

Name: _____

Use with L. Arts for Assignment 5 & 6

Hitchhikers in the Bathroom

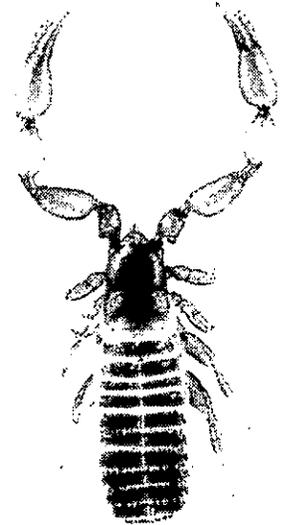
by Liana Mahoney

Imagine this. You step up to the sink, wet your toothbrush, and begin cleaning your pearly whites. Out of the corner of your eye, you see something moving on the wall. Suddenly, you realize you're not alone in the bathroom. Your heart pounding, you turn toward the tiny intruder to get a better look.

You're horrified to see that it has eight legs, and a pair of oversized pincers on its front end. Is it some kind of miniature octopus, or a bizarre crab? Is it going to sting you?

Actually, it's a bug, and it's no more harmful to you than a housefly. This tiny bathroom bug is called a pseudoscorpion (SOO-doh-SCOR-pee-uhn). But don't be fooled by its name. It's not really a scorpion; it's just a relative. The pseudoscorpion is a kind of arachnid (uh-RAK-nid), which means it is closely related to spiders, scorpions, and mites. Like scorpions, pseudoscorpions have a segmented body and two enormous pincers. But pseudoscorpions lack the curved stinger that all true scorpions have.

Pseudoscorpions usually live outside in mulch, under tree bark, and in leaf litter. So how do they end up in the bathroom? They use those pincer-like claws to hitch a ride on other bugs, such as flies and beetles. When these insects come in, so do the pseudoscorpions - attached to their legs!



These tiny arachnids prefer moist places. Since the bathroom tends to be humid after bathing and showering, it's a likely place to find them. But they are easily overlooked. Most pseudoscorpions are only about two to eight millimeters long.

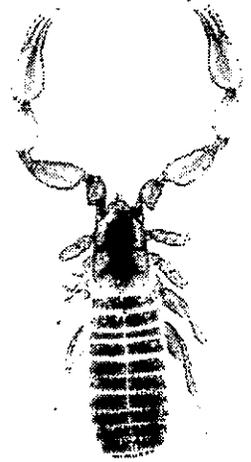
Pseudoscorpions don't bite or sting humans, and they can even be helpful. These bugs feed on common household pests, such as carpet beetle larvae, ants, mites, and small flies. Welcoming this hitchhiker into your home may mean there are fewer household pests to "bug" you!

Name: _____

Assignment 5

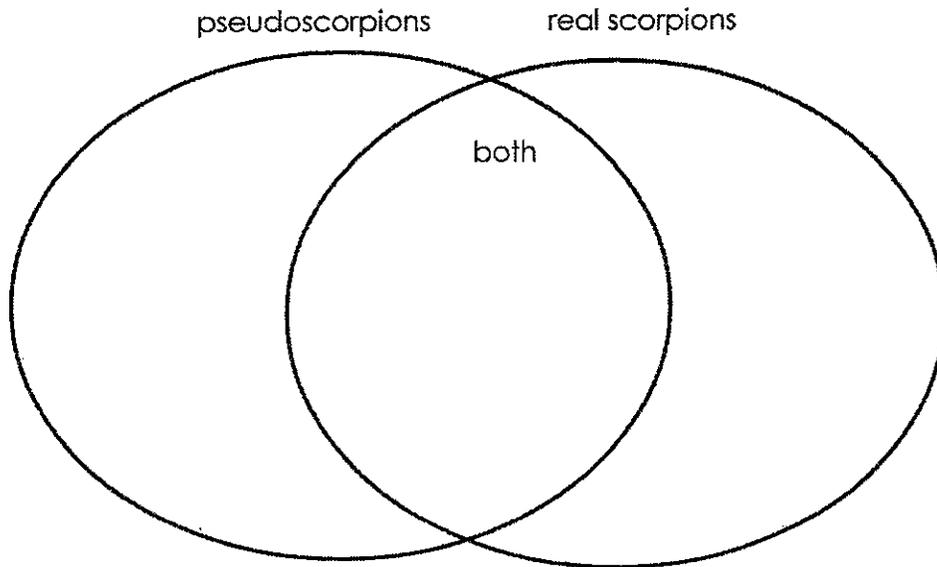
Hitchhikers in the Bathroom

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1. If you wanted to find a pseudoscorpion outdoors, where would you look?

2. Use the Venn diagram to show how pseudoscorpions and real scorpions are alike and how they're different.



3. How can pseudoscorpions be helpful to humans?

Name _____

Take Home Test - writing expressions, properties of operations, combining like terms, one-step equations

Write each phrase as an algebraic expression.

1. 12 more than a number

2. the quotient of a number and 9

3. the product of a number and 5

4. 5 more than the sum of a number and 15

Choose the correct property for each of the following.

5. $1 \cdot 5 + 9 \cdot 5 = 5(1 + 9)$
 - a. associative
 - b. commutative
 - c. distributive
 - d. identity

6. $(5 \cdot 8) \cdot 2 = 5 \cdot (8 \cdot 2)$
 - a. associative
 - b. commutative
 - c. distributive
 - d. identity

7. $2 \cdot 10 = 10 \cdot 2$
 - a. associative
 - b. commutative
 - c. distributive
 - d. identity

Name _____

Combine like terms.

8. $7a + 3b - 2a - 5 + b$

9. $2x + 4 + x + 5 + 2x$

Solve for the variable. Show your work!

10. $x + 5 = 15$

11. $m - 2 = 24$

12. $5k = 55$

13. $\frac{m}{8} = 9$

Bonus: Answer 1, 2, or all 3. Make sure to show your work for credit.

1. Divide 30 by $\frac{1}{2}$ and add 10. What is the answer?

2. A clerk works in a butcher shop. He is 6 feet tall, 25 years old, and has an average build. What does he weigh?

3. $5x^2 + 8 = 133$

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SHI HUANGDI

c. 259 BC–210 BC



HOW HE AFFECTED THE REGION Shi Huangdi was a powerful Qin emperor in China's first dynasty. He ordered the building of the Great Wall of China and had thousands of terra-cotta warriors made to guard his tomb.



As you read the biography below, look for ways that Shi Huangdi's strength and determination helped him accomplish many achievements during his reign as emperor.



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Shi Huangdi's name at birth was Cheng. Cheng was crowned king of the Qin, a Chinese state, at the age of 13, but his rule did not become official until he turned 21. His first act as ruler was to begin taking over the other six Chinese states one at a time. Cheng was a strong military leader. He often made **ruthless** decisions in order to take control of the enemy states.

In 221 BC, China became unified for the first time. Cheng renamed himself Shi Huangdi, meaning First Emperor. He was very confident in his abilities as a leader. He **proclaimed** that his dynasty would last "10,000 generations."

Shi Huangdi earned many lasting achievements during his reign. He ordered the Great Wall to be built. This was to protect China from war clans in the north. Shi Huangdi adopted a single form of money to be used throughout China. It was a round copper coin with a square hole in the middle. Irrigation canals and roads were built all over the empire. The Qin even established one language to be spoken and written by all people in China.

VOCABULARY

ruthless cruel

proclaimed announced

Even though Shi Huangdi accomplished many great things, he was not a popular leader. His people worked hard to build the Great Wall, dig irrigation canals, and build a huge palace for Shi Huangdi. They did not get paid for this work. The Qin emperor also ordered more than 6,000 life-sized warriors to be made out of terra cotta. These hand-made figures were meant to guard Shi Huangdi's tomb after his death.

Eventually, Shi Huangdi stayed in his palace almost all the time. He would only speak to a small number of trusted people in person for fear that someone might try to kill him. He had already survived three attempts on his life.

Shi Huangdi died suddenly in 210 BC. He had ruled as the first emperor of unified China for 37 years. The accomplishments of Shi Huangdi left a lasting mark on Chinese culture. His determination and ideas for changes made China very strong. The Qin dynasty was the foundation for all future emperors.

WHAT DID YOU LEARN?

1. **Recall** Identify three lasting achievements of Shi Huangdi.

2. **Draw a Conclusion** Why did Shi Huangdi fear for his life toward the end of his reign?

ACTIVITY

Write an epitaph for Shi Huangdi's tomb. Include one or two details that you learned from your reading.

Energy: Potential vs. Kinetic

Directions: Read the following passages and answer the questions following the reading.

ALL Energy is either potential or kinetic.

Potential energy is energy that is stored in an object. It isn't being used at the moment, but is waiting to do work. A good example is to think about a boulder sitting on top of a hill. Just sitting there, the boulder isn't doing anything. But because it is sitting on top of a hill, it has the potential to roll down and do some damage to a car or building below. The energy is stored in that rock because of its size (mass) and the distance it will travel once it starts rolling. Another good example is a rubberband. When you stretch a rubber band, it wants to move back to its original position, and thus you have given it potential energy. As the rubber band is released, potential energy is changed to motion.

Kinetic energy is energy of motion. A rubber band flying through the air has kinetic energy. When you are walking or running your body is exhibiting kinetic energy. This energy is performing work. Other examples of kinetic energy include: legs pump bicycle pedals, lightning snaps trees, cars travel down the street, football players making tackles, and 4-wheelers speeding through the woods.

Potential energy is converted into kinetic energy. As mentioned before, a stretched rubberband can change from having potential to kinetic energy. Another example of this change between kinetic and potential energy can be seen using a yo-yo. Before a yo-yo begins to fall from your hand it has stored energy due to its position. At the top (in your hand) it has its maximum potential energy. As it starts to fall the potential energy begins to be changed into kinetic energy. At the bottom its potential energy has been completely converted into kinetic energy so that it now has its maximum kinetic energy. Another example of the change between kinetic and potential energy is a waterfall. A waterfall has both potential and kinetic energy. The water at the top of a waterfall has stored potential energy. When the water begins to fall, its potential energy is changed into kinetic energy. This change in energy is used in Niagara Falls, Canada to provide electricity to parts of the northeastern United States.

Questions:

1. What is kinetic energy?

2. What is potential energy?

3. List 5 examples of Potential energy given in the above passage. The first two are filled in for you.
 1. __ A boulder sitting on top of a hill that could roll down. _____
 2. __ A stretched rubberband. _____
 3. _____
 4. _____
 5. _____

4. List 5 examples of Kinetic Energy given in the passage above. The first two are filled in for you.
 1. __ Water *falling* down a waterfall. _____
 2. __ Car moving through the streets. _____
 3. _____
 4. _____
 5. _____