

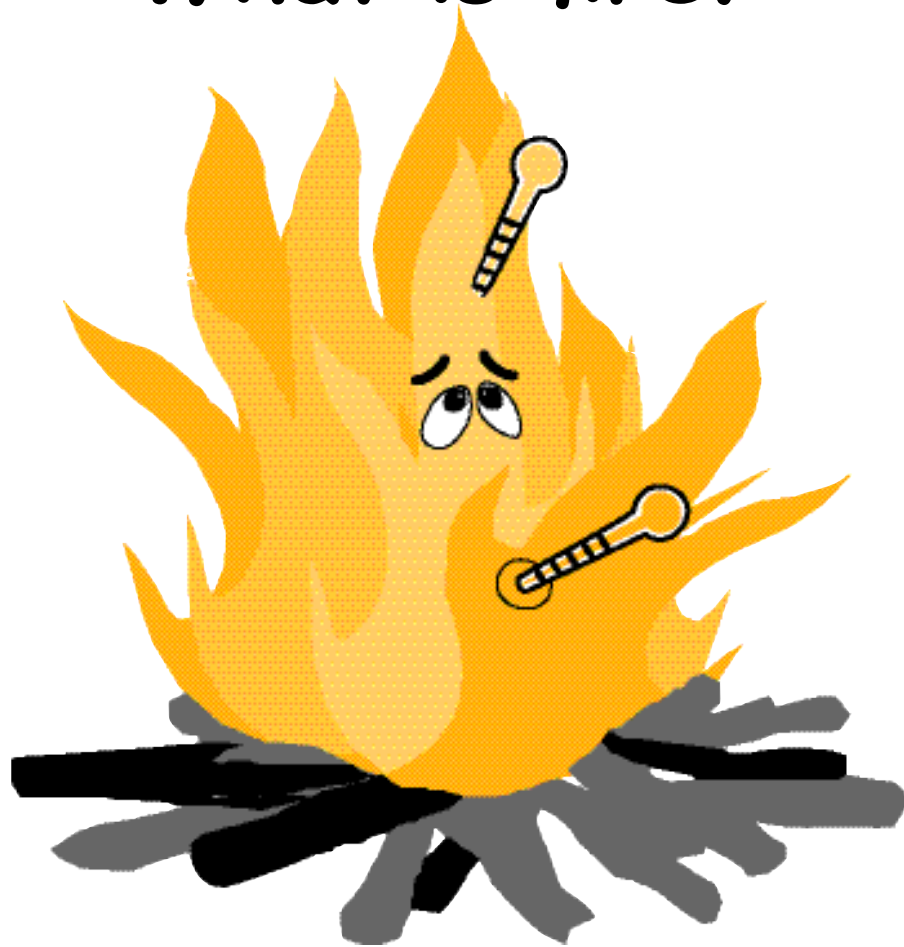
# PRIMARILY for U.S.\*

GRADES 2-3

\* Understanding Science

Volume 28 • Issue 3 2004 - 2005 Fernbank Science Center • DeKalb County School System ISSN 0742-6518

## What is fire?

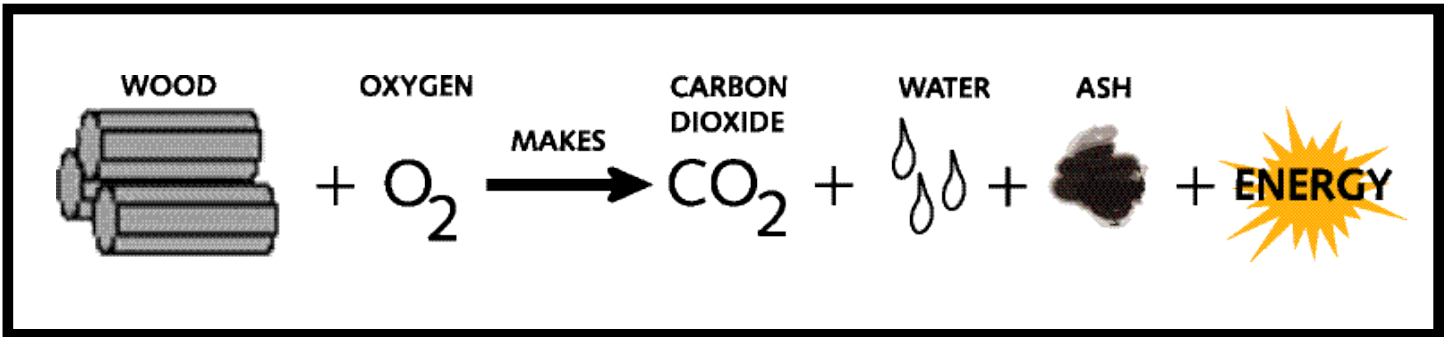


Is a fire the same temperature at the top and at the bottom?



Are all flames the same color?

Fire is energy. Fire occurs when the molecules of a fuel such as wood combine with oxygen in the air.



When a fire burns, two kinds of energy are produced: light energy, and heat energy.



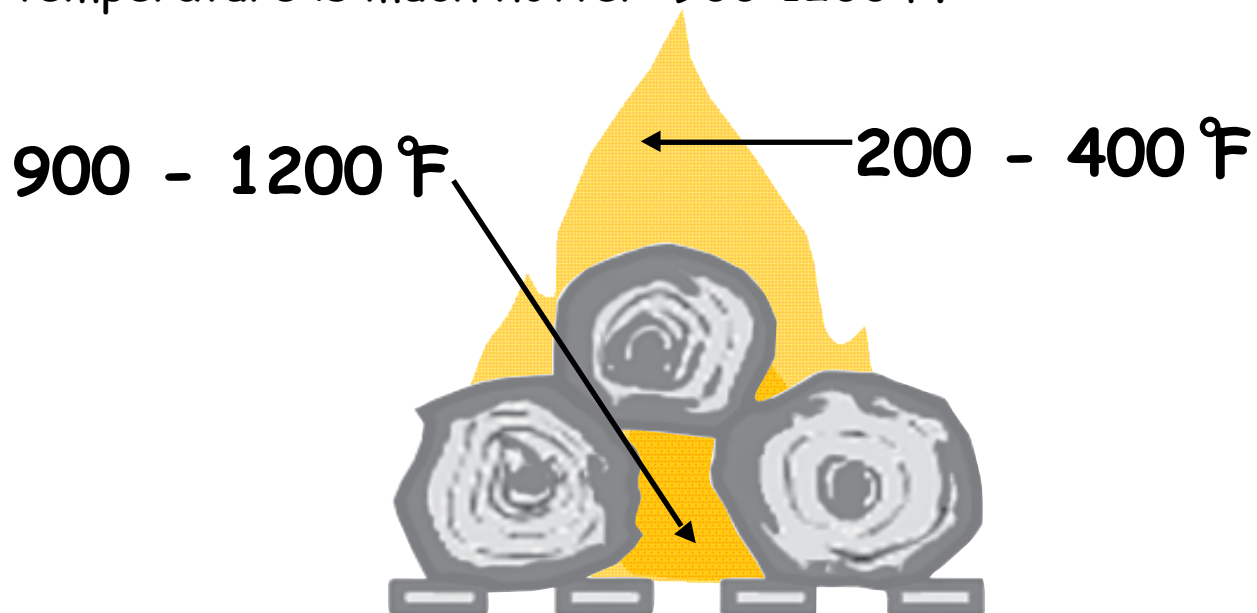
How do your eyes sense the light energy?



How do your hands sense the heat energy?

**Answer:** Nerve cells in your eyes tell your brain that the flame is bright. Nerve cells in your skin tell your brain that the flame is warm.

Fire is not the same temperature everywhere. Where the flames are, the temperature is 200-400°F. But where you see it glowing, the temperature is much hotter: 900-1200°F.



A candle flame is orange, but not all flames are the same color. Different substances burn with different colors. Flame color can show what chemical is present in a sample.



Calcium salts  
burn orange-red.



Lead salts  
burn blue-white.



Potassium salts  
burn pale violet.

**COLOR EACH FLAME THE COLOR IT BURNS!**





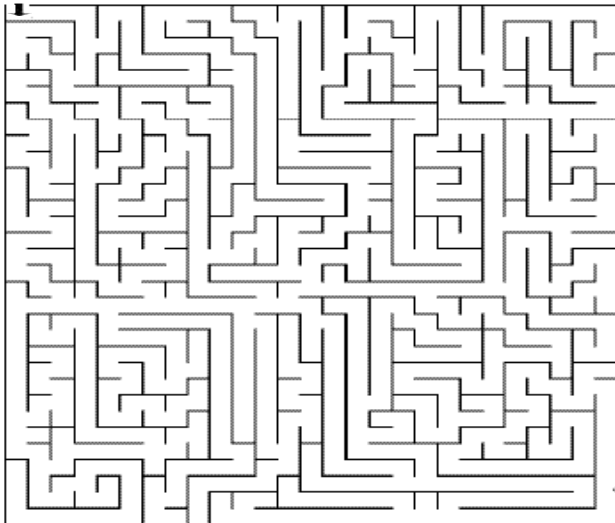
# FIRE-Y FUN

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

Find the "fire-y" words in this table.  
Put a circle around each one.

Hint: The hidden words are at the bottom of the page.

Start  Find the Fireman



Some answers to "Fire-y Fun": Matches, torch, keep warm, light, cooking, smoke, oxygen, burn

# A GEORGIA FIRE FOREST

A fire forest is an ecosystem that needs fire to stay healthy.

A fire forest needs to burn every one to three years to keep the plants and animals healthy.

Fire helps the forest in many ways. It clears away plants that might compete for soil, nutrients and water. Young pine trees grow best in open spaces.



**ONLY GROWN UPS  
SHOULD USE FIRE!**



# Plants and Animals



The longleaf pine can live 300-500 years, and can be 100 feet tall. It has very thick bark to protect it from fire and



The red-cockaded woodpecker loves the longleaf pine! It always chooses living pine trees for its nest. The babies are cared for by a "family" of 4 - 10 adult



The Southeastern pocket gopher needs sandy soil for its tunnels. It even builds its own toilet underground!



The gopher tortoise is Georgia's state reptile. Gopher tortoises find low-growing plants and sandy soil for their burrows in the fire forest.

Written by Linda Lbgdberg with assistance from V. Dailey, Chris Showalter, Larry Wilson. Layout illustrations and graphics are by Sheila Ward. The "fire forest" photograph is by Teri Nye.

It is the policy of the DeKalb Board of Education not to discriminate on the basis of age, sex, race, color, religion, national origin, disability or handicap in its education programs, activities or employment practices.