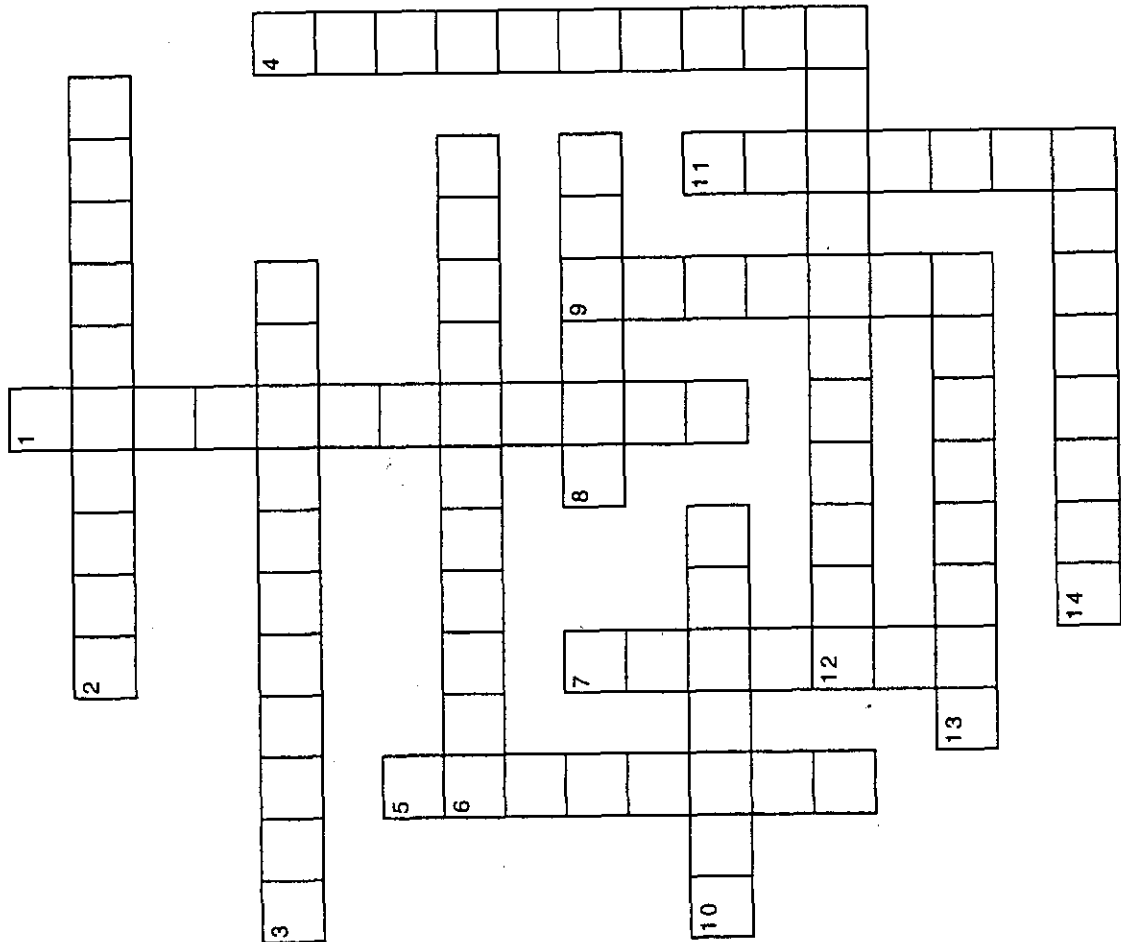


### Crossword Puzzle for "Branches of Science"

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_



### Clues for "Branches of Science"

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

#### Across:

- 2. \_\_\_\_\_ is the study of how body parts work.
- 3. \_\_\_\_\_ is the study of reptiles like snakes and lizards.
- 6. \_\_\_\_\_ is the study of fish.
- 8. \_\_\_\_\_ is the study of plants.
- 10. \_\_\_\_\_ is the study of animals.
- 12. \_\_\_\_\_ is the study of birds.
- 13. \_\_\_\_\_ is the study of cells.
- 14. \_\_\_\_\_ is the study of fungus.

#### Down:

- 1. \_\_\_\_\_ is the study of very small living things.
- 4. \_\_\_\_\_ is the study of insects.
- 5. \_\_\_\_\_ is the study of viruses.
- 7. \_\_\_\_\_ is the study of the environment.
- 9. \_\_\_\_\_ is the study of the parts of the body.
- 11. \_\_\_\_\_ is the study of living things.

#### Select your answers from these words:

Mycology  
Zoology  
Entomology  
Cytology  
Physiology

Ecology  
Microbiology  
Virology  
Herpetology  
Biology

Ichthyology  
Ornithology  
Botany  
Anatomy





# Laboratory Safety Rules

The science lab is a wonderful place to work and learn. The science lab should also be one of the safest places in the school. Oftentimes we concentrate on the lab activity itself or our friends in the class and we forget about safety. We should condition ourselves to be not only conscious of safety, but to make it the major concern while we are doing an experiment. To condition ourselves we need to practice our lab safety rules over and over again. We should study them, keep them with us when we are doing a lab, and constantly remind ourselves and others of our laboratory safety rules.

## 1. Prepare Properly

- A. Tie back long hair and confine loose clothing.
- B. Wear aprons and safety glasses when told to do so.
- C. Remove long necklaces and other items like scarves or ties before starting a lab project.
- D. Keep all unnecessary items off the lab table.
- E. Know where all the safety and first-aid items are located in the laboratory. These items include a fire extinguisher, fire blanket, first-aid kit, safety shower, eye wash bottle, and so on.
- F. Listen carefully and follow the teacher's directions.
- G. Begin only when told to do so.

## 2. Be Careful

- A. Never reach across an open flame.
- B. Never put anything in or near your mouth or eyes in the science lab.
- C. Never engage in horseplay in the lab.
- D. Never breathe in fumes directly.
- E. Never force glass because it will break.
- F. Never look directly into bright lights.
- G. Never leave chemical bottles open. Always replace the tops.
- H. Never pour water into acid.



### 3. Be Considerate of Others

- A. Remember the lab is a place to work and learn.
- B. Be careful not to bump other students and their equipment in the lab.
- C. Talk quietly in the lab and only to other members of your group.
- D. Attend to the teacher quickly.
- E. Work at a steady and constant pace.
- F. Stay on task.
- G. Treat classmates with respect.
- H. Participate in lab activities.

### 4. Report Unusual Occurrences to Your Teacher

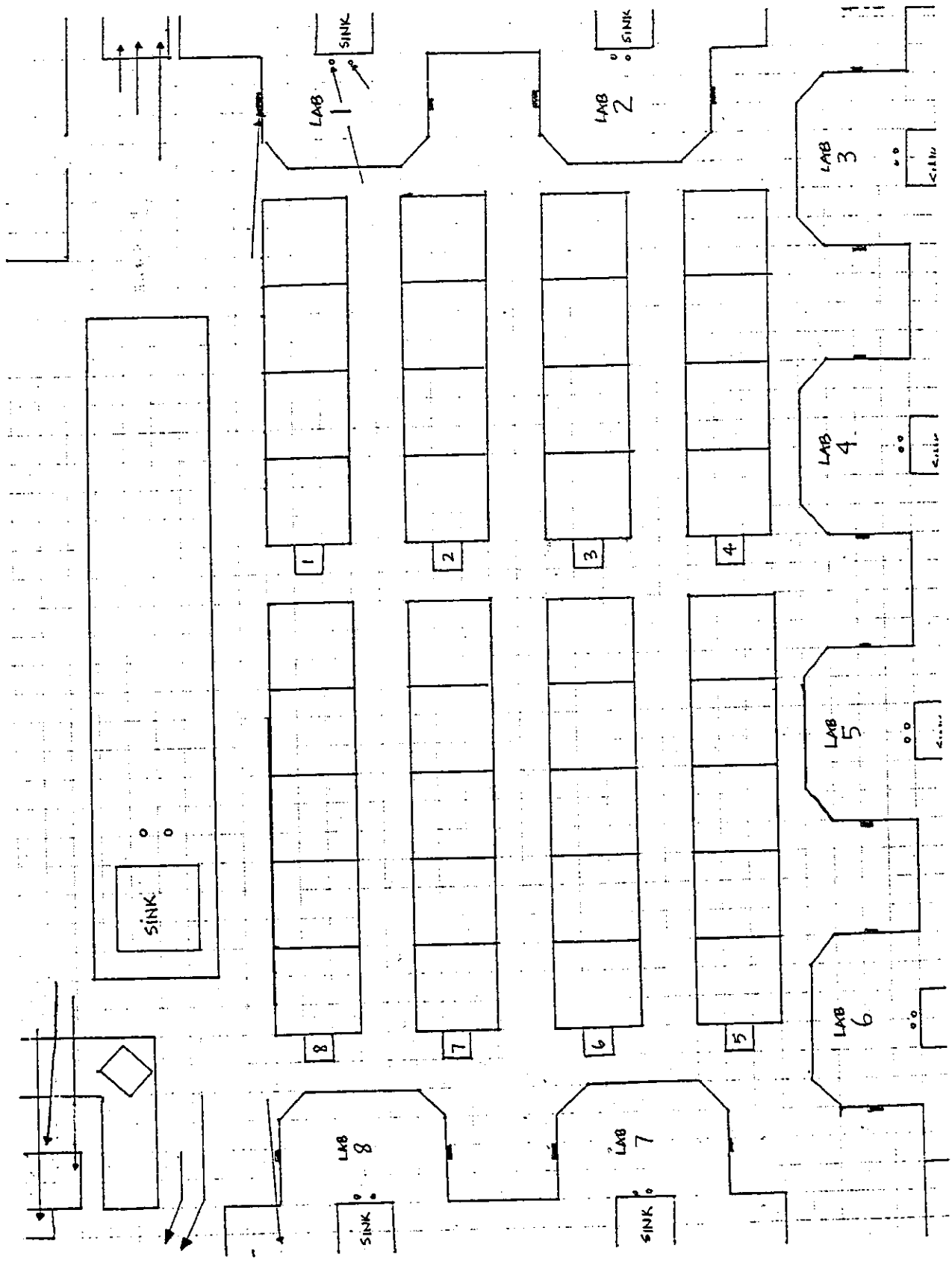
- A. Report any equipment that is broken or not working properly.
- B. Report any chemical spills immediately.
- C. Report accidents immediately.

### 5. Clean Up

- A. Dispose of all used chemicals and matches as your teacher instructs.
- B. Leave your area neat and clean.
- C. Return all equipment to the proper place.
- D. Wash your hands.

### 6. Specific Lab Safety Rule for Our Lab

- A. \_\_\_\_\_  
\_\_\_\_\_
- B. \_\_\_\_\_  
\_\_\_\_\_
- C. \_\_\_\_\_  
\_\_\_\_\_



# Lab Safety Rules

## Poster Production

The laboratory must be a safe place to work, therefore it is your responsibility to know all of the safety rules. Help yourself and your classmates become aware of these rules by making a poster of your safety rule(s). The poster should include: (1)the safety rule (2)creativeness and (3)color. You may wish to include other material to make your poster different. Your uniqueness will help your classmates remember your safety rule!



Your safety rule(s):

Presentation date:

### Grading rubric

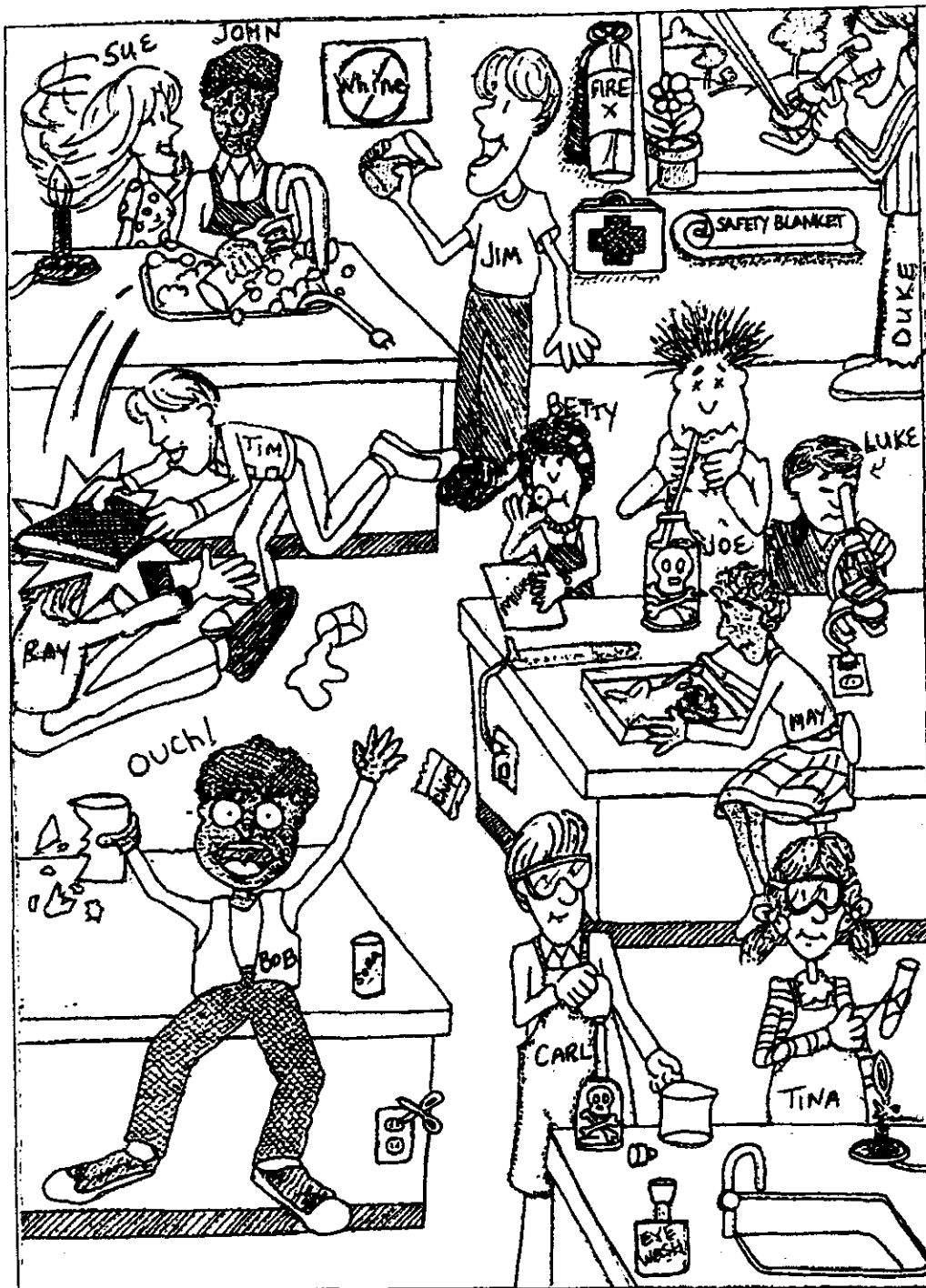
Includes safety rule 3pts

Colorful 2 pts

Neatness 3 pts

Uniqueness 2pts

Remember: Always do your best work!!



1. List 3 unsafe activities shown in the illustration and explain why each is unsafe.
2. List 3 correct lab procedures depicted in the illustration.
3. What should Bob do after the accident?
4. What should Sue have done to avoid an accident?
5. Compare Luke and Duke's lab techniques. Who is following the rules?
6. What are three things shown in the lab that should not be there?
7. Compare Joe and Carl's lab techniques. Who is doing it the correct way?
8. What will happen to Ray and Tim when the teacher catches them?
9. List three items in the illustration that are there for the safety of the students in the lab.
10. What is Betty doing wrong?

# WHAT'S WRONG WITH THIS STORY????

The students in this story break many lab safety rules. Find at least ten mistakes that were made. On a separate piece of paper, number from one to ten, summarize what they did wrong and explain what they should have done.

## A DAY IN THE LAB

Mr. "C's" class was open, but Mr. "C" was not there. Most students were waiting outside; however, Ross, Blake, Susie, and Mary went in because they were bored and saw all of the equipment. Marvin found the meal worms and decided he wanted to take a look at one under a microscope. He climbs up to get a microscope from the cabinet and jumps off the counter with the microscope in one hand. He takes the microscope outside 'cuz he figures he can get a better look at the meal worm if he was able to get some direct sunlight on the microscope. When he saw Mr. C walking down the hall, he ran inside and put the microscope on one of the lab stations, letting the cord dangle off the edge.

Blake also found the meal worms pretty interesting so he put one on a ruler and flung it at Susie. She went running through the classroom, knocking over some glass beakers. Blake tried to pick it up and cut himself, just as Mr. "C" entered the room. Mary didn't want Blake to get in trouble so she tried to stop the bleeding and hide the wound by placing her hand over it, giving Mr. "C" a nice big grin.

Mr. "C" let the class in. The class began and students were working with various measuring tools in groups. Ross and Mary both wanted to use the triple beam balance so they both grabbed it and fought for it. It finally flew out of both their hands and landed on Joe's foot. No one knew what to do so they just told him to wait until he got home to tell his mom.

By this time everyone was getting bored. They left everything out and decided to find something else to do. Susie was chewing on a pen and the ink leaked into her mouth. She saw what looked like water in the graduated cylinder and drank it. Blake and Mary were curious to see the inside of a mealworm so they obtained a scalpel (knife for dissection). Mary held the mealworm in her hand while Susie dissected it. Blake took the iguana out of the cage, threw it to Ross and yelled "catch!". Ross dropped the Iguana. After playing with the iguana, Ross decided to wash his hands. While washing his hands, he splashed water on the lights in the cage. He wiped off most of the water, then he reached over and unplugged the lights.

The bell rang and the class ran out.

# LAB SAFETY

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

BROOM  
~~DO NOT EAT~~  
~~FIRST AID KIT~~  
PERMISSION  
SAFETY

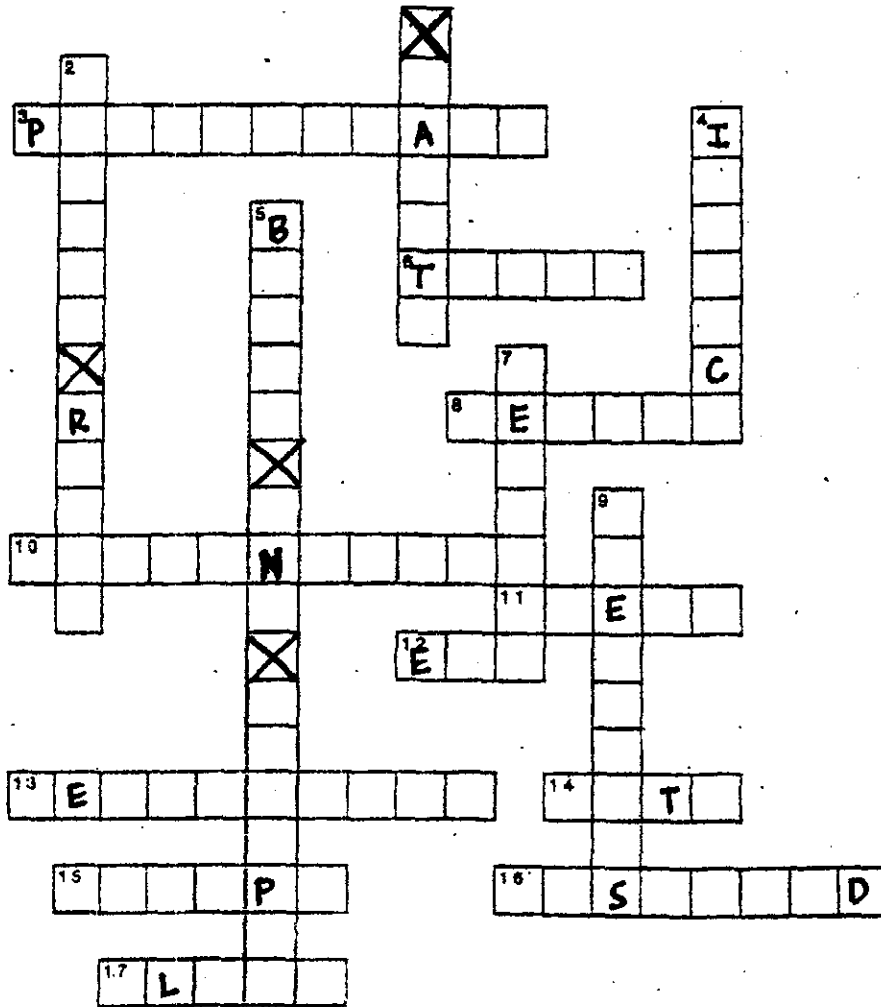
CHEMICAL  
EYEWASH  
~~NO RUNNING~~  
REPORT  
~~SAFETY SHOWER~~

CLEAN  
~~FIRE BLANKET~~  
PARTICIPATE  
RESPONSIBLE  
~~WASH HANDS~~

15 of 16 words were placed into the puzzle.

Solution

Created by [Puzzlemaker](http://Puzzlemaker) at [DiscoverySchool.com](http://DiscoverySchool.com)



**Across:**

3. To be successful in Science , you must be an attentive listener, ask questions when you don't understand and \_\_\_\_\_ in class!
6. Do not \_\_\_\_\_ any substance or put any materials into your mouth.
8. \_\_\_\_\_ any accident, incident or hazard - no matter how trivial to your teacher- immediately!
10. You must be \_\_\_\_\_ for your own actions and learning.
11. \_\_\_\_\_ your work area at the conclusion of the experiment as your teacher directs.
12. Never \_\_\_\_\_ or drink in the laboratory.
13. Always obtain \_\_\_\_\_ to begin a lab.
14. No \_\_\_\_\_ work will be accepted.
15. You will be \_\_\_\_\_ to class, which means you will be in your assigned seat, doing your warm-up when the bell rings.
16. Never perform any experiment not specifically \_\_\_\_\_ by your teacher.
17. Never work \_\_\_\_\_ in the laboratory.

**Down:**

1. In science, you must be responsible for your own \_\_\_\_\_ as well as the safety of others.
2. The lab is a safe place to work if you are aware of the important \_\_\_\_\_.
4. \_\_\_\_\_ glassware before use, never use chipped or cracked glassware;
5. Always clean-up broken glass by using tongs & or a \_\_\_\_\_; throw the glass into a designated container.
7. Maintain mutual \_\_\_\_\_ for all people in our classroom.
9. Never mix \_\_\_\_\_ unless specifically told to do so by your teacher.

**Select your answers from these words:**

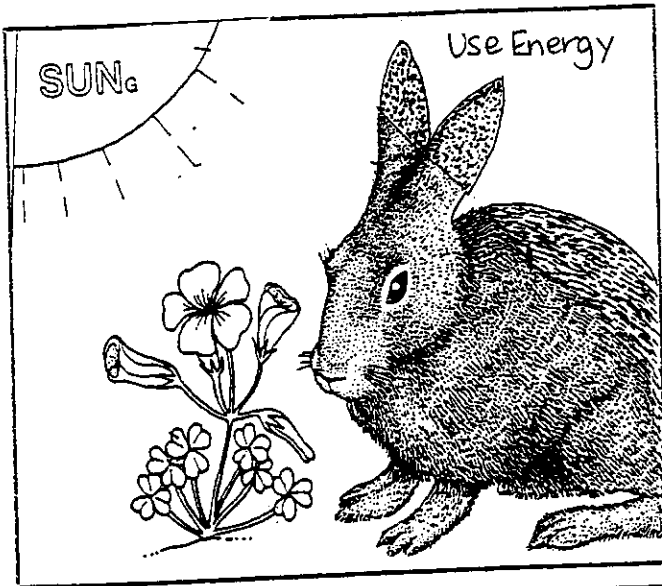
chemicals  
late  
inspect  
responsible  
permission  
assigned

Report  
taste  
prompt  
respect  
alone  
brush and dustpan

eat  
Clean  
safety  
participate  
safety rules

# CHARACTERISTICS OF LIVING THINGS.

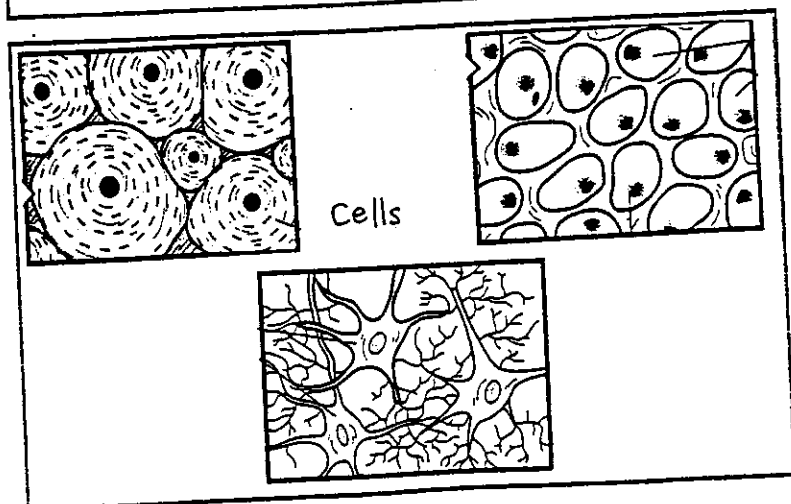
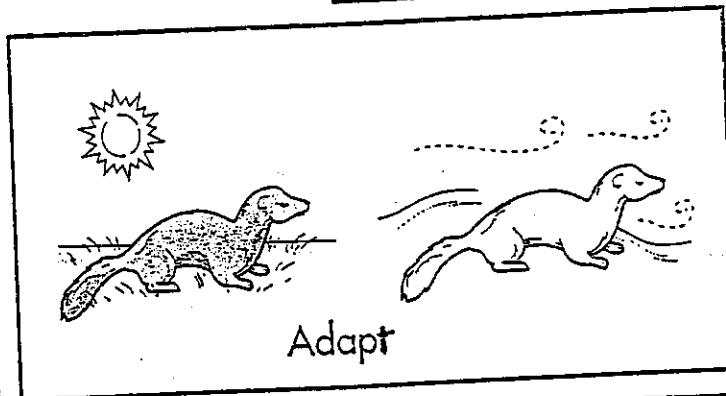
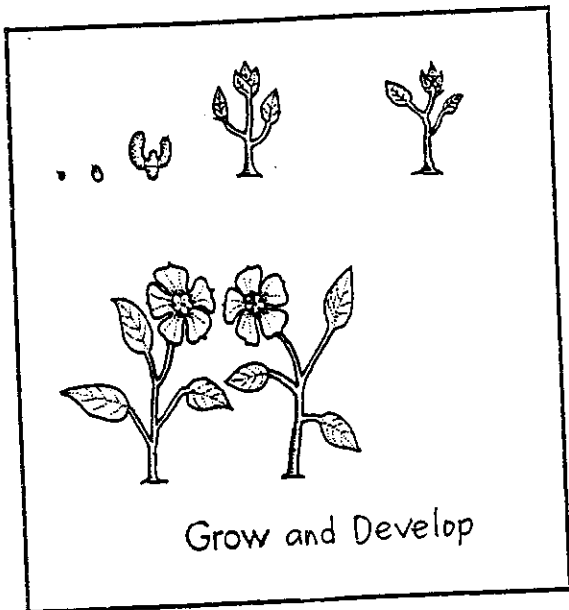
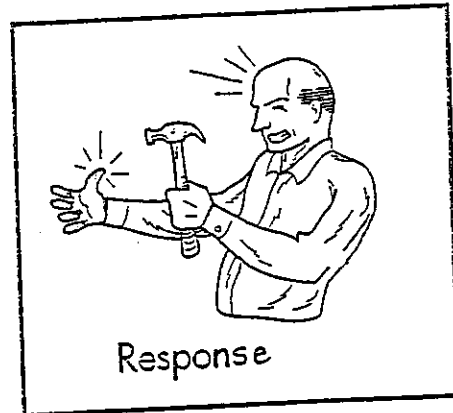
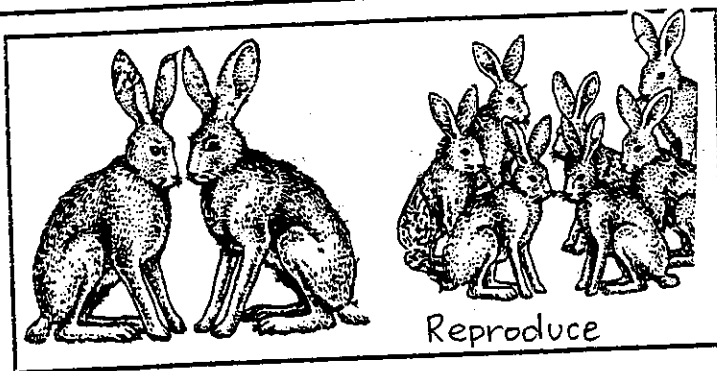
LIST THE 6 CHARACTERISTICS AND GIVE AN EXAMPLE OF EACH. COLOR EACH PICTURE.



1.

2.

3.



4.

5.

6.

**ACTIVITY: WORLD OF LIVING THINGS**

NAME \_\_\_\_\_

Group: \_\_\_\_\_

#	Specimen	Has cells	Uses energy	Adapts	Responds	Grows and Develops	Reproduces

## 2-1 What are living things?

### Lesson Review

**Part A** Complete the following. Write the correct term in the space provided.

1. Any living thing is called an \_\_\_\_\_.
2. The basic unit of structure and function in living things is the \_\_\_\_\_.
3. If you react to a change in your surroundings, you are \_\_\_\_\_.
4. The source of energy for most living things is the \_\_\_\_\_.
5. When something gets bigger, it \_\_\_\_\_.

**Part B** Place a check mark beside each statement that describes a characteristic that is true of all living things.

- |                                       |                                      |
|---------------------------------------|--------------------------------------|
| _____ 1. has cells                    | _____ 5. use sunlight to make food   |
| _____ 2. can move                     | _____ 6. use energy                  |
| _____ 3. grow and develop             | _____ 7. respond to changes          |
| _____ 4. produce more of its own kind | _____ 8. are adapted to surroundings |

### Skill Challenge

**Skills:** applying concepts, classifying

Use the illustration to answer the questions.



1. What is the source of energy for the puppies in the illustration? \_\_\_\_\_  
\_\_\_\_\_
2. In what ways will the puppies change to become more like their mother? \_\_\_\_\_  
\_\_\_\_\_
3. Which characteristics of living things are shown in the illustration? \_\_\_\_\_  
\_\_\_\_\_

## 2-2 What are adaptations?

### Lesson Review

Complete the following.

1. What is the environment? \_\_\_\_\_  
\_\_\_\_\_
2. Name three living things that are part of your environment. \_\_\_\_\_  
\_\_\_\_\_
3. Name five nonliving things that are part of your environment. \_\_\_\_\_  
\_\_\_\_\_
4. What is an adaptation? \_\_\_\_\_  
\_\_\_\_\_
5. Why is your thumb an adaptation? \_\_\_\_\_  
\_\_\_\_\_
6. In what ways do people adapt the environment to meet their needs? \_\_\_\_\_  
\_\_\_\_\_
7. How are thick fur and body fat adaptations of a polar bear? \_\_\_\_\_  
\_\_\_\_\_
8. How are gills an adaptation of fishes? \_\_\_\_\_  
\_\_\_\_\_

### Skills Challenge

**Skills:** applying definitions, classifying

The term "biotic" is used to describe anything that is living. The term "abiotic" is used to describe nonliving things.

The items listed in the table are parts of the environment. Decide whether each thing listed is *biotic* or *abiotic*. Complete the table by placing a check mark in the correct column.

**Table 1 Parts of the Environment**

Object	Biotic	Abiotic	Object	Biotic	Abiotic
1. Grass			6. Trees		
2. Rocks			7. Birds		
3. Clouds			8. Fishes		
4. Insects			9. Water		
5. Air			10. Snow		

H

## 2-3 What are responses?

### Lesson Review

**Part A** Write the term that best completes each statement in the space provided.

1. The ways in which living things respond to stimuli is called \_\_\_\_\_.
2. A change that causes a response is a \_\_\_\_\_.
3. The inactive state of some animals during winter months is \_\_\_\_\_.
4. The movement of animals from one living place to another is \_\_\_\_\_.
5. A behavior that an organism is born with is an \_\_\_\_\_.

**Part B** Identify each of the behaviors listed as either a learned behavior "L" or an instinct "I." Write the correct letter in the space provided.

- |                                 |                                    |  |
|---------------------------------|------------------------------------|--|
| _____ 1. a bird building a nest | _____ 5. cooking your dinner       | _____ 8. a plant turns to face the sun |
| _____ 2. buttoning your shirt   | _____ 6. a robin feeding her young | _____ 9. playing the piano             |
| _____ 3. ironing a shirt        | _____ 7. a newborn crying          | _____ 10. dancing                      |
| _____ 4. blinking your eyes     |                                    |  |

### Skill Challenge

**Skills:** relating cause and effect, applying concepts

**Part A** Responses to stimuli are an example of cause and effect relationships. The stimulus is the cause. The response is the effect.

Read each statement. Underline the causes. Circle the effects.

1. You jump when you hear a loud noise.
2. A bird flies to a warmer climate in the winter to find food.
3. A chipmunk begins to hibernate when the weather becomes cooler.
4. You call the fire department after smelling smoke.
5. Carlos slips on a wet floor.

**Part B** Describe the stimulus and response shown in the diagram. Write your answer on the back of this worksheet.

