

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.



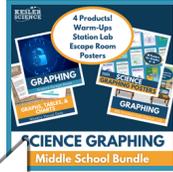
WIKI TICKETS

Quick formative assessments



STEM CHALLENGES

Real-world STEM problem-solving



GRAPHING

Table and charts and graphs ... OH MY!



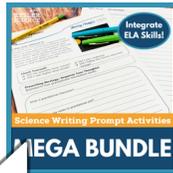
SCIENCE READING COMPREHENSION

Leveled reading passages with mini-activities



SPANGLER COLLABORATION

Exclusive Steve Spangler lessons and videos



WRITING PROMPTS

Writing activities covering 100+ topics

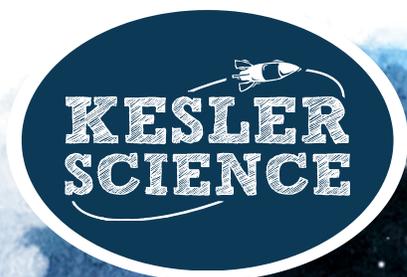


EXPLORIES

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!



Let Them Eat ... Bugs!

I have to be honest. For me, the idea of eating bugs is ... challenging 🤢 but insects have been a dietary staple in some parts of the world for centuries. *Entomophagy*, or the practice of eating insects, could offer tons of benefits to the environment and food

sustainability. Plus, who wouldn't want to add a little more crunch to their lunch?

The graph on the next page shows the cost in terms of water, food, and emissions for different sources of protein. The details below go with the graph to explain more about it.

Reducing Greenhouse Gas Emissions

According to a study by the Food and Agriculture Organization (FAO) of the United Nations, crickets produce 80 times less methane than cattle per unit of body weight. That's a huge reduction in greenhouse gases!

Lowering Water Usage

Beef production demands approximately 2400 gallons of water per pound of meat. 🌊 Insects, on the other hand, require significantly less water. Producing a pound of crickets needs only about 0.45 gallons of water!

Efficient Feed Conversion

Insects are remarkably efficient at converting feed into edible body mass. Cattle, pigs, and chickens convert about 10-15% of what they consume into body weight. Insects can convert 30-40% of their feed into biomass!

To put it another way, crickets need about 2.1 pounds of feed to produce 1 pound of body mass, compared to the 25 pounds of feed required by cattle to produce the same amount of meat.

Reducing Land Use

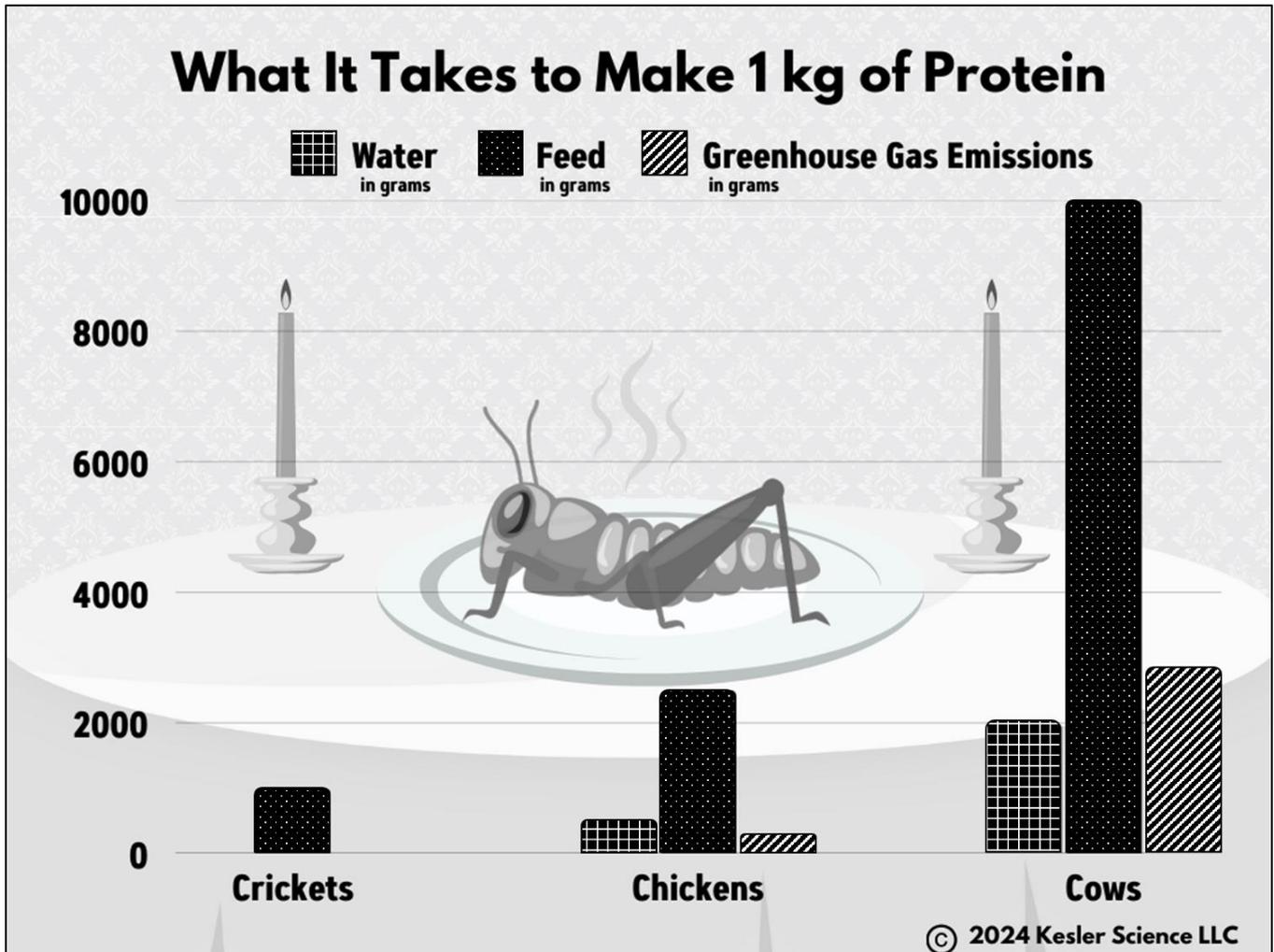
Livestock require tons of farmland, not just for living on, but for growing their food. Insects require far less space -they can be raised vertically in urban settings! Imagine: fields of crickets instead of fields of cows. 🤢

Alleviating Pressure on Wild Fish Populations

Insects can help feed livestock, too! Fishmeal is a common ingredient in animal feed and comes from wild-caught fish. The demand for fishmeal is so high that overfishing can be a real problem. Protein from insects like black soldier fly larvae can be a good substitute, which helps lighten the pressure on wild fish populations.

Economic Considerations

Can you imagine seeing a prize cricket next to other livestock at the county fair? Insect farming is a new opportunity for small-scale farmers. The startup costs and resource requirements are far less than traditional farming. Plus, the global market for edible insects is projected to grow. Just imagine: a future where kids run lemonade and roasted ant stands on the corner. 🍷🐜



1. If you could only see the graph and not the details with it, how could you still tell that cows are the least efficient at turning their food into protein?

2. Looking at the graph, how could you guess that cows require the most land to support them?

3. Of the benefits listed - reduced greenhouse gases, feed, water, land use, fishing, and better economics, which could you NOT likely deduce from the graph?

Let Them Eat ... Bugs!

I have to be honest. For me, the idea of eating bugs is ... challenging 😬 but insects have been a dietary staple in some parts of the world for centuries. *Entomophagy*, or the practice of eating insects, could offer tons of benefits to the environment and food

sustainability. Plus, who wouldn't want to add a little more crunch to their lunch?

Check out this graph about the cost in terms of water, food, and emissions for different sources of protein, then check out the details below:

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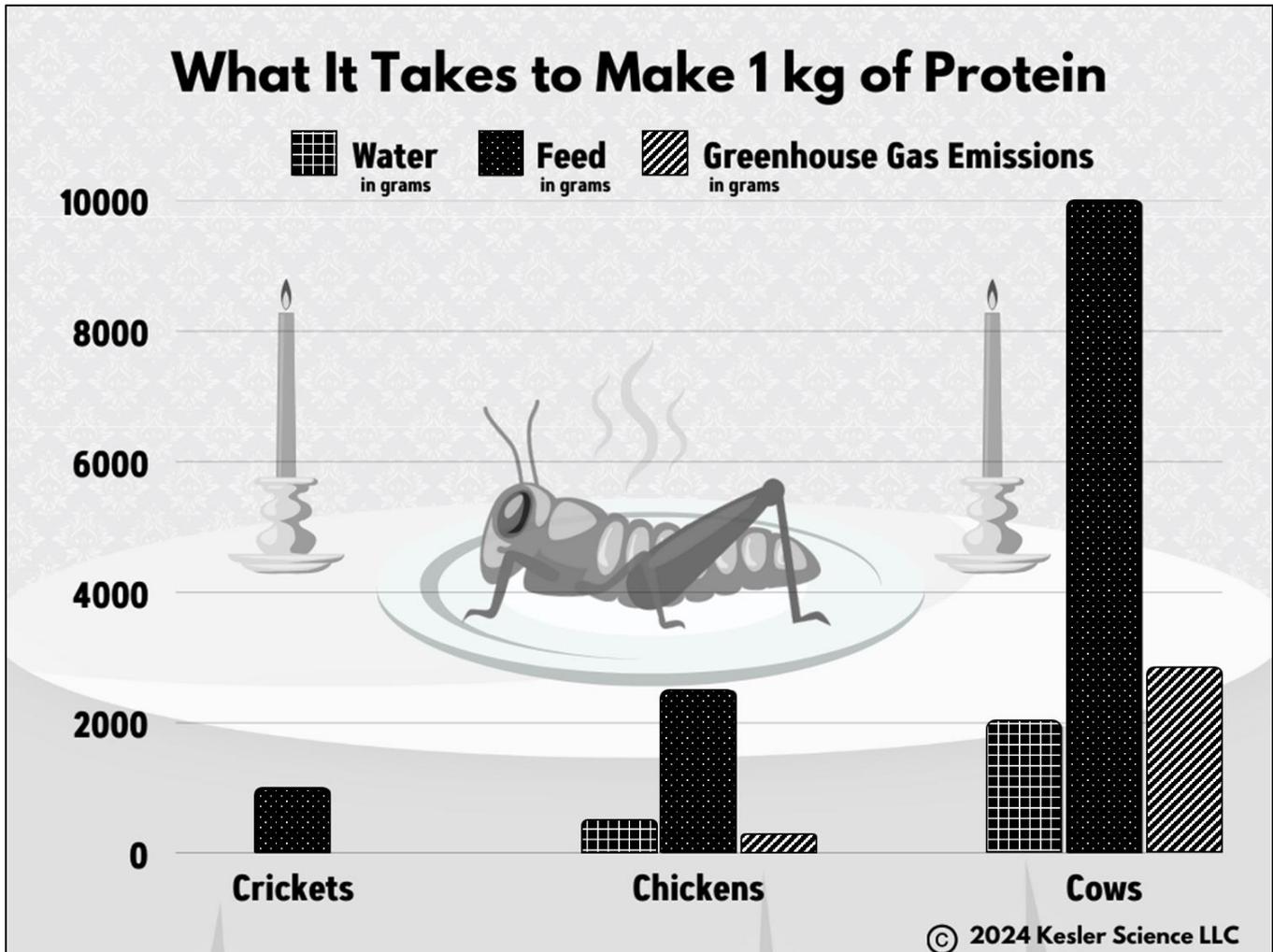
Livestock require tons of farmland, not just for living on, but for growing their food. Insects require far less space -they can be raised vertically in urban settings! Imagine: fields of crickets instead of fields of cows. 😬

Alleviating Pressure on Wild Fish Populations

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- If you could only see the graph and not the details under it, how could you still tell that cows are the least efficient at turning their food into protein?

They require more grams of feed to produce a kilogram of protein than chickens and insects do.
- Looking at the graph, how could you guess that cows require the most land to support them?

They need much more feed per kilogram of protein, and that feed has to come from either grazing space or land used to grow food for them.
- Of the benefits listed in the blog - reduced greenhouse gases, feed, water, land use, fishing, and better economics, which could you NOT likely deduce from the graph?

Gases, feed, and water are mentioned directly, and land use is not hard to guess as a result. You might be able to assume that protein that requires fewer resources would be a good farming opportunity. There is nothing in the graph that suggests reduced fishing pressure would be a result.

The next time you're hungry for a burger, are you going to try a bug-er instead? 🍔🦗