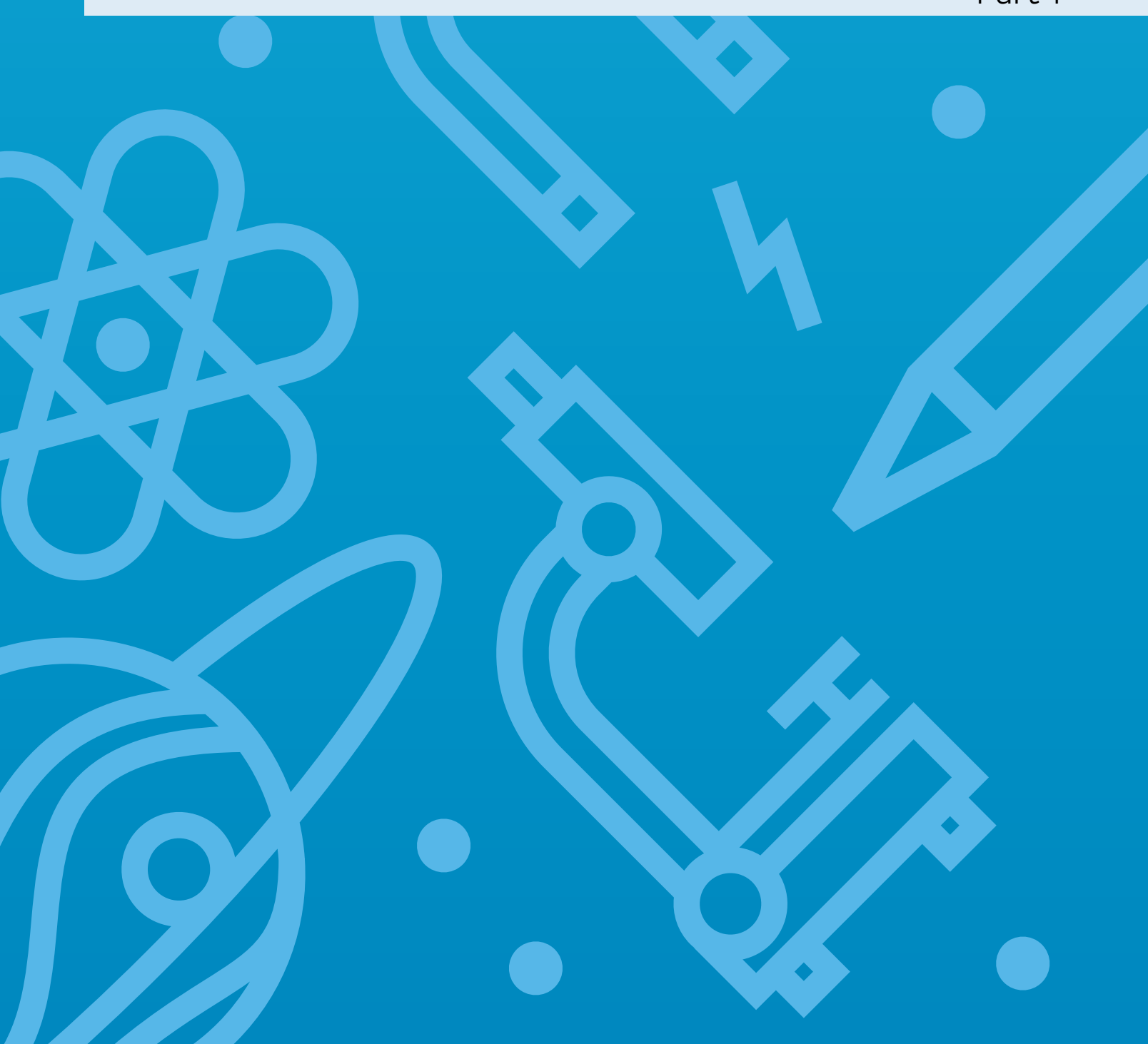




**CALVERT**™  
PUBLICATIONS

**1st Grade** | Teacher's Guide  
Part 1



# SCIENCE

## PAGE 1: LIGHT

### MATERIALS NEEDED

- pencils
- crayons
- writing tablet
- vocabulary-word cards

#### Concept:

Light can come from many sources.  
 Light can pass through, be reflected, or be blocked.  
 Light with opaque objects creates shadows.  
 Mirrors reflect light.

#### Objective:

I will know the objectives of *Science 101*.

#### Process:

Observing, using the sense of sight

#### Reading Integration:

Vocabulary development, recognizing a sentence, left to right, oral directions, writing name, listening

#### Vocabulary:

light, mirror, shadow, reflection

#### Teaching Page 1:

To prepare for this page and *Science 101*, have children look around them for light. Have the children identify where light comes from, any shadows they see, where light is bright or dim, and any reflections they see.

Inform children that *Science 101* will discuss different properties of light. Light is everywhere and allows us to see our world.

Read the introduction aloud with children. Ask children to point to different sources of light mentioned in the introduction. Read the objectives aloud with children. Tell the children that they will learn about light as energy, shadows, and reflections, and will also design a solution to a problem about light.

Unit 1 | LIGHT

LIGHT

Everywhere you look,  
light is there.  
 You use your eyes to see  
shadows on the ground.  
 A mirror reflects back at you,  
light is all around.

**Objectives**

**Read these objectives.** They will tell what you will be able to do when you have finished this workbook.

1. I can identify light as energy.
2. I can tell what causes shadows.
3. I can tell what reflects light.
4. I can design a solution to a problem.

**My name is** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

I will learn about light.

Introduction | 1

**Activities:**

1. Vocabulary words are often listed in the lesson plan for the student pages. Write each word on a word card and use them for instructional activities with the children.

*Example:* Ask a child to find the word card that says *light* and hold the card up for the children to see. Ask if anyone can tell a way to change the word to mean “more than one.” When the addition of *s* has been suggested, ask another child to find the word card that says *lights*.

2. Use the writing tablet to write the vocabulary words.
3. Make a science word chart or dictionary. Record the vocabulary words under the proper letter. This procedure will gradually develop alphabetizing skills.

## PAGE 20: ANIMALS HAVE EARS

### MATERIALS NEEDED

- pictures of various animals (other than those in workbook)
- writing tablet
- Worksheet 10

#### Concept:

Animal ears are different to fit special needs.

#### Objective:

I can tell how ears catch sound.

#### Processes:

Observing, by using the sense of sight; comparing

#### Reading Integration:

Speaking in a group, following written directions

#### Vocabulary:

owner

#### Teaching Page 20:

Display the pictures. Ask the children to compare the ears of the animals. Encourage them to use words that describe the physical attributes of the various ears. (*tall, wide, pointed, floppy, etc.*)

Write the words used on a chart or chalkboard with the animal names.

Example: 

<u>Animal</u>	<u>Ears</u>
mouse	round

Read the sentences to the class or have a volunteer read them. Proceed with the animals pictured on the page as you did with the pictures in the display.

Ask: "Which animals do you think might have the best hearing?"

"Why do some animals need to hear better than others?"

Teach the vocabulary word *owner*. Have a child use the word in a sentence on the board. Have the children write the sentence in their writing tablets.

Read the directions to the class. Have the page completed independently.

YOU LEARN WITH YOUR EARS | Unit 2

Animals have different types of ears.

Tell how these animal ears are special.

Match the ears to their owners.

20 | Section 2

**Activities:**


1. Be sure that all children have had a chance to experiment with sound in the discovery center.
2. Review the workbook pages to prepare for the self test.
3. Make an "ear collage" with pictures cut from magazines.
4. Do Worksheet 10.

After the sheets have been distributed, discuss the problems the animals might have with the wrong ears.


Have children color the pictures and give the silly looking animals new names. Provide help for spelling the names.

Student Worksheet | Science 102


**How can these animals hear?**  
Color them.  
Name them.




deerephant



elecat




froggit



rog

Science 102  
Worksheet 10  
with page 20


✓

Teacher Check \_\_\_\_\_  
Initial      Date

150

## PAGE 8: I USE MY TONGUE TO TASTE

### MATERIALS NEEDED

- word cards
- mirrors (small pocket mirrors will do, as many as you can find)
- writing tablet
- magnifying glass (if available)
- Worksheet 3

### Concepts:

Taste buds on the tongue help the sense of taste. They can taste sweet, salty, sour, and bitter.

### Objective:

I can tell about the sense of taste.

### Process:

Observing, using the sense of taste

### Reading Integration:

Sentence structure (statement), vocabulary development

### Vocabulary:

buds, sweet, sour, bitter, salty, (tongue)

*Note: Vocabulary words in parentheses were previously introduced and are being reviewed.*

### Teaching Page 8:

Put a diagram of a tongue on the board.

It might look something like the one on Worksheet 3, with these labels:

- a) bitter   b) sweet   c) sour   d) salty

Introduce the vocabulary words in conjunction with the diagram.

Tell the children that the taste buds on the tongue have special jobs to do. The taste buds on the tip of the tongue taste sweet things. Those buds along the sides of the tongue taste salty and sour things. In the middle of the back are taste buds that taste things that are bitter.

The next three pages will help the children remember that the tongue tastes only these things. All other refinements of taste are a function of the sense of smell.

Have a child read the title and introductory sentence. Give each child a mirror or have children share the mirrors that are available. Ask them to try to see the taste buds on their own tongues. If you have magnifying glasses, let them get a better look. Discuss what the children see.

MORE ABOUT YOUR SENSES | Unit 3

### I Use My Tongue to Taste

I have taste buds on my tongue.  
My tongue tastes sweet things.  
My tongue tastes sour things.  
My tongue tastes salty things.  
My tongue tastes bitter things.



Write this sentence in your writing tablet.

I use my tongue to taste.



Talk about things that taste sweet, sour, salty, and bitter.

8 | Section 1

Finish reading the sentences on the page.  
Let the children complete the writing tablet activity. Drill vocabulary words in context.

Discuss the sentence in the box.

List the things that the children name for each category on the board or on a "Taste Chart." Note that not all things taste the same way to all people.

**Activity:**

Do Worksheet 3.

Read the directions.

Let the children do the page independently using the diagram on the board for reference.

Science 103 | Student Worksheet

Write the taste words.

sweet    sour    salty    bitter

Science 103  
Worksheet 3  
with page 8

Teacher Check  Initial \_\_\_\_\_ Date \_\_\_\_\_

203

## PAGE 6: EAGLES

### MATERIALS NEEDED

- word cards
- pictures of birds of prey (eagles, hawks, falcons, owls)
- pictures of fishing birds (gulls, loons, pelicans, kingfishers)
- pictures of insect eaters (woodpeckers)
- pencils
- crayons
- Worksheet 4

#### Concept:

Some birds are meat eaters.

#### Objectives:

I can tell about some wild animals.

I can tell what animals need to live and to grow.

#### Processes:

Classifying, observing

#### Reading Integration:

Recalling details

#### Vocabulary:

eagle, eaglet, nest, dives, flies, catch

#### Teaching Page 6:

Display the pictures of birds of prey. Ask the children what kinds of animals or fish the various birds would eat.

#### Examples:

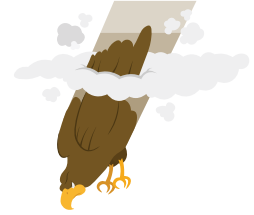
Owls and falcons eat small rodents, such as mice or chipmunks; eagles and larger hawks eat small rodents and some larger animals (rabbits), snakes, or other birds (chickens).

Many farmers like to have owls around. They keep the mice from the feed.

Gulls and loons dive into the water after fish.

#### ANIMALS | Unit 4

An eagle eats meat.  
The eagle flies high in the air.  
He hunts for fish or small animals.  
The eagle dives down,  
down,  
down,  
to catch his food.



Eagles live in nests.  
The nest is in a high place.  
Baby eagles are eaglets.



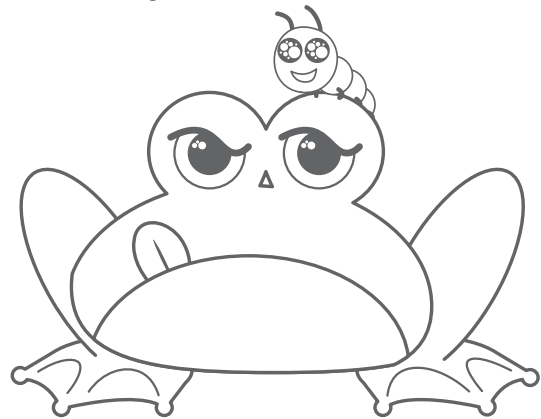
Eagles drink  
from lakes or streams.



6 | Section 1

#### Student Worksheet | Science 104

This is a bullfrog.  
Bullfrogs eat insects.  
Insects are meat.  
**Color the bullfrog.**



Science 104  
Worksheet 4  
with page 6



Teacher Check

Initial \_\_\_\_\_ Date \_\_\_\_\_

266



Read the page to the children or have volunteers read it aloud. Provide an opportunity for discussion about the eagle and its babies. (Refer to an encyclopedia or a book about eagles for additional information.)

Note that the eagle's nest is built in a very high tree or on a high rocky ledge.

### Activities:

1. To extend knowledge of meat eaters, provide materials about amphibians and reptiles that eat meat (crocodile, alligator, bullfrog).

Do Worksheet 4.

2. Read the three sentences. Talk about bullfrogs with the children. Ask them if they have ever seen a bullfrog or if they have ever seen one catching flies.

Have a child read the direction.

## PAGE 7: ACTIVITY PAGE

### MATERIALS NEEDED

- pencils
- crayons
- writing tablet

### Teaching Page 7:

Review the meat-eating animals, pictures and vocabulary.

Have a child find and read the sentences on the page that tell them what to do.

Be sure all the children understand the directions.


Have the children complete the page independently. Check it together.





### Activity:


As an enrichment activity, suggest that those children who wish may draw an animal name from a box. They should find out what the animal eats, where it sleeps, and what its baby is called. They are also to find or draw a picture of the animal.

*Note:* Be sure to have available information on each animal that is in the box.

Unit 4 | ANIMALS


**Match the word to the picture.**

lion	▶		▶		
cub	▶		▶		
eagle	▶		▶		
eaglet	▶		▶		


**Write the sentence in your writing tablet.**

Lions and eagles eat meat.

Section 1 | 7

## PAGES 16 AND 17: SELF TEST 1

### MATERIALS NEEDED

- pencils
- scissors
- paste or glue
- Worksheet 7

#### Concept:

Evaluate the children's progress.

#### Objective:

I can tell about some plants that grow in nature.

#### Reading Integration:

Following directions, main idea, recalling details

#### Vocabulary:

Review all vocabulary.

#### Teaching Pages 16 and 17:

Review the vocabulary words. Practice matching the words to pictures.

Review the major concepts: Plants grow in nature; some plants are large; some plants are small; and some plants grow in special places.

The general proficiency of your group should dictate whether you choose to direct the self test or allow the children to proceed independently once directions are given.

In either case you should be available to answer questions and to help with the vocabulary as needed.

Check the self test immediately.

Review any concepts that were missed.

PLANTS | Unit 5

### SELF TEST 1

Each answer = 1 point

Write the correct words on the lines.

sunlight	grow	water	seeds
soil	plant	tree	everywhere

Plants grow everywhere.

All plants can grow.

A tree is a big plant.

Grass is a small plant.

Plants grow from seeds.

Plants need water, sunlight, and good soil.

16 | Section 1

Unit 5 | PLANTS

### Match the seed with the plant.

### Match the plant with the place where it grows.

11  
14

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My Score

Section 1 | 17

**Activity:**

Do Worksheet 7.

Have a child read the title.


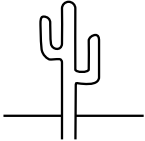


Have another child read the directions.  
Instruct them to cut out the four words at the bottom and to paste the words in the box under the right picture.

Check the worksheet together.

Student Worksheet | Science 105

**PLANTS IN NATURE**

Color the pictures.  
Cut out the words.  
Glue the words to the right pictures.




tree fern

cactus grass

fern tree grass cactus

Science 105  
Worksheet 7  
with page 17



Teacher Check \_\_\_\_\_  
Initial Date

354



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