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THE AWARD-WINNING PRINT & ONLINE FAMILY FEATURE
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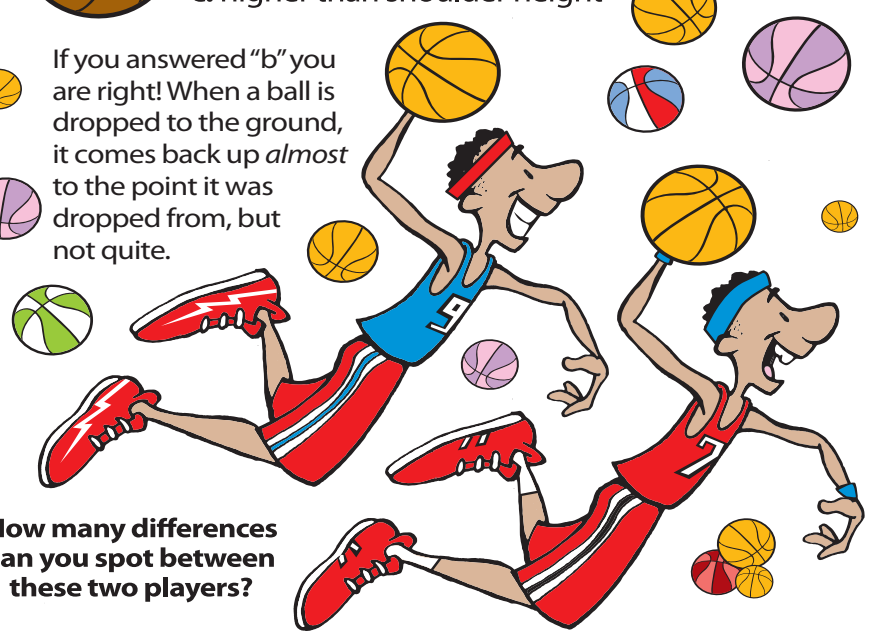
Q: How high will a basketball bounce when dropped from shoulder height?

a. back to shoulder height
b. less than shoulder height
c. higher than shoulder height

If you answered "b" you are right! When a ball is dropped to the ground, it comes back up *almost* to the point it was dropped from, but not quite.



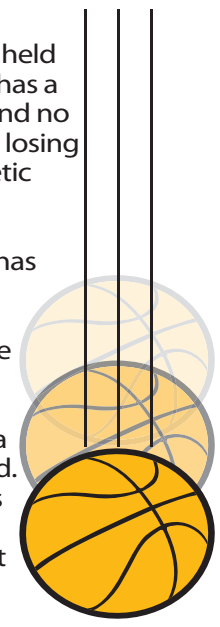
How many differences can you spot between these two players?

STEM Basketball

When a basketball is held above the ground, it has a lot of **potential energy** and no **kinetic energy**. As it falls, it starts losing its potential energy and gets kinetic energy.

When the ball hits the ground, it has lots of kinetic energy. The friction against the ground slows the ball down, but it also slightly heats the ball. This is **thermal energy**.

The ball bounces back up but to a lower height than where it started. The original potential energy was transformed into thermal energy and kinetic energy. And that's just the way the ball bounces.



KINETIC ENERGY

The energy of motion. Anything that is moving has kinetic energy, and the faster it is moving, the more kinetic energy.

POTENTIAL ENERGY

An object high above the ground has potential energy because of the work it took to get it there and the work it will do when it falls.

THERMAL ENERGY

Thermal energy is the name for energy that comes from the temperature of an object.

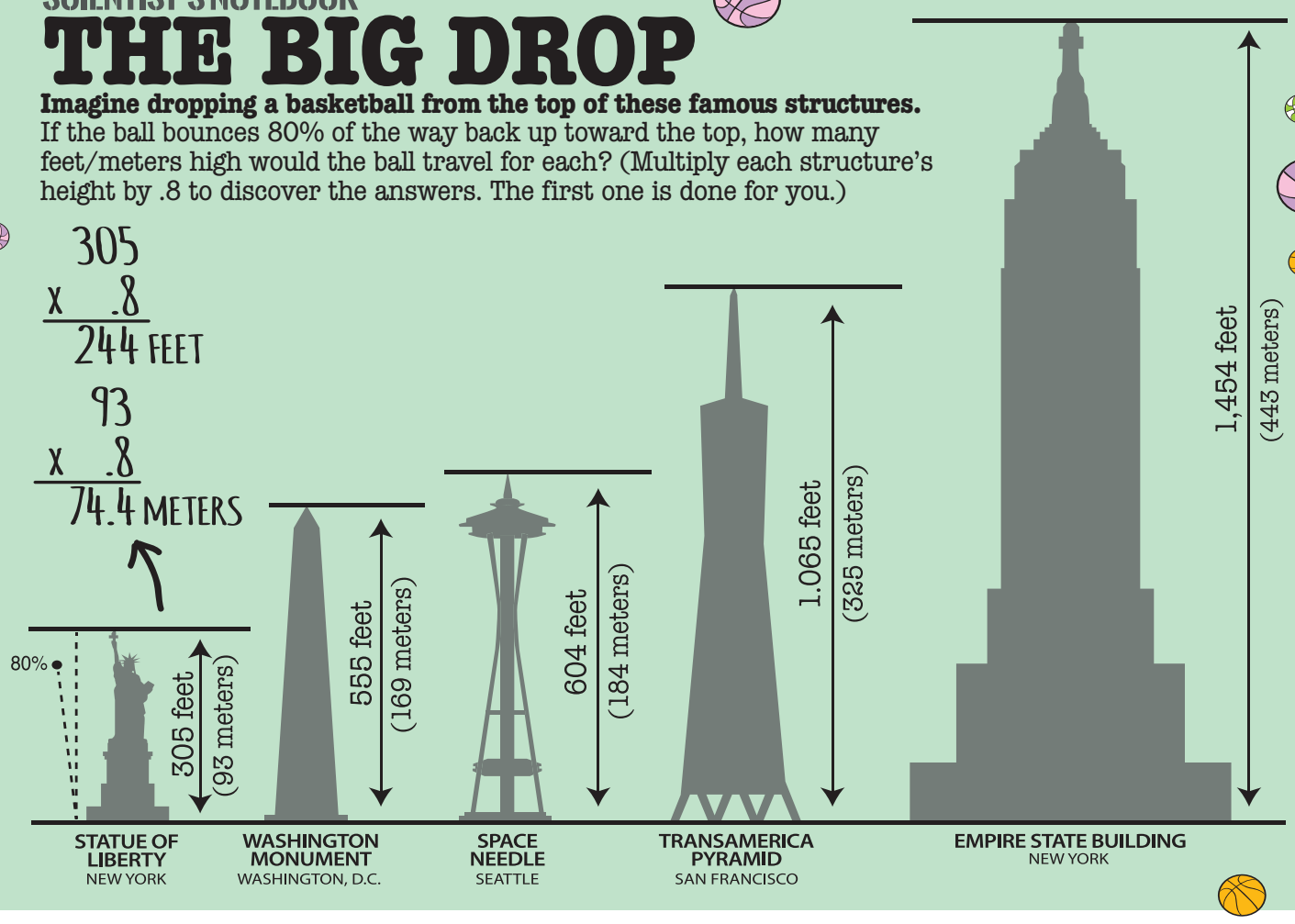
SCIENTIST'S NOTEBOOK

THE BIG DROP

Imagine dropping a basketball from the top of these famous structures. If the ball bounces 80% of the way back up toward the top, how many feet/meters high would the ball travel for each? (Multiply each structure's height by .8 to discover the answers. The first one is done for you.)

305
x .8
244 FEET

93
x .8
74.4 METERS



Two-Minute Drill

How many basketballs can you find on this page in two minutes? Now have a friend try. Who found more?

Extra! Extra! Basketball Math

Look through the newspaper for final scores of basketball games. Calculate how many more points the winning team earned than the losing team.

Standards Link: Research: Use the newspaper to locate information.

Kid Scoop FIT&FUN

To improve your basketball skills and get some great exercise, work on these drills with some friends or family members.

Every Day Practice

Shoot 10 times from three different places—first the baseline, next from the elbow of the free-throw line and the following 10 from inside the lane. Repeat on the opposite side.

Practice with Two Friends

Shoot two free throws while one player rebounds and the other player sprints around the half court. Then the shooter takes the rebounds, the player shooting rebounds takes the sprints and the sprinter shoots two free throws.

Bounce Twice

One player shoots from a three-point distance and his partner lets the ball bounce twice and then shoots from that spot.

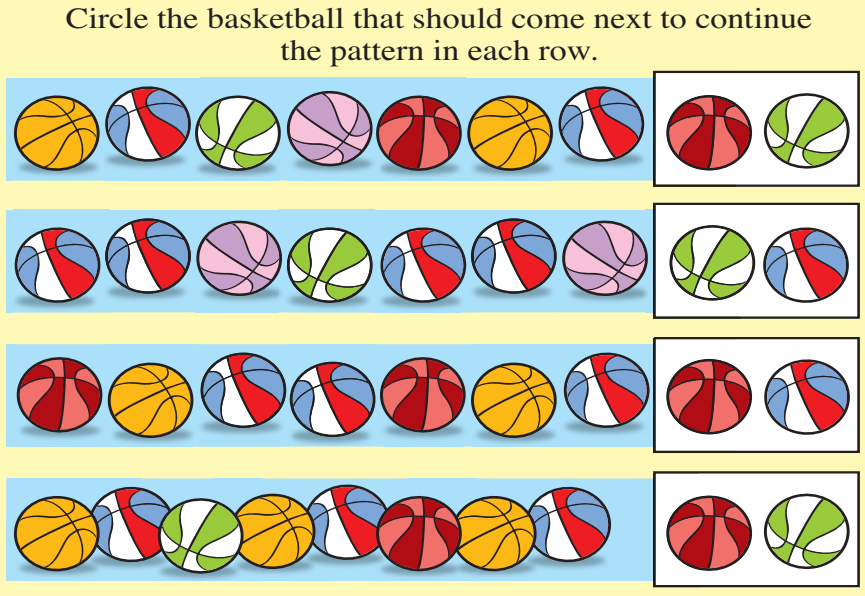
Basketball Golf

Place markers at different points on the court and set a number for how many attempts it should take before scoring from that spot. Start from the marker and continue shooting from wherever the ball lands until the shot is made. Keep track of attempts. The player with the lowest score wins.

Standards Link: Physical Education: Use a variety of basic and advanced movement forms.

Kid Scoop Puzzler

Circle the basketball that should come next to continue the pattern in each row.



Standards Link: Math: Extend simple patterns.

Double Double Word Search

Find the words in the puzzle. Then look for each word in this week's Kid Scoop stories and activities.

POTENTIAL
SHOULDER
THERMAL
KINETIC
BOUNCE
ENERGY
GROUND
MOTION
HEATS
COURT
THREE
BALL
DUNK
WORK

I	N	O	I	T	O	M	P	S	T
S	A	C	T	H	B	Y	O	H	O
H	U	I	H	E	G	W	T	O	D
E	T	T	R	R	R	O	E	U	R
A	C	E	E	M	O	R	N	L	E
T	E	N	E	A	U	K	T	D	T
S	E	I	U	L	N	N	I	E	T
E	R	K	G	O	D	Y	A	R	A
T	R	U	O	C	B	A	L	L	M

Standards Link: Letter sequencing. Recognized identical words. Skim and scan reading. Recall spelling patterns.

Kid Scoop VOCABULARY BUILDERS

This week's word:
FRICTION

The noun **friction** means the action of one surface rubbing against another.

The **friction** caused by sliding down the rope made Joe's hands burn.

Try to use the word **friction** in a sentence when talking with your friends and family today.

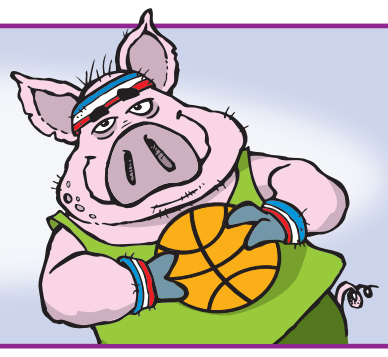
FROM THE Kid Scoop LESSON LIBRARY

Energy Scavenger Hunt

Look through the newspaper for five examples of energy being created or used. Discuss whether or not the energy is **kinetic**, **potential** or **thermal**.

Standards Link: Physical Education: Use a variety of basic and advanced movement forms.

Why is it no fun to play basketball with a pig?



ANSWER: Because they always hog the ball.

Write On! SPORTS REPORT

What is your favorite sport or exercise? Write a paragraph describing it and the reasons why you like it.

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