

# National Chili Month: Classroom Activities & Prompts

## 1. Social Studies & History

### Lesson: The Columbian Exchange and the Spread of Spice

- **Activity:** Map the journey of the chili pepper.
  - **Facts to Cover:** Chili peppers originated in the Americas (modern-day Bolivia, Peru, Mexico). They were one of the oldest cultivated crops in the Americas. Christopher Columbus encountered them in the Caribbean and mistakenly called them "peppers" because of their heat, leading to the name. Spanish and Portuguese traders quickly spread them across Europe, Africa, and Asia as part of the Columbian Exchange in the 16th century.
  - **Task:** Students use a world map to trace the pepper's path from its origin to its global distribution.
- **Discussion Prompt:** How did the introduction of chili peppers affect the cuisine and culture of countries like India, Thailand, and Hungary (home of paprika, which is made from chilies)?

### Writing Prompt:

- **Prompt:** Imagine you are a Spanish explorer's cook in the 1500s. Write a journal entry describing the first time you tasted this "new spice" that the natives call *chilli* and how you plan to use it to replace the expensive black pepper back in Europe.

## 2. Science & Health

### Lesson: The Science of "Heat"

- **Key Concepts:**

- **Capsaicin:** The chemical compound (a *capsaicinoid*) responsible for the spicy sensation in chili peppers.
- **Mammals vs. Birds:** Capsaicin affects mammals but not birds. (Fun fact: This is an evolutionary defense mechanism; birds eat the fruit and disperse the seeds, while mammals are deterred from chewing them.)
- **The Scoville Scale:** Invented by pharmacist Wilbur Scoville, this scale measures the heat intensity of chili peppers based on the concentration of capsaicinoids. (e.g., Bell peppers = 0 SHU; Jalapeños  $\approx$  2,500–10,000 SHU; Carolina Reaper  $\approx$  1.5-2.2 million SHU).

- **Activity: Cooling the Burn:**

- **Discussion:** Why does water make the burn worse? Why do people drink milk? Capsaicin is an oil-based chemical. Water can spread the oil, while fats/oils (like those in milk or sour cream) or starches (like rice or bread) can dissolve or absorb it, providing relief.
- **Challenge:** Students research or debate the best methods for reducing the heat from a spicy pepper (milk, water, sugar, bread, etc.) and explain the science behind their choice.

### Writing Prompt:

- **Prompt:** Explain the science of "hot." Describe how a tiny molecule called capsaicin tricks your brain into thinking your mouth is on fire and what your body does to react to this sensation.

### 3. Language Arts & Vocabulary

#### Lesson: Regional Vocabulary and Culinary Terminology

- **Focus:** The different names and spellings for chili.
  - **Chili** (with an "i"): Refers to the dish (*chili con carne* - chili with meat) in American English.
  - **Chile** (with an "e"): Refers to the pepper itself, common in Spanish and the American Southwest.
  - **Chilli** (with "ll"): Common spelling for the pepper and the dish in the UK and Commonwealth countries.
  - **Jalapeño vs. Chipotle:** A fresh jalapeño is the same species as a chipotle, which is a smoke-dried jalapeño.
- **Activity: Chili-Themed Haikus or Acrostics**
  - **Haiku:** Write a three-line poem about the chili experience (5-7-5 syllables).
    - *Example: Bright red, tiny pod, A fire wakes in my mouth, Need milk, feel the burn.*
  - **Acrostic:** Use the letters in **CHILI PEPPER** to start phrases describing the pepper or the dish.

#### 4. Math & Critical Thinking

##### Puzzle: Scoville Scale Conversion (Ratios and Comparisons)

Pepper	Scoville Heat Units (SHU)
Bell Pepper	0
Jalapeño	5,000
Habanero	350,000
Carolina Reaper	1,500,000

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- **Questions (For various grade levels):**

1. **Ratio:** How many Jalapeños would it take to equal the heat of one Habanero? (Answer:  $350,000/5,000=70$  Jalapeños)
2. **Fraction:** What fraction of a Carolina Reaper's heat is a single Habanero? (Answer:  $350,000/1,500,000=7/30$ )
3. **Percentage:** If a recipe calls for a spice blend that is 60% ground Ancho (1,500 SHU) and 40% ground Cayenne (40,000 SHU), what is the approximate heat of the blend? (Answer:  $(0.6 \times 1,500) + (0.4 \times 40,000) = 900 + 16,000 = 16,900$  SHU)

## Puzzle: The Chili Ingredient Word Search

Create a standard word search grid using the following words (and others related to the history and science lessons):

- CHILI
- PEPPER
- CAPSAICIN
- SCOVILLE
- HABANERO
- JALAPENO
- BEANS
- TOMATO
- CUMIN
- TEXAS
- COLUMBUS
- MEXICO
- PAPRIKA

## 5. Creative Writing & Opinion

### Writing Prompts:

- **Narrative:** Write a short story about a family's annual chili cook-off. Focus on the sensory details: the smell of the spices, the steam rising from the pot, the tense moment of tasting the "secret ingredient," and the agony and joy of the competition.
- **Persuasive/Opinion:** The great debate: **Do beans belong in chili?** Write an argumentative essay defending a side. You must include at least three facts from the history or science lessons (e.g., Texas-style chili traditionally omits beans).
- **Descriptive:** Using vivid language and five senses, describe the moment you take a bite of the world's spiciest chili. Use metaphors and similes to convey the heat. (e.g., *"The heat hit me like a runaway train, a thousand tiny needles pricking my tongue."*)
- **"If you were a spice..."** If you were an ingredient in a bowl of chili, which one would you be (the beef, a bean, a chili pepper, the onion, a cumin seed) and why? Describe your role in the pot and how you contribute to the final flavor.