Mint Worksheet

Objective(s):

Students will use problem solving skills and the distributive property to determine facts about mint and mint production information.

Indiana Academic Standards:

Mathematics

Algebra and Functions: 7.AF.1 Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create equivalent linear expressions, including situations that involve factoring out a common number (e.g., given 2x - 10, create an equivalent expression 2(x - 5)). Justify each step in the process.

National Agricultural Literacy Outcomes

Agriculture and the Environment Outcomes

T1.6-8g. Recognize how climate and natural resources determine the types of crops and livestock that can be grown and raised for consumption.

Materials:

- Writing utensil
- Student worksheet

INDIANA AG ESCAPE

MYSTERY CROP

Background information: This mystery crop grows well in rich, moist soil. It can be a common crop found in container gardens. Another interesting fact about this mystery crop is that it can be easily propagated. Propagation is a form of taking a cutting from the parent plant to produce another identical plant without a seed.
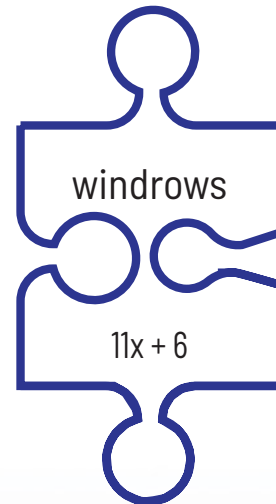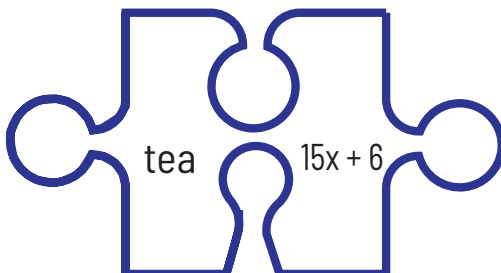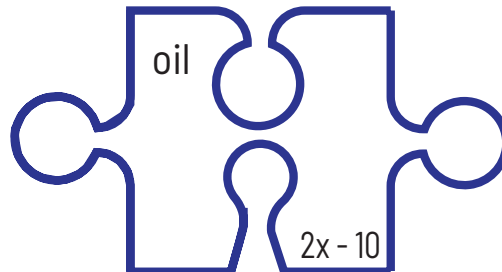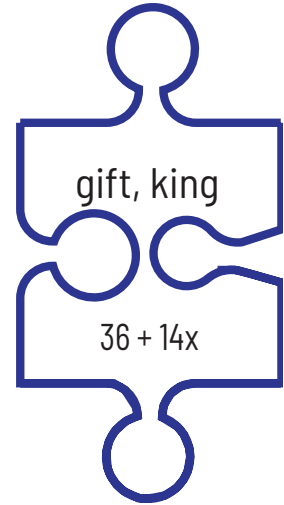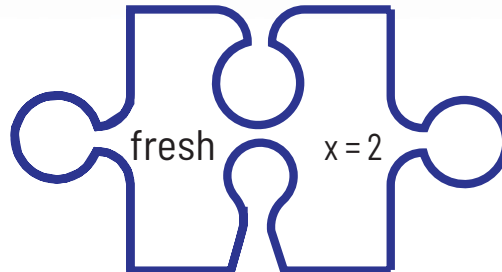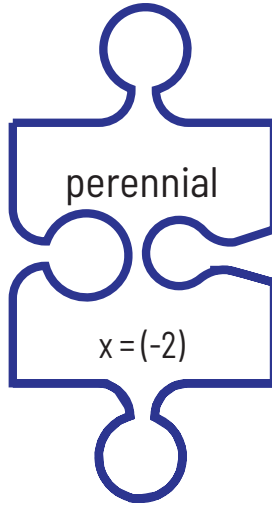
Directions: Use the distributive property to simplify these equations to their simplest form. Once you have simplified or solved for the variable in these equations, find the correct answer on the second sheet and match it with the question to find out the answer!

1. This crop's main use is its _____ $2(x-5)$.

2. This crop is used to make many types of _____ $3(5x+2)$.

3. This crop is a _____ $-3(4x-2) = 30$.

4. When this crop is harvested, it is laid into piles to dry called _____ $3(5x+2)-4x$.

5. This crop was used as a _____ for a _____ $8+7(4+2x)$.

6. This crop has a _____ scent, used in things like gum and toothpaste $4x+3=-5x+21$.

What is it? _____

ANSWER BANK

Each puzzle piece below contains the correct answer to an equation and the missing word in the corresponding sentence.

perennial

x = (-2)

fresh   x = 2

oil

2x - 10

gift, king

36 + 14x

tea   15x + 6

windrows

11x + 6

Teacher Answer Key

The correct answers for the puzzle are as follows
1. oil = 2x - 10
2. tea = 15x + 6
3. perennial = x = (-2)
4. windrows = 11x + 6
5. gift, king = 36 + 14x
6. fresh = x = 2

Mystery crop = mint

Supplemental Information

- Explain to students that Indiana is an important mint-producing state. Every year there are over 25,000 acres of mint planted in Indiana.
- Northwest Indiana produces the most mint in the state. St. Joseph and Starke counties have the largest productions.
- Give some examples of what Indiana mint could be used for, including mint gum, mint candies, toothpaste and mint chocolate chip ice cream.
- Mint is a perennial plant, meaning it lives more than one life cycle.
- Harvest between mid-June and late September.
- When mint is harvested it is piled into "windrow," which are lines of piled mint laid out to dry in the wind.
- One acre of mint = 76 pounds of mint oil.
- The mint industry contributes about $69.7 million in production to the economy.
- **Careers: Farmer, food scientist, agronomist and crop inspector**