

What Can Kesler Science Do for You?

4th - 8th grade science teachers love our Life, Earth, and Physical Science materials! With these easy and engaging materials, teachers can save planning time and put their focus back on the teaching that really matters.



5E LESSONS

Two-week lessons with over 100 topics



ESCAPE ROOMS

Engaging activities for review



INQUIRY LABS

Three different levels to fit every student



AMAZING ANCHORS

Anchoring phenomenon to book-end your lessons



SUB PLANS

Never worry about planning for a sub again.



WARM-UPS

Bellringers for the entire year



STATION LABS

Student-led exploration



INTERACTIVE NOTEBOOKS

Bring science journals to life.



WIKI TICKETS

Quick formative assessments



STEM CHALLENGES

Real-world STEM problem-solving



GRAPHING

Table and charts and graphs ... OH MY!



SCIENCE READING COMPREHENSION

Leveled reading passages with mini-activities



SPANGLER COLLABORATION

Exclusive Steve Spangler lessons and videos



WRITING PROMPTS

Writing activities covering 100+ topics

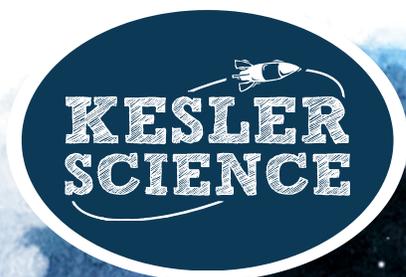


EXPLORIES

Story-driven units with integrated activities



The Kesler Science Professional Learning Network (PLN) group on Facebook has a huge community of engaged and supportive science teachers - come join us!



That's Quite a Bird!



A shoebill couple in East Africa.

I wouldn't say I'm a serious birder, but I do admire the epic trek that many species take over the Gulf of Mexico during springtime. I live in the middle of a migratory path called the Central Flyway, so lots of enthusiasts come to my neck of the woods in Texas to catch a glimpse of migrating birds like martins and hummingbirds heading towards their summer homes in the central US and Canada.

There's a bird species I stumbled across last week that couldn't be more different than the cute little warblers flying over my home. If I saw this bird in my neighborhood, I'd keep my small pets inside! I'm talking about the shoebill, a monster bird that lives in East Africa.

The shoebill stork's scientific name, *Balaeniceps rex*, means "whale-headed

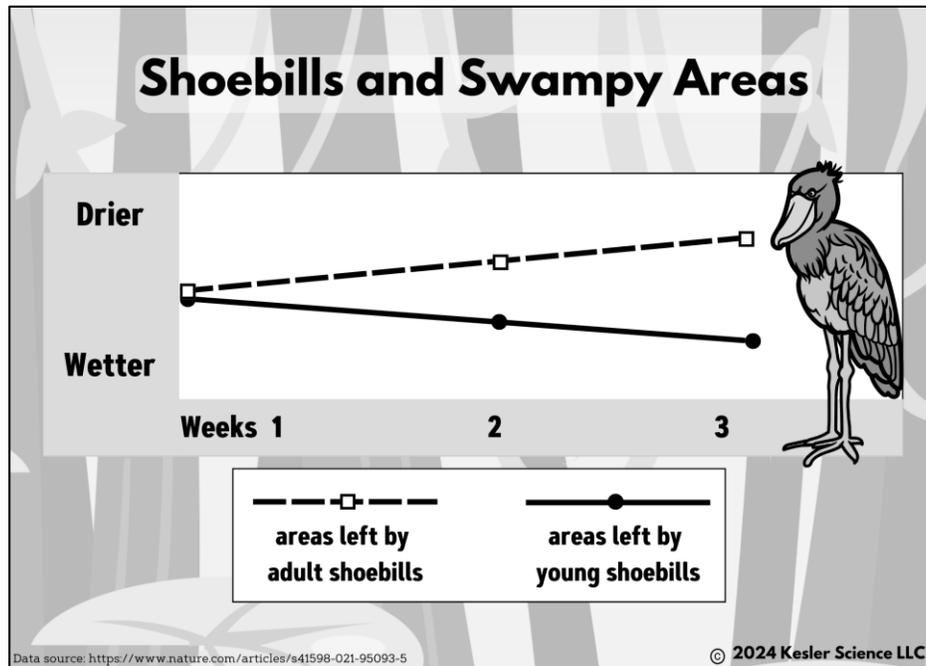
king." Makes sense - these birds can tower up to 5 feet tall and sport a massive bill. It's the third largest bill among birds!

With their huge, sharp bills, these birds are expert predators. They stand motionless in East African swamps for hours, then suddenly strike and gulp up catfish, snakes, or young crocodiles with their massive beaks. Crocodiles!

This imposing creature is actually pretty tame around people, though, and is a favorite among birders who visit Africa. They use their bills for other purposes too; they carry cool water to sprinkle over their nests when it gets too warm.

Unfortunately, shoebill populations have been dropping due to habitat disturbance, hunting, and people who try to capture them as pets. There are only around 5,000 birds left in the wild. This has landed the birds at "vulnerable" status, which means they are at risk of extinction. In contrast, there are about 35 million ruby-throated hummingbirds in North America!

Scientists are concerned, so ecologists have been collecting data on shoebill movement in the swampy areas they call home. They found something interesting - shoebills tend to move around in their habitats, but not all shoebills move away from the same areas. It depends on age! Can you figure out the trend in the graph on the next page?



Hope you'll enjoy *wading* into this topic! 😊

1. What trends do you see in the graph above? Can you think of any possible reasons for these trends?

2. In the graph above, how many weeks did scientists conduct their investigation about shoebills?

3. At the end of the experiment, were there more young shoebills or older shoebills in the wetter areas? Why do you predict this is?

4. If a shoebill habitat started flooding more often, how would this negatively impact the population?

That's Quite a Bird!



A shoebill couple.

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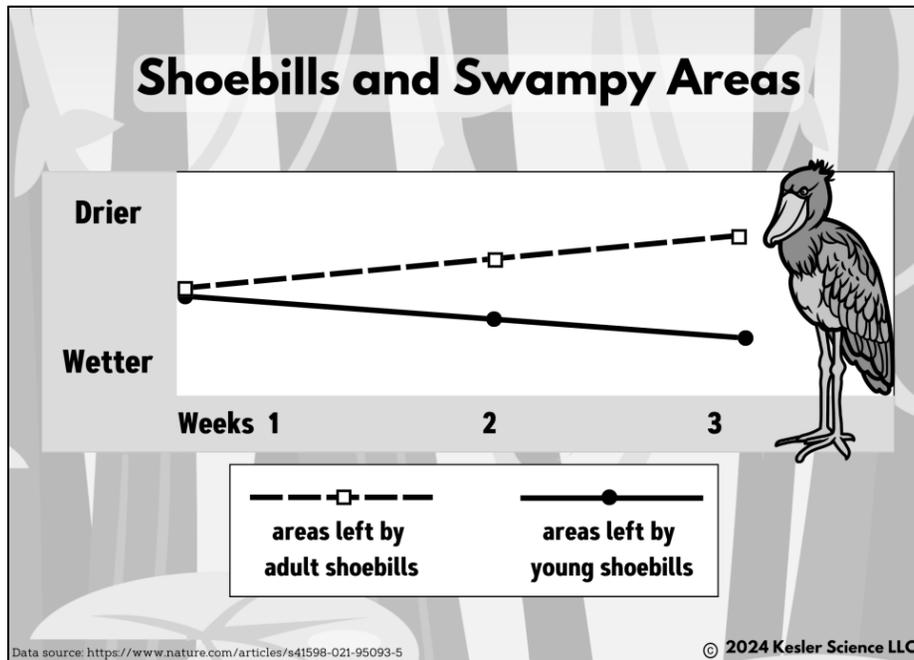
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Both adult and young shoebills start out in the same level of wetness in their swampy homes, but adult shoebills leave areas that

are becoming drier, while young shoebills leave areas that are becoming wetter.

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1. What trends do you see in the graph above? Can you think of any possible reasons for these trends?

Adult shoebills leave drier areas whereas young shoebills leave wetter areas. Possible reasons will vary.

2. In the graph above, how many weeks did scientists conduct their investigation about shoebills?

The scientists monitored shoebill movement for 3 weeks.

3. At the end of the experiment, were there more young shoebills or older shoebills in the wetter areas? Why do you predict this is?

There would be more older shoebills in the wetter areas, as these birds left the dry areas in larger numbers. Predictions can vary, but perhaps young shoebills may have trouble moving or avoiding danger in wetter areas.

4. If a shoebill habitat started flooding more often, how would this negatively impact the population?

Younger shoebills prefer not to live in wet habitats. If wet habitats increased the rates of death in young shoebills, the population would decrease since they would not live long enough to reproduce.