

Dissections Done Differently: An Evolutionary Focus

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<http://bit.ly/SciTeachers> This website has links to many of our documents & our Presentation
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Overview of whole lesson

- **Day 1 - Investigation Plan Dissect First Animal**
 - Group of four dissect two of the same organism following directions, labeling and answering questions
 - Each group receives the handouts for their animal with diagrams and questions about the dissection
 - Students fill out the external anatomy table for their animal as they do their dissection (page 2)

- **Day 2 & part of 3 - Knowledge Probe - Animal Group**
 - Become an expert on their system for their organism --four systems (page 1)
 - Each student researches their system on the animal they just dissected to answer all questions
 - After finishing research they fill in their system table for their animal (pg 3)
 - Each student will make a temporary mini poster that summarizes their research to share this with their expert group
 - Digestive
 - Respiratory
 - Circulatory
 - Reproductive

- **Day 3 & 4 - System Experts – Application –Expert Group**
 - Students break out in expert groups based on their systems
 - They share their mini posters and explain how the animal they dissected meets the needs of their system
 - Create a cladogram based on their system and the trends they see after learning about all the animals.
 - Once the group has decided on a cladogram they remake their temporary mini posters to show their cladogram and explanation and take back to their animal groups.

- **Day 5 & 6 - Part III – Bringing the Systems Together - Animal Group**
 - Return to animal group and share systems cladogram using your mini poster
 - Look at all four cladograms and take note of where they are similar and where they are different. (page 4)
 - Prediction - Create cladogram based on all four systems using their cladogram, further research and brainstorm what it should look like on their whiteboards
 - Explanation - refer back to the initial question and use the cladogram as evidence, reasoning is why the cladogram is placed as it is
 - Kids then put their cladogram on the board for the whole class to see
 - Once all the cladograms are posted class discusses the differences in them and the similarities.
 - Kids do the final evaluation as explained in the directions

- **Day 7 Part V – Animal Dissection and Evolution Mini Poster Presentation**
- Before dissecting explain the mini poster and animal evolution project the kids will do. They need to know what they will be expected to share from this dissection with their classmates (pg 6)
- Dissect second animal following the dissection guide and using the dissection of second organism as a guide to trace the systems on the new animal. They will need to include information about the systems on their posters

- **Days 8 - 10 - Animal Dissection and Evolution Poster Research**
 - Focus on the evolutionary history and ecological niche of the organism to create a mini poster - following the rubric

- **Day 11 -**
- Animal journey - poster sharing with one partner walking the journey and the other teaching at poster then swapping roles (pg 7)

Organisms for Dissection

<u>First Organism</u>	<u>Second Organism</u>
Frog	Crayfish
Clam	Starfish
Worm	Frog
Crayfish	Anole
Perch	Worm
Starfish	Perch
Anole	Clam

Documents for Notebooks and Students

- Initial dissection
 - Dissection directions & questions in notebooks
 - Diagrams for labeling to tape into BILL
 - Dissection discussion guide for system to become expert on to tape into BILL
- System Expert Groups
 - Animal comparison chart for system expert group for each student to tape into BILL
- Organism group system sharing
 - Evolution of animals using all four body systems in notebook, kids write notes in BILL
- Dissection of second organism
 - Dissection directions & questions in notebooks
 - Dissection summary of systems on second organism in notebook
 - Rubric for animal dissection and mini poster creation
- Animal Journey
 - Template for note taking during journey
 - Geologic time scale to note evolution of each animal as journey