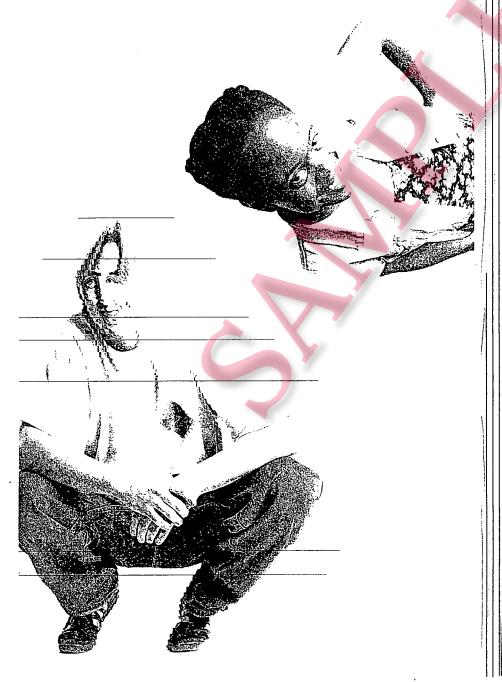
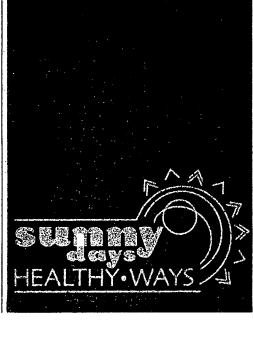




# LESSON 1

# THE SUN AND LIFE ON EARTH







# WHAT'S UP TODAY?

- 1) Agree or Disagree?
  - a) What do you think about the sun and how it works?
- 2) Harms and Benefits
  - a) What are the harms of the sun's energy to humans?
  - b) What are the benefits of the sun's energy to humans?
- 3) Personal Risk Assessment Activity
  - a) Based upon your unique characteristics, what is your personal risk for skin damage from UVR?
- 4) About Your Personal Risk Three Main Factors:
  - a) Where you live
  - b) Who you are
  - c) What you do
- 5) Your Personal Sun Experiences

### **VOCABULARY:**

- Altitude (Elevation)
- Electromagnetic Spectrum
- Latitude
- Ozone
- Photosynthesis

- Ultraviolet Radiation (UVR)
- UVA Rays
- UVB Rays
- UVC Rays
- UV Index

## ALSO, CHECK OUT:

# http://library.thinkquest.org/15215

"The Sun: Man's Friend and Foe" leads you through the history and culture of the sun through movies and fun activities.

# http://www.epa.gov/sunwise/uvindex.html

Find out the daily UV Index in your area!



# DO YOU AGREE OR DISAGREE?

AGREE • • • • UNDECIDED • • • • DISAGREE

#### 1. WITHOUT THE SUN. LIFE COULD NOT EXIST.

- The sun supplies energy in the form of light and heat, which is needed by all living things.
- The sun provides light, which helps grow both the food that you eat and the trees that help produce the oxygen you breathe. The process by which plants make their own food is called photosynthesis.
- The sun provides warmth.
- The sun helps your body create its own Vitamin D, which is an important nutrient in developing strong, healthy teeth and bones.

<ul> <li>Anyming eises</li> </ul>		
	↓	
	,	

#### 2. THE SUN GIVES OFF ONLY LIGHT YOU CAN SEE.

- Actually, the sun emits an entire spectrum of light. Known as the electromagnetic spectrum, only a portion of it can be seen by humans. The visible spectrum is what we know as a rainbow, or by the acronym "ROY G BIV."
   At either end of the visible spectrum, there are many other kinds of light we can't see like infrared light, ultraviolet light, x-rays and gamma rays.
- Ultraviolet light is divided into three categories, based on the length of the
  wave: UVA, UVB and UVC. The ozone layer absorbs some of these rays
  before they travel to the ground. The ozone does not absorb UVA; all of it
  reaches the ground. UVB is partially absorbed; some still reaches the ground.
  UVC is completely absorbed; none reaches the ground.