

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

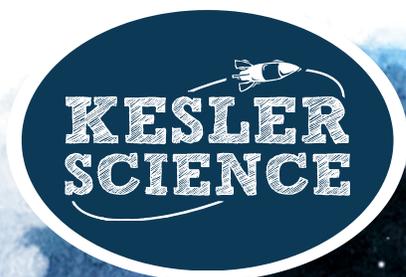


EXPLORIES

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!



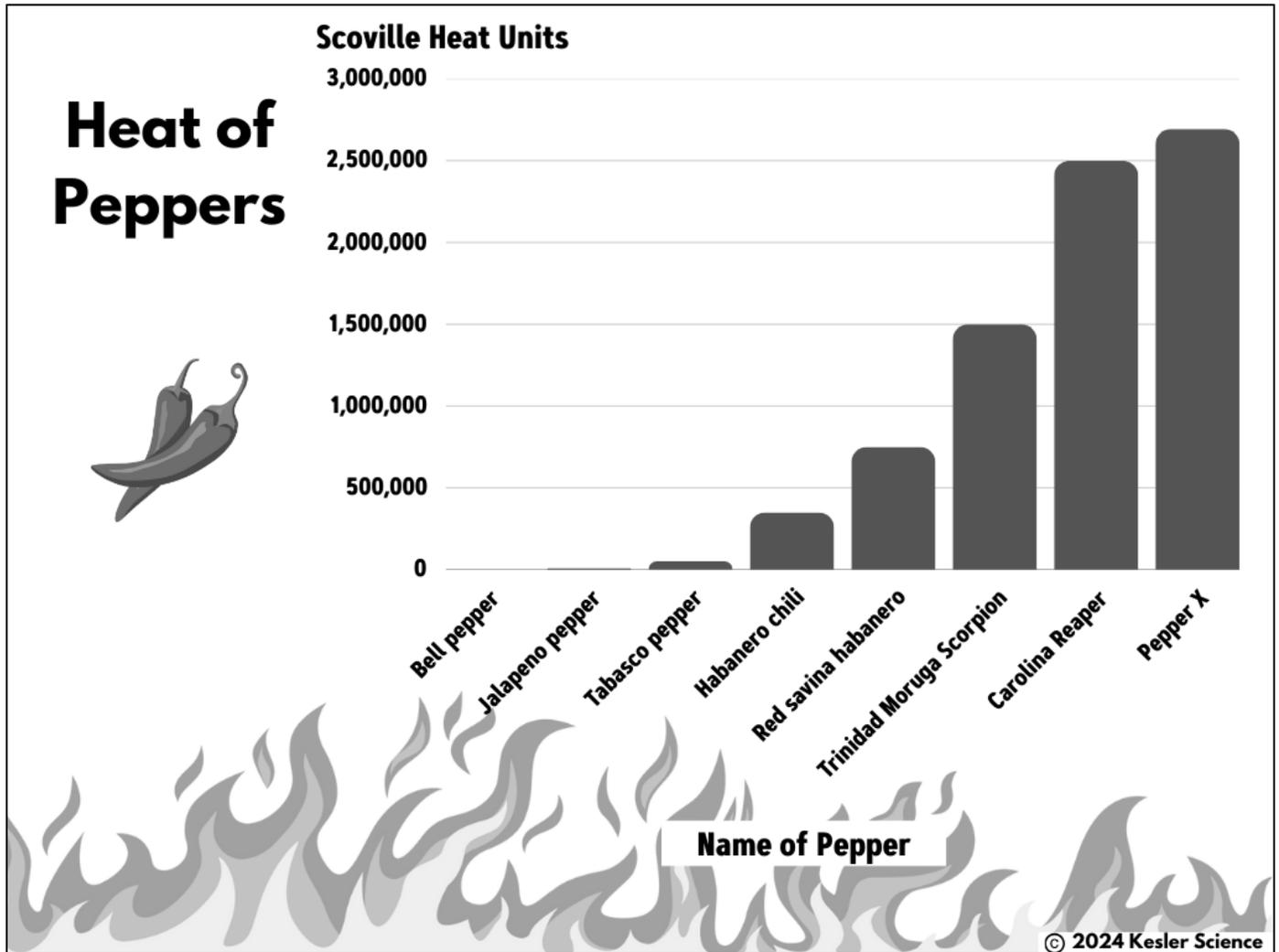
Hot Peppers and Artificial Selection

The world of hot peppers is WILD. In 2007, the hybrid Ghost pepper from India was the hottest pepper in the world. It was dethroned by the infamous Carolina Reaper pepper in 2013. In October 2023, a new pepper called "Pepper X" claimed the world title - it's about 1000 times hotter than a jalapeno! 🌶️

This is a great connection to artificial selection that students might enjoy because of shows like Hots Ones. Who doesn't like to watch celebrities cry over their chicken wings? 😊

Using the same process that brought us goldendoodles, pepper growers create hybrid varieties of peppers that combine the best characteristics of two types of peppers. They also select the hottest peppers from one generation and keep those seeds to grow the next generation. It takes about 10 generations before an unusual pepper trait, like extreme heat, becomes a consistent trait in the population.

Check out the graph on the next page to see how artificial selection has affected the heat levels of peppers!



1. Which peppers have less than 1 million Scoville heat units?

2. About what is the difference in heat units between Trinidad Moruga Scorpion pepper and Pepper X?

3. How do Habanero Chilis compare to the Carolina Reaper in spiciness?

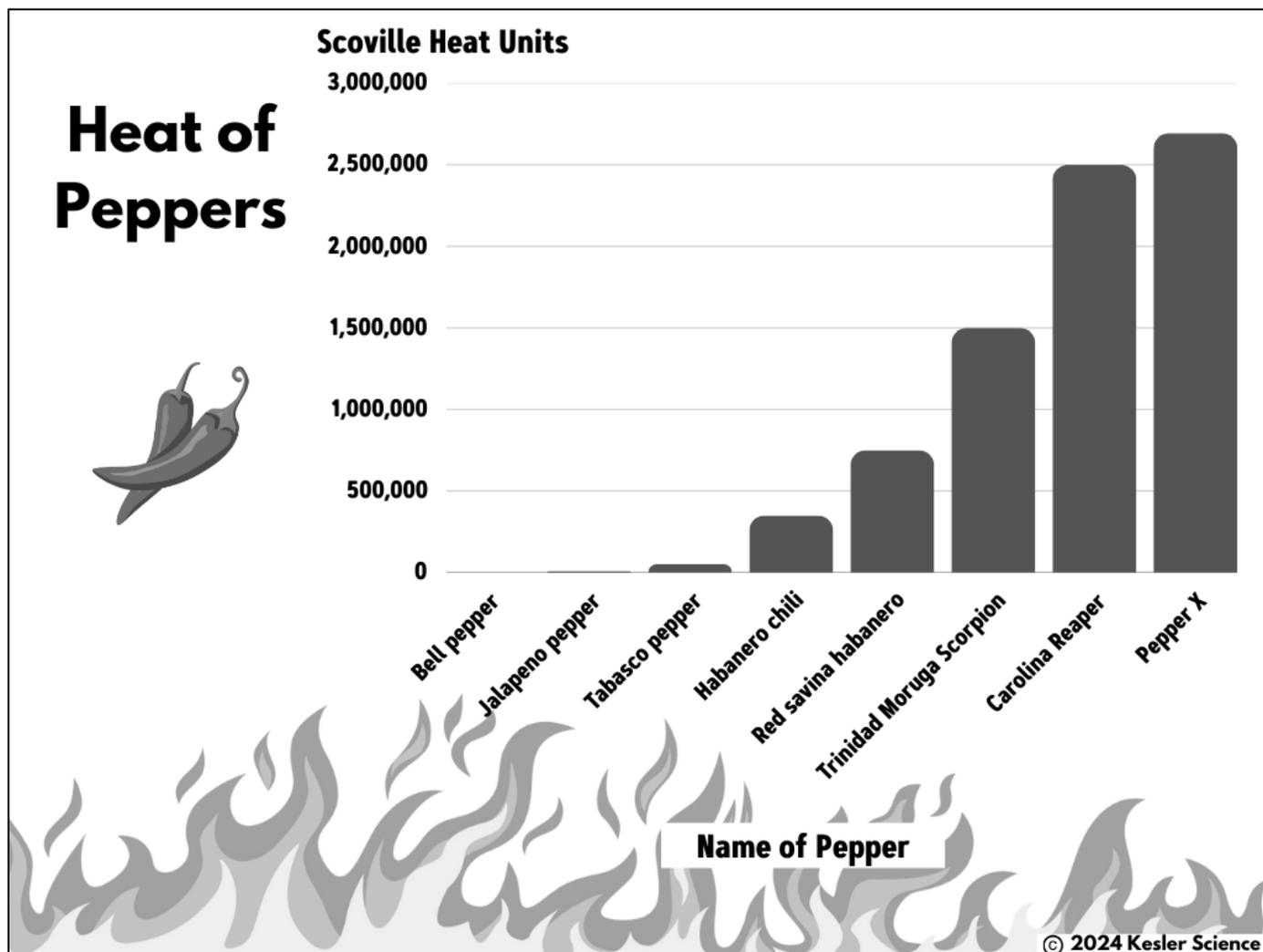
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1. Which peppers have less than 1 million Scoville heat units?

Red savina habanero, habanero chili, tobasco pepper, jalapeno pepper and bell pepper all have less than 1,000,000 Scoville heat units.

2. About what is the difference in heat units between Trinidad Moruga Scorpion pepper and Pepper X?

Pepper X has about 2,600,000 heat units while the Scorpion pepper has about 1,500,000 heat units. This difference is roughly 1,100,000 heat units.

3. How do Habanero Chilis compare to the Carolina Reaper in spiciness?

The Habanero Chili has about 300,000 heat units while the Reaper has 2,500,000 heat units. The Reaper is about 10x more spicy than the Habanero.