Class Starters & Enders

Making the Most of Instructional Time
Five Minute Lessons

Class Starters and Enders help utilize the last minutes of class when a lesson ends but there is not enough time to start another, or for an interest approach at the beginning of class. Mini-lessons correlate to GPS in the programs areas below.

Caffeine

The top picture shows a regular spider while the bottom picture shows a spider on caffeine.

"I'm all Hopped up on Mountain Dew!" - Texas Ranger, *Talladega Nights*

Program Areas: Healthcare, Culinary Arts, Family and Consumer Sciences, Agriculture

Instructions: Read the material and make notes of important points and answer the questions.

Most people are unaware that everyday they consume what is considered to be a **psychoactive** drug. Caffeine, a **central nervous system (CNS) stimulant**, is consumed by 90% of Americans daily in hopes of keeping them awake and alert. This naturally occurring chemical can be found in several plants such as the coffee plant, tea bush, and kola nut. In each of the plants, caffeine also acts as a natural **pesticide** by paralyzing and killing insects that try to feed on the plant. If caffeine is both a psychoactive drug and a natural pesticide, how can it be sold and consumed so regularly? The **Food and Drug Administration** (FDA) lists caffeine as a "**generally recognized as safe** food substance" and therefore requires little to no regulation.

Like any other drug, caffeine has side effects and over time a **tolerance** can be developed. Side effects include blurred vision, dry mouth, dizziness, flushing, cold sweats, increased heart rate, troubled breathing, diarrhea, anxiety, insomnia, nausea, and increased urination. By building up a tolerance, the side effects may be reduced. Withdrawal symptoms from caffeine include headache and irritability.

Caffeine is widely known to be found in coffee, energy drinks and soft drinks. It is also found in products such as over the counter medicines, decaffeinated tea/coffee and ice cream.

Product	Caffeine (in mg)
Brewed coffee	95-200
Brewed decaf coffee	2-12
Black tea	40-120
Brewed tea	50
Coca-Cola	35
Diet Coke	47
Mountain Dew	54
Barq's Root Beer	23
Mug Root Beer	0
Vault	71
Red Bull Energy Drink	76
Monster Energy Drink	160
Hershey's Milk Chocolate	9
Hershey's Special Dark Chocolate	31
Ben and Jerry's Coffee Heath Bar Ice Cream	84
Extra Strength Excedrin (2 Tablets)	130
Chocolate Milk	5

Review

1. What type of stimulant is caffeine?
2. What percentage of Americans drink caffeine each day?
3. Name two reasons people drink caffeine.
4. Name three plants that produce caffeine.
5. What is a natural use for caffeine in plants?
6. Why does caffeine require little or no regulation by the FDA?
7. Name three side effects of caffeine consumption.
8. What does mg stand for in the chart?

Language Connection:

Research/ Define the following:

- Central Nervous System (CNS)
- Food and Drug Administration (FDA)
- Generally Recognized as Safe
- Pesticide
- Psychoactive
- Stimulant
- Tolerance

Math Connection:

If Stacy drinks a Monster Energy Drink in the morning, has a Diet Coke with lunch, takes two extra strength Excedrin tablets after lunch, enjoys a glass of brewed tea with dinner, and a Hershey's Special Dark Chocolate Bar for dessert, how many milligrams of caffeine has she consumed in one day?

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