



Comprehensive Curriculum Revised 2008

Grade 7 Science



Louisiana Department of EDUCATION Paul G. Pastorek, State Superintendent of Education

Unit 1, Activity 1, Safety Contract

Safety Contract

PREPARE FOR LABORATORY WORK

- Study laboratory procedures prior to class.
- Never perform unauthorized experiments. •
- Keep your lab bench organized and free of apparel, books, and other clutter.

Know how to use the safety shower, eve wash, fire blanket, and first aid kit,

DRESS FOR LABORATORY WORK

- Tie back long hair.
- Do not wear loose sleeves, as they tend to get in the way.
- Wear closed toed shoes with tops.
- Wear lab coats or aprons during all laboratory sessions.
- Wear safety goggles during all laboratory sessions.
- Wear gloves when using chemicals that irritate or can be absorbed through skin.

AVOID CONTACT WITH CHEMICALS

- Never taste or "sniff" chemicals. Never draw materials in a pipette with your mouth.
- When heating substances in a test tube, point the "mouth" away from people.
- Never carry dangerous chemicals or hot equipment near other people.

AVOID HAZARDS

- Keep combustibles away from open flames.
- Use caution when handling hot glassware.
- When diluting acid, always add acid slowly to water. Never add water to acid.
- Use glycerin and twist slowly at the base when inserting glass tubing through stoppers.
- Turn off burners when not in use.
- Do not bend or cut glass unless appropriately instructed by teacher.
- Keep caps on reagent bottles. Never switch caps.

CLEAN UP

- Consult teacher for proper disposal of chemicals.
- Wash hands thoroughly following experiments.
- Leave laboratory bench clean and neat.

IN CASE OF ACCIDENT

- Report all accidents and spills immediately.
- Place broken glass in designated containers.
- Wash all acids and bases from your skin immediately with plenty of running water.
- If chemicals get in your eyes, wash them for at least 15 minutes with an eye wash.

I,, agr	ee to (a) Follow the teacher's instructions, (b) protect my
eyes, face, hands, and body during laboratory,	(c) conduct myself in a responsible manner at all times in
the laboratory, and (d) abide by all of the safety	regulations specified above.
Print Name	Signature
Date	-

Parent's/Guardian's Signature _____ Date ____

Unit 1, Activity 3, What am I?

Name_	_
Date	_

Identify the characteristics of each element by completing all boxes that apply.

What am I?

	Metal	Non- metal	Family	Chemical Bond	Natural	Synthetic	State at room temperature
Oxygen							
Carbon							
Hydrogen							
Nitrogen							
Calcium							
Phosphorus							

Speci	al characteristics or properties:
Oxygen	
Carbon	
Hydrogen	
Nitrogen	
Calcium	
Phosphorus	

Unit 2, Activity 4, Who's in the Pond?

Name: _____

Date:

Class:

KWL				
What I KNOW:	What I WANT to know:	What I LEARNED:		

Who's in the Pond?

What's in My Cell?

Name: _____ Date: _____

Complete the word grid for your chosen cell by describing the function of the cell structures listed. List the material used to represent each structure and explain why the material was chosen.

Structure	Animal	Plant	Function	Material Used to	Why Selected
				Model	
Cell Wall					
Cell Membrane					
Nucleus					
Nuclear Membrane					
Cytoplasm					
Endoplasmic Reticulum (E.R.)					
Ribosome					
Mitochondrion					
Vacuole					
Lysosome					
Chloroplast					

Unit 3, Activity 1, Metamorphosis Observations

Metamorphosis Observations Story Chain

Add the next sentence to complete the story.

The Beginning Eggs are laid	To begin the life cycle of a frog, eggs are laid in water and are fertilized by the male.
And now the tadpole arrives! Tadpole forms	
Here comes the hind legs Hind legs develop	
Legs, legs, and more legs! Now the front legs develop	
Finally a frog! The legs are fully developed	

Kingdom	A group of similar phyla or divisions Example - Animalia
Phylum	A group of similar classes Example - Chordata
Class	A group of similar orders Example - Mammalia
Order	A group of similar families Example - Primates
Family	A group of similar genera Example - Hominidae
Genus	A group of similar species Example - <i>Homo</i>
Species	A group of organisms that look alike and are capable of producing fertile offspring in the natural environment Example - <i>sapiens</i>
Scientific Name	The name used by the scientific community Example - <i>Homo sapiens</i>
Common Name	A general name for a species Example - Human being

Biological Classification Split Page Note-Taking Sheet

Unit 4, Activity 1, Biome Field Trip

Name	
Date	
Class	

Biome Field Trip Split-Page Notetaking Sheet

Use the notetaking sheet to record information about each biome visited.

Biome	
Physical description	
Characteristics	
Plant and animal species	
Products/resources	
Unique characteristics	

Biome	
Physical description	
Characteristics	
Plant and animal species	
Products/resources	
Unique characteristics	

Biome	
Physical description	
Characteristics	
Plant and animal species	
Products/resources	
Unique characteristics	

Biome	
Physical description	
Characteristics	
Plant and animal species	
Products/resources	
Unique characteristics	

What's the Connection?

Use the following terms to cerate a Graphic Organizer that shows the relationship of the following terms: *biosphere, communities, ecosystem, organism,* and *populations*



Unit 4, Activity 5, Symbiotic Relationships

Symbiotic Relationships

Name_____

Date _____

List two organisms and the symbiotic relationship they share.

Organism	Organism	Relationship

Symbiotic Relationships

Name_____

Date _____

List two organisms and the symbiotic relationship they share.

Organism	Organism	Relationship

Adaptation Vocabulary Self-Awareness Chart

Rate your level of understanding of each word with either a plus (understand well), a check (limited understanding or unsure), or a minus (don't know). With each word listed, an example and definition must be included. Add more terms to the table as they relate to adaptations. Continue to complete the table during the lesson in order to use it as a review and study sheet.

Word	+	 -	Example	Definition
Adaptation				
Behavioral				
Structure				

Seed Dispersal

Using the following graphic organizer, describe each type of seed dispersal and provide examples of each. The first example has been provided for you.



The ecosystem vocabulary card below, using the term *Non-Native Species*, has been partially completed. You should add the missing component. Complete the remaining vocabulary cards for the following terms: *Native Species, Invasive Species*, and *Pest*.









Unit 5, Activity 6, Temporary Wetlands KWL

Temporary Wetlands KWL

Complete the KWL chart. Upon completion, this chart can be used as a study guide. Mike's New Home

What I Know	What I Want to Know	What I Learned
Wetlands are temporary areas of water. Examples of wetlands include swamps and marshes.	What causes wetlands to form in certain areas? Where is the largest wetland located?	A bog is a type of wetland. Wetlands can very in size from a shallow pond to larger bodies of water such as the Florida everglades.

Mike's New Home

Mike the Tiger, LSU's mascot, was in need of a new enclosure. LSU had to advertise, interview, and hire persons that met the following job descriptions and qualifications to create one of the largest and finest tiger habitats in the United States. Given the job descriptions and information, identify both the abiotic and biotic factors that are necessary to create a suitable habitat. Upon completion, identify how a change in one abiotic factor would have an impact on Mike's habitat.

- 1. **Wanted:** A team of 50 people to section off and frame a 15,000 square foot enclosure.
- 2. Wanted: Persons to build a swimming pond and create a waterfall.
- 3. **Wanted:** Persons to landscape the enclosure with lush planting of plants and trees, especially an oak. The plants and trees will serve to simulate parts of the tiger's natural habitat.
- 4. **Wanted:** A construction company to build glass paneled arches that will allow visitors underwater views of Mike swimming.
- 5. **Wanted:** A construction company to create a sixty-foot-tall Italianate Tower or Campanile behind the arches of the viewing wall. A Campanile is a free standing bell tower usually separated from the main building.
- 6. Wanted: A company to install fencing to surround the enclosure.
- 7. **Wanted:** A company to provide and install large climbable rocks that will also create a barrier around the pond.

Abiotic Factors

Biotic Factors

Unit 6, Activity 1, Reproduction Vocabulary Self-Awareness Chart

Reproduction Vocabulary Self-Awareness Chart

Rate your level of understanding of each word with either a plus (understand well), a check (limited understanding or unsure), or a minus (don't know). With each word listed, an example and definition must be included. Add more terms to the table as they relate to reproduction. Continue to complete the table during the lesson in order to use it as a review and study sheet.

Word	+	 -	Example	Definition
Asexual Reproduction				
Sexual Reproduction				
Budding				
Regeneration				

Unit 6, Activity 1, Laboratory Investigation Scoring Rubric

Name_____

Date _____

	Excellent 3	Proficient 2	Marginal 1	Novice 0
	Points	Points	Point	Points
Problem and	Problem and	Problem and	Problem and/or	Problem and/or
Hypothesis	hypothesis	hypothesis	hypothesis are	hypothesis are
	clearly and	stated	stated poorly.	limited or
	completely	adequately.	Poorly	missing.
	stated. Clearly	Adequately	identified	Independent
	identified	identified	independent	and dependent
	independent	independent	and dependent	variable not
	and dependent	and dependent	variable.	identified.
	variables.	variables.		
Experimental	Problem and	Problem and	Problem and	Problem does
Design	experimental	experimental	experimental	not match
	design match.	design	design match to	experimental
	Variables are	generally	some extent.	design.
	constant. Clear,	match. Attempt	Very little	Variables not
	complete, and	to hold	attempt to hold	held constant.
	replicable	variables are	variables	Procedures are
	procedures.	made.	constant.	missing or
	Control is	Procedures are	Incomplete	incomplete.
	identified and	complete but	procedures.	
	appropriate.	needing minor		
		modifications.		
Data	Well-organized	Appropriately	Poorly	Very poorly
Presentation	data. Data	presented well-	organized data,	organized data,
	presented in an	organized data.	presented in an	presented in an
	appropriate	Minor errors or	inappropriate	inappropriate
	manner.	omissions may	manner. Major	manner.
		be present.	errors or	
			omissions.	
Conclusion	Conclusion	Conclusion	Conclusion	Conclusion
	fully supports	generally	supports data	does not
	data and	supports data	and addresses	support data.
	includes	and addresses	hypothesis, but	No attempt to
	hypothesis.	hypothesis.	is limited.	address
		Minor errors in	Major errors in	hypothesis is
		interpretation of	interpretation of	made.
		results.	results.	

Laboratory Investigation Scoring Rubric

Unit 6, Activity 3, Discussion Guide For Reciprocal Teaching

	Meiosis and Me Discussion Guide for Reciprocal Teaching
Reading	Date:
Prediction:	
Question:	
Clarifications:	
Same Statement	
summary statement:	
Was the prediction confirm	ed? Explain.

Unit 6, Activity 5, Trendy Traits Vocabulary Self-Awareness Chart

Trendy Traits Vocabulary Self-Awareness

Rate your level of understanding of each word with either a plus (understand well), a check (limited understanding or unsure), or a minus (don't know). With each word listed, an example and definition must be included. Continue to complete the table during the lesson in order to use it as a review and study sheet.

Word	+	 -	Example	Definition
Phenotype				
Genotype				
Allele				
Hybrid				
Monohybrid				
Dihybrid				
Dominant				
Recessive				

Punnett Square

Name _____

Date _____

Diet Related Illness GIST

As you read the article or text, list key terms in the space provided that may be used to summarize the diet-related illnesses. Use these terms to write a summary about the reading material. The first summary has been written for you as an example.

Heart Disease

Heart Disease	Cholesterol
Muscle	Meat Products
Oxygen	Saturated Fats
Arteries	Smoking
Arthrosclerosis	Heart

Summary:

The heart is a **muscle** that requires **oxygen** to pump blood throughout the body. The heart only rests between beats while pumping 2.100 gallons of blood per day. **Heart attacks** are caused by several factors such as **smoking** and an unhealthy diet that contains an excessive amount of **saturated fats**. **Saturated fats** are the fats that remain hard at room temperature and are found in foods such as butter, margarine, lard, and coconut oil. **Meat products** can also contribute to **heart disease** and **arthrosclerosis**. **Arthrosclerosis** is the build-up of fatty-tissue in the **arteries** that can cause blockage, which can lead to a heart attack. **Cholesterol** can be a risk factor contributing to **heart disease**. It is a fat-like substance found in meats, egg yolks, and rich ice cream. **Heart disease** has also been linked to genetics.

Unit 7, Activity 2, Diet Related Illness

Diabetes

Summary:

Osteoporosis

Summary:

Unit 7, Activity 3, Healthy Menu Opinionnaire

Healthy Menu Opinionnaire

Name _____

More attention and concern has been placed on the diets of children and teenagers. Dietrelated illnesses have been linked to food choices. In an effort to promote a healthy diet, some schools are joining in the fight. Respond to the following statements by stating your position and discuss at least three reasons to support your opinion.

All candy dispensing school vending machines should be replaced with dried fruit snacks and granola bars.

My opinion is...

Reason 1

Reason 2

Reason 3

Unit 7, Activity 3, Healthy Menu Opinionnaire

All drinks machines should only contain water, fruit juice, and low fat milk.

My opinion is...

Reason 1

Reason 2

Reason 3

Unit 7, Activity 5, Drug Fact Card

Drug Fact Card Split-Page Notetaking Sheet

Use the card to record researched information about a selected drug.

Scientific	
Name	
Other	
Names	
Appearance/	
How is it	
used?	
Efforts.	
long- and	
short-term	
II. alth	
Health Bielze	
INISKS	

Name_____

Date _____

Feeding Relationships

Label each circle as a type of consumer: carnivore, herbivore, or omnivore. Define and provide examples of each.



Unit 8, Activity 3, Cycles and More

Cycles and More Split-page Note Taking Sheet

	-plants use nitrogen compounds to build cells
Nitrogen Cycle	
	-used by plants and algae to make sugars, which are energy-rich, carbon-
	containing compounds
Carbon	
Cycle	

Unit 8, Activity 4, Importance of H_2O

Name_____

Date _____

Importance of H₂O

Identify ways in which living things use water. Add additional lines as needed.



Unit 8, Activity 4, Water Source Cards

Cut the following cards and arrange them showing the largest to smallest source of water.

Rivers	Soil
Lakes	Groundwater
Oceans	Icecaps and Glaciers

Unit 8, Activity 4, What is an Aquifer

Name _____

Date _____

What is an Aquifer?

Prediction:

What do you think the main idea of this text will be?

Summarize:

What have you learned so far from the text?

Can you support your summary with evidence from the text?

What do you expect to read next?

Discussion:

Using the information obtained from the text, write 3-5 summary sentences.