Light
Poetry

Create a cinquain (five-line poem) based on the science word "light"

_____
science word

_____ _____
adjective *adjective*

_____ _____ _____
word ending in "ing" *word ending in "ing"* *word ending in "ing"*

_____ _____
word ending in "ing" *phrase*

_____
Synonym of original word

LIGHT
ABC GRID

Fill in the grid with terms about **light** which begin with the letter in each box.

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

Seeing is Not Always Believing"
Refraction

PROCEDURE:

1. Fill a clear glass about ¾ full with water.
2. Put a pencil in the glass of water.
3. Look carefully at this glass and draw what you see.
4. Count how many students pick up the bend in the pencil at the water line.
5. Try different objects to see if the same thing happens.

***This apparent bend is due to refraction. Light waves refract at different speeds through different materials, and appear to bend.

Draw a picture of what you see.

LIGHT
Anticipation Guide

Directions: Each of the following statements are about light. Read each statement and put a "T" by the statements *you think* are "true" and a "F" by the statements *you think* are "False". Be prepared to explain your decisions to the group.

_____ 1. We do not need light to see colors.

_____ 2. Light affects our everyday life.

_____ 3. The sun is the only natural source of light.

_____ 4. The primary colors of light are identical to the primary colors of paint.

_____ 5. Like sound, light can go around corners.

_____ 6. Light will pass though some objects and will pass through other objects.

_____ 7. Light is a form of energy that we can see.

_____ 8. Reflection is the change in direction of a light ray as it bounces off an object.

_____ 9. Visible light is the only type of light.

_____ 10. White light contains all the colors of a rainbow (visible spectrum).

Note to teacher:
An anticipation guide is a series of statements to get the students to think about what they already know about a concept. The guide should be given prior to teaching to assess background knowledge, help to recognize misconceptions, arouse interest, and encourage students to form questions of their own. It can be used as a springboard for class discussion. A grade should **NOT** be given. At the end of the unit, students should revisit this anticipation guide to evaluate how well they understood the concept and to correct possible misconceptions.

Concept Definition Map

(Use for vocabulary or concept terms)

LIGHT

EXAMPLES

What is it like?

What is it?

Write definition in your own words.

Note to teacher:

Concept definition mapping is a vocabulary activity that provides students with a graphic organizer that outlines the key parts of a definition (class/category, properties/characteristics, and examples/illustrations). Students are guided into considering the questions that a complete definition should answer: "What is it like?" "What are some examples of it?" and "What is it?"

Students could work in pairs using information from the textbook, class notes, reading passages, background knowledge, and other print sources.

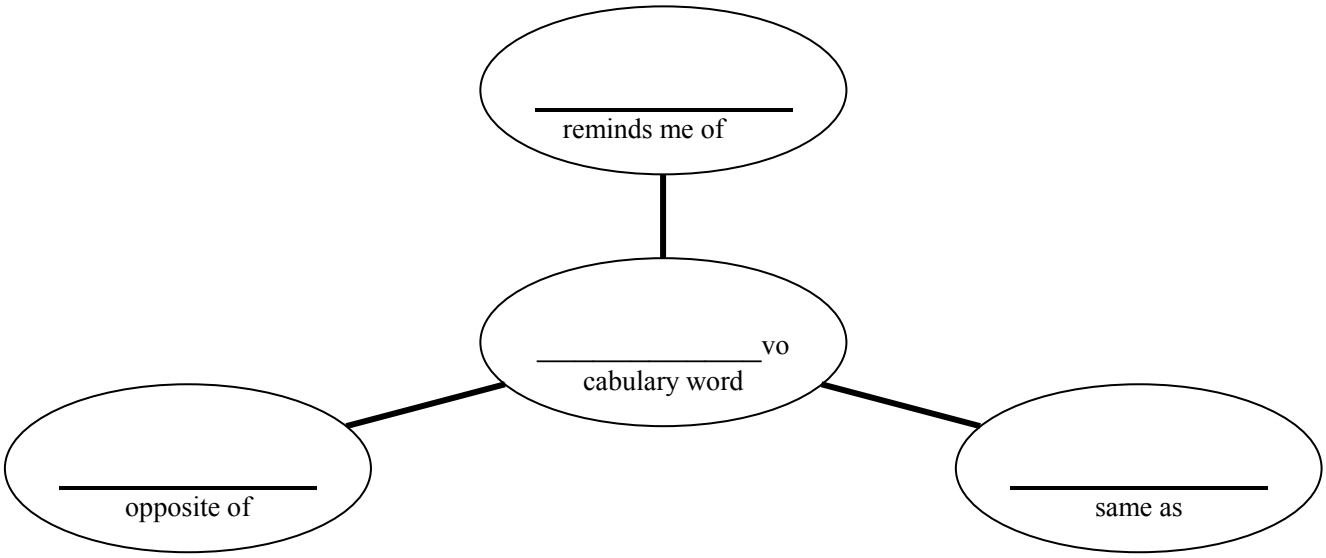
Students should summarize statements forcing them to write the definitions in their own words. This activity will also help students make connections between background knowledge and new learning.

This could be done for each vocabulary word or for variety the teacher could choose to use the vocabulary map on next page.
The idea is to get the students to think beyond the definitions in the glossary.

VOCABULARY MAP

(Use for vocabulary or concept terms)

Directions: Fill in the circles for each word.



Draw an illustration of the word.	What is it? (Write definition in your own words)

Note to teacher:

Draw this graphic organizer on the board. Students should draw the graphic organizer in their science notebooks. There should be one map per vocabulary word. In addition, students could add a drawing and write the definition in their own words. This can be done in groups of two. For variety, students could choose to use the concept map on the previous page for some words. The idea is to get the students to think beyond the definitions in the glossary.

Frayer Model

(Use for vocabulary or concept terms)

Essential Characteristics	*Non-Essential Characteristics*
Examples	*Non-Examples*

Note to teacher:
The Frayer Model is a graphic organizer that differentiates characteristics, defining an important concept from those merely associated with it. A Frayer model grid contains for sections: essential characteristics, non-essential characteristics, examples, and non-examples. It can be used as a worksheet to guide the students as they read though a section or by the teacher to guide classroom discussion.

To introduce the activity, the teacher and class lists on the board as many examples of the concept as possible. Students work in cooperative groups to analyze the terms for what they have in common and place the terms in the appropriate places on the grid. Students should add to the grid as they read and be able to justify their placement of the terms. This model emphasizes making connections, determining importance, and improves questioning ability.