Fourth Grade: Fossil Friends

Standards
Life Sciences 2: Fossils can be compared to one another and to present day organisms according to their similarities and differences.

Objectives
Students will…
- Analyze similarities and differences between animals and their ancestors.
- Explain why scientists examine fossil records in order to piece together earth’s timeline.
- Flex their writing skills in a fun comic writing activity.

Materials
- Paper
- Markers

1) Hook: Read *Feathered Dinosaurs* by Don Lessem.  
   (10 minutes)
2) Talk with the students about how dinosaurs called theropods were the early ancestors of today’s birds. 
   (5 minutes)
3) Examine this chart of the evolution of birds:  
   [https://evolution.berkeley.edu/evolibrary/article/evograms_06](https://evolution.berkeley.edu/evolibrary/article/evograms_06). Notice how scientists compare each fossil they find, observing and recording the characteristics of the fossil and identifying similarities and differences between other fossils. This helps them piece together a timeline of the planet’s history. 
   (5 minutes)
4) Try it out! Compare the following creatures by drawing venn diagrams:
   a) Yi Qi:  
      [https://www.newscientist.com/article/dn27436-this-dinosaur-had-wings-like-a-bat-but-did-it-fly-like-one/](https://www.newscientist.com/article/dn27436-this-dinosaur-had-wings-like-a-bat-but-did-it-fly-like-one/)
   b) Archaeopteryx: 
      [https://www.nhm.ac.uk/galleries/galleries-home/treasures/specimens/archaeopteryx/](https://www.nhm.ac.uk/galleries/galleries-home/treasures/specimens/archaeopteryx/)
   c) Modern day bats:  
      [https://www.nationalgeographic.com/animals/mammals/facts/bats](https://www.nationalgeographic.com/animals/mammals/facts/bats)
   d) Modern day American robins:  
5) Time for some creativity! Students will write a comic strip about a time traveling dinosaur and a duck who become friends.