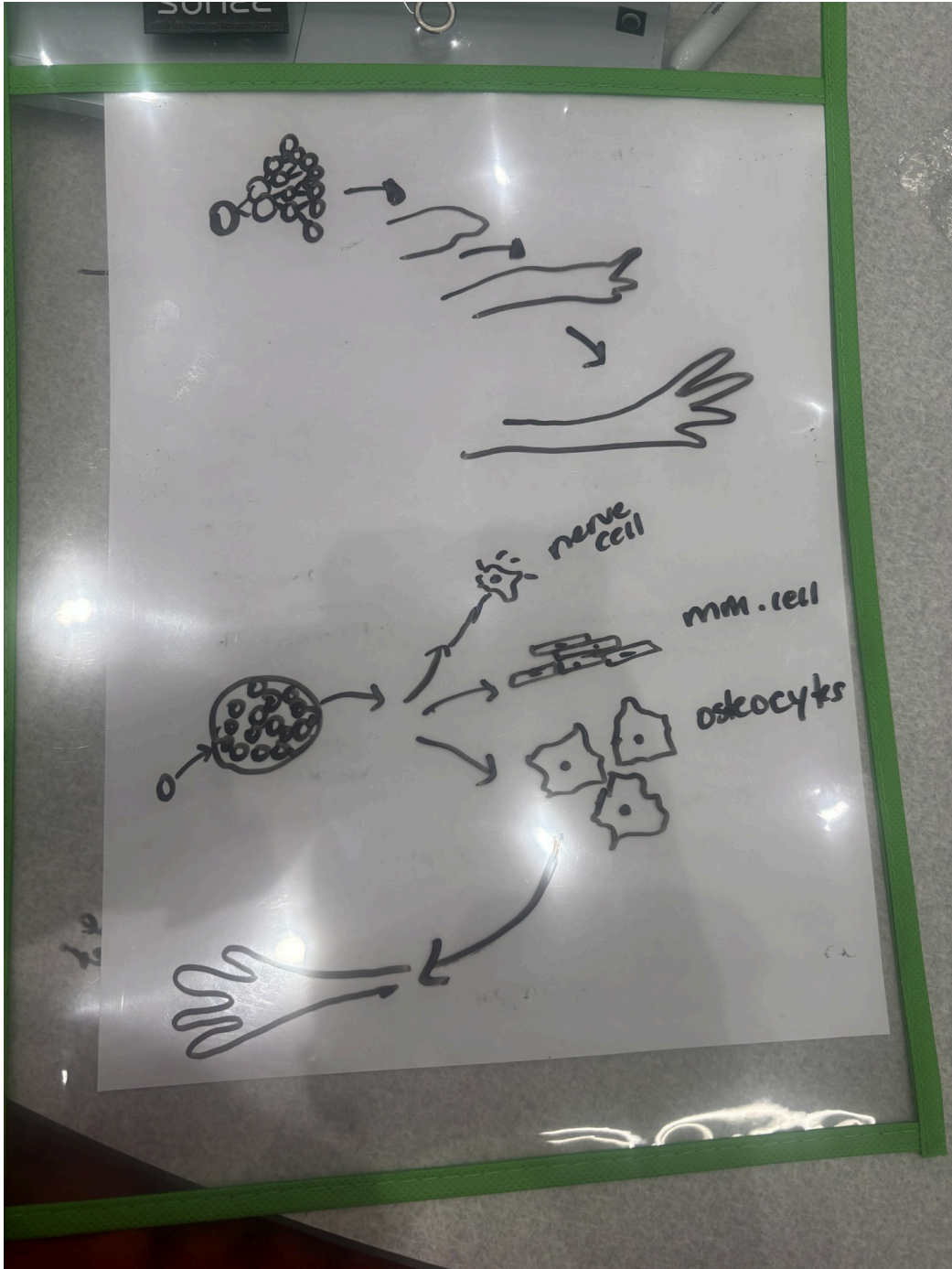
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Show your work below (i.e. text, model images, questions, data etc.)



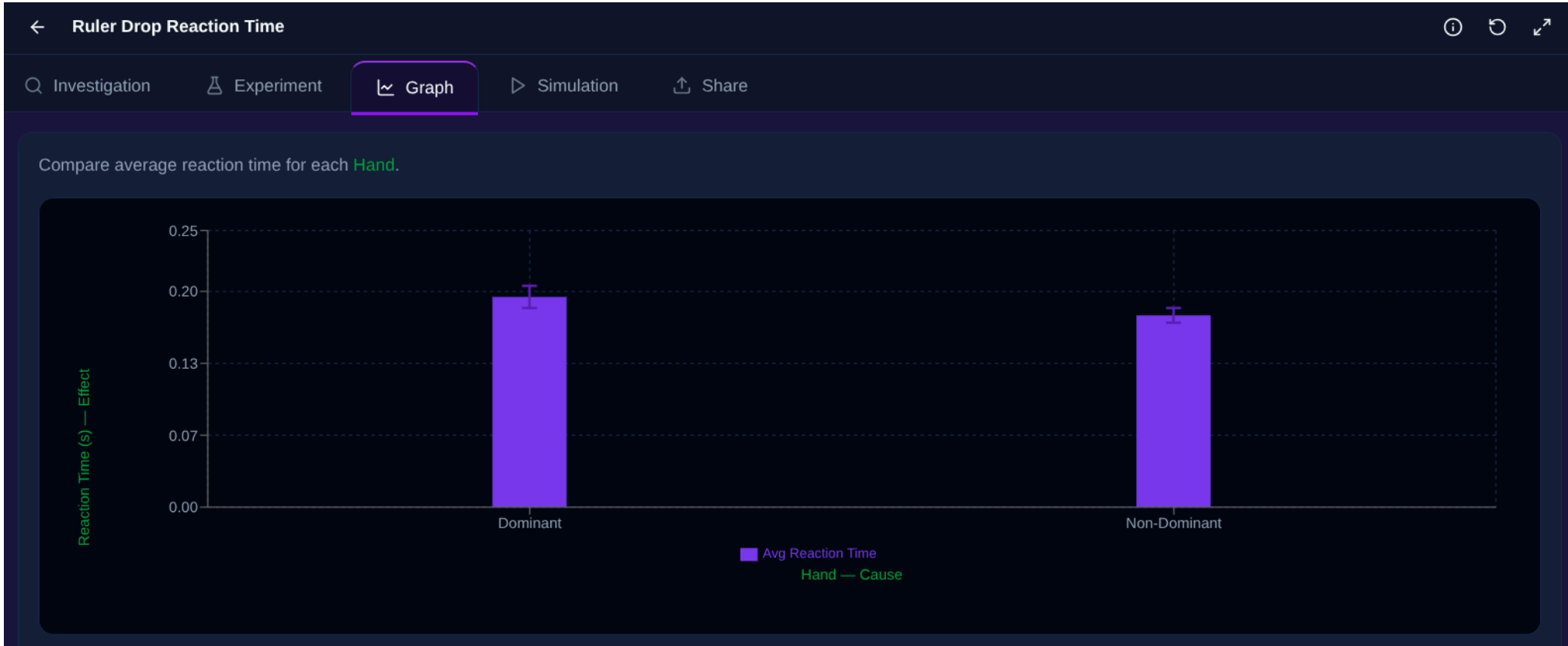
Salamander Leg Regeneration - [Back to summary table](#)

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Human reaction time - [Back to summary table](#)

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The Hayflick Limit - [Back to summary table](#)

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Suicidal Mating - [Back to summary table](#)

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Supertasters

- [Back to summary table](#)

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Turquoise Killifish and Bigmouths - [Back to summary table](#)

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