

Swamp Feast

Background Information for Teachers

Welcome to a magical world where your students can meet some of the animals of the swamp that live in a secret castle. In this book we've taken two subjects that young kids love - the enchantment of a medieval castle and the wonder of the natural world - and combined them in a compelling story of festivity and danger. Two areas that seem so different are brought together through the workings of imagination. The castle is revealed to be a baldcypress tree in a Louisiana swamp, and the characters in the "castle" are animals typically found in this unique habitat.

Your students will have the opportunity to learn about life in the Middle Ages and at the same time study the life that exists in the mysterious swamp. They will meet knights and princesses, lowly peasant farmers, and ferocious dragons that are discovered to be some of the amazing animals that reside in a wetland community.

Your students will encounter the following characters and learn how they live, what they eat, and some of their unique adaptations that allow them to survive in a wetland habitat:

Peasant farmer - crawfish
Brave armored knights - armadillos
Steward - grey squirrel
Cook - honey bee
Lord and Lady - red-tailed hawks
Weaver - Argiope spider
Barber - opossum
Minstrels - green tree frogs
Troubadours - crows
Prince and Princess - barred owls
Monarchs - butterflies
Dragons - dragonflies
Secret Guard - bats
King - alligator

The story follows life in a castle and in a baldcypress swamp. Your students can glimpse the daily operation of a medieval castle and the people that worked and lived there. The story then transforms into the life of a south Louisiana wetland that surrounds a baldcypress tree.

So take a magical journey that will enrich and amaze your childrens' imaginations and introduce them to the wonderful world of wetlands.

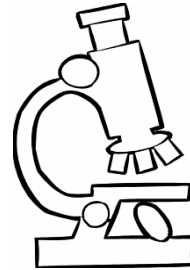
Time to Experiment: INTRODUCTION TO OUR WETLAND WORLD-

Materials: (you must provide materials unless otherwise noted)

Castle Book (provided)

Student sheets about the characters in the book (provided)

Pencil, pen, or crayons for students to write or draw with



Procedure:

Read and follow the directions for the following activities:

1. Read "Baldcypress Tree"
2. Read "Crawfish" and match the body parts to their names.
3. Read "Armadillo and Heads-up '4' - up"
4. Read "Medieval Feast"
5. Read "Honey Bee Fruits"
6. Read "Red-Tailed Hawk Costume"
7. Read "Weaver Spider"
8. Read "Opossum Puppet"
9. Read "Tree Frog Songs"
10. Read "Crow Stories"
11. Read "Owl and Mouse Game"
12. Read "Butterfly Bracelet"
13. Read "Dragonfly Glow in the Dark"
14. Read "Bat Sound Waves"
15. Read "Alligator - Big Lizard"

Conclusions:

Your students should be more familiar with the animals of the swamp after they complete the following experiments.

Baldcypress Tree:

Arbor Day - the celebration of tree planting is celebrated all over the world.

In Israel, for example, they celebrate Tu B' Shebat meaning "the fifteenth day of the Hebrew month Shebat," also known as the "New Year for Trees."

In ancient times, this day was celebrated by planting trees for the children born during the year. A cedar tree was planted for each boy and a cypress tree for each girl.

(Adapted from <http://www.dltk-kids.com/crafts/arborday/>).

Draw or describe the tree you would be:

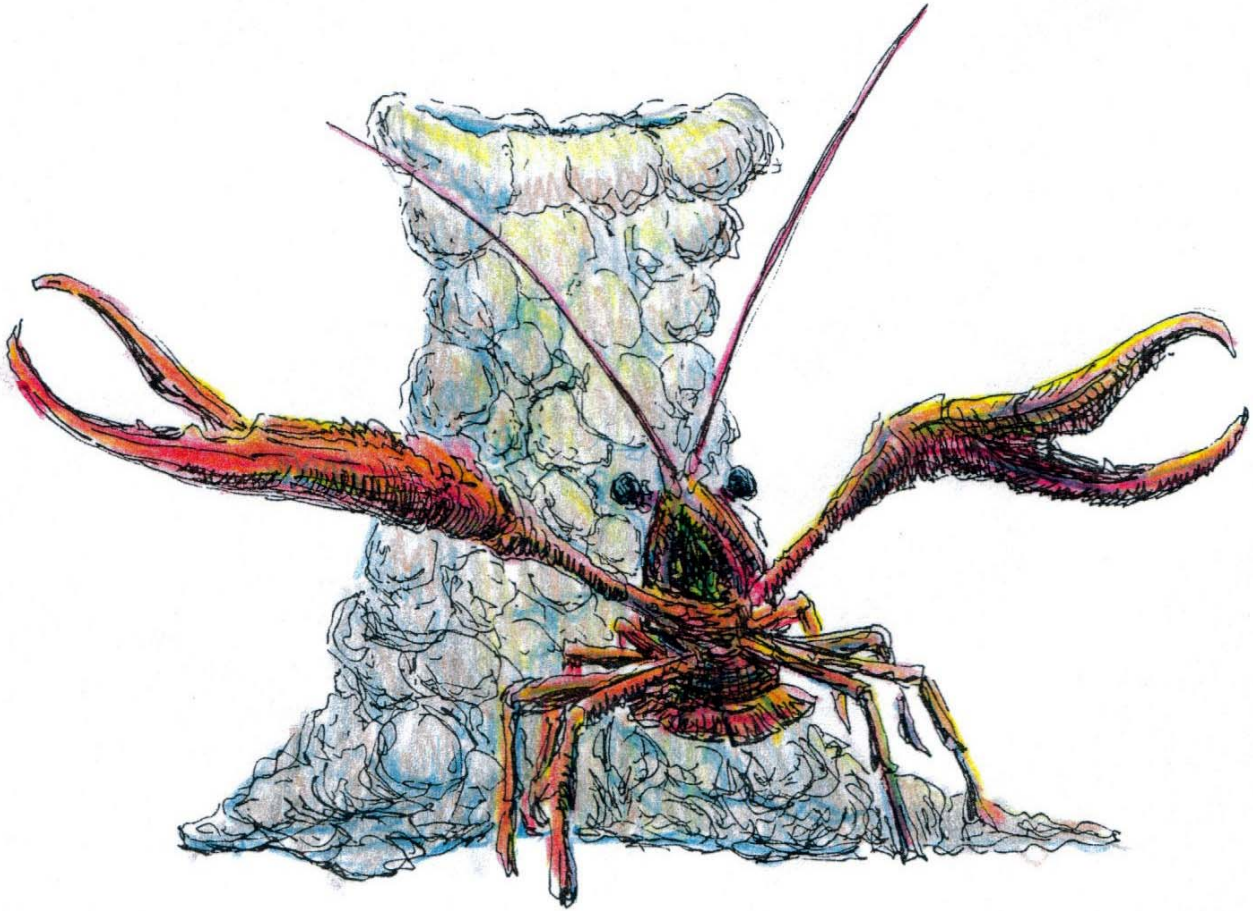
1. What kind of leaves would you have?
2. What kind of bark would you have?
3. What kind of flowers would you have?
4. What kind of fruit would you have?

Name:

Date:

Crawfish:

Connect the names to the parts of the crawfish -



Walking legs

Chaliced (front claws)

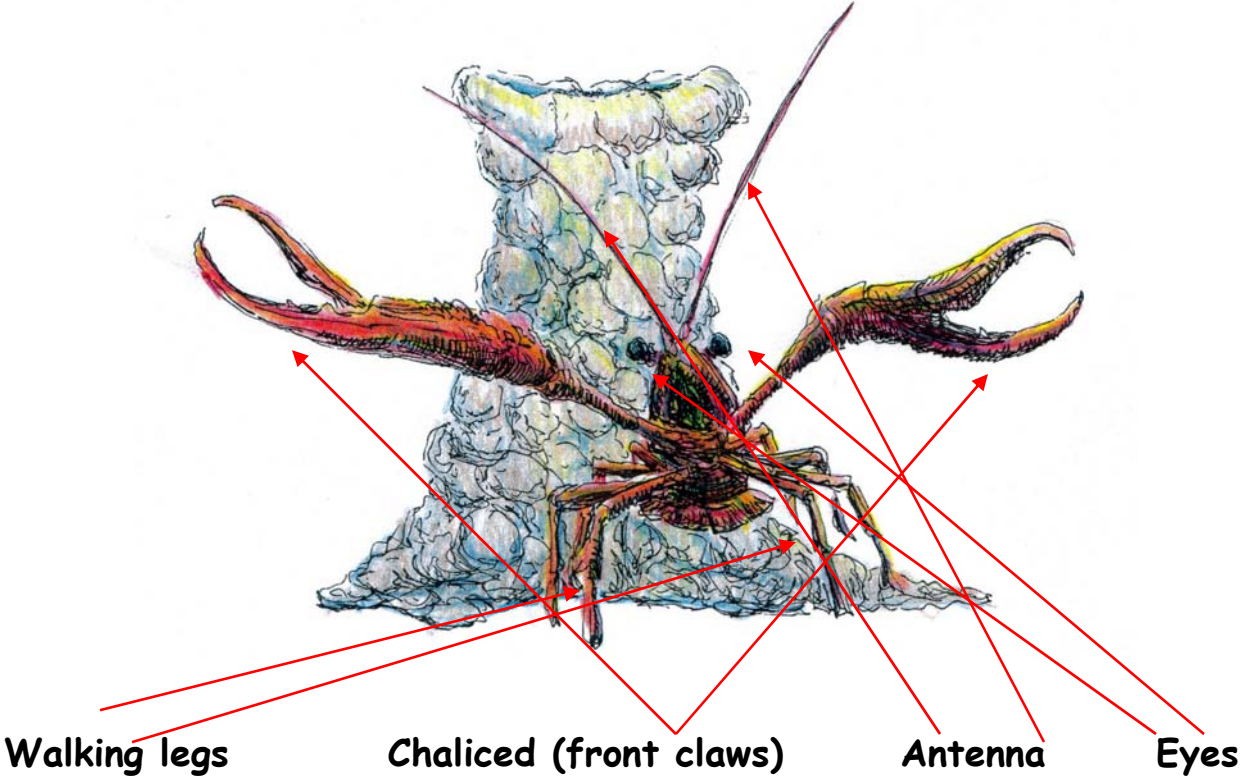
Antenna

Eyes

Instructor Sheet

Crawfish:

Connect the names to the parts of the crawfish -



Armadillo:

Game - Heads Up - 7 Up.

Adaptation - our version will be Heads Up - 4 Up

(Armadillos always have quadruplets- 4 identical babies!)

Directions:

1. Have 4 students stand in the front of the class, while the rest of the students close their eyes and put their heads on their desks.
2. The Quads (4 students in the front) quietly go through the class and gently tap 4 other students on the head/shoulder (the chosen/tapped students should not look up but keep their eyes closed tightly).
3. The Quads walk quietly back to the front of the class, everyone looks up and the 4 that were chosen/tapped stand up.
4. The chosen/tapped 4, one at a time, getting only one turn, try to guess who picked them. If they get it right in one guess they become a Quad, if not the person that chose them stays up front.
5. No one should say who chose whom until every one of the chosen/tapped 4 has guessed.

Name:

Date:

Medieval Feast:

Squirrel – research medieval feasts and make up your own menu for the evening's party.

FEAST FOODS

Vegetables include carrots, lettuce, okra, onions, and spinach. In the fields grains were raised such as barley, oats, rye, and wheat. These grains were ground into flour to use in breads and cakes or used to make ale (a drink like beer). The peasants also harvested a number of fruits including grapes, cherries, plums, and crab apples.

Nuts were also a favorite. Almonds, both sweet and bitter, were eaten whole as garnish, or more commonly ground up and used as a thickener in soups, stews, and sauces. Particularly popular was almond milk, which was a common substitute for animal milk during Lent and fasts.

Meats eaten were what could be raised by farmers or hunted in the manor forests. The meat was heavily salted or smoked to keep it from spoiling. The most common meats were beef, some fresh fish, and a variety of fowl including chickens, partridges, peafowl, and pigeons. Some pork was eaten although it was usually tough. Swans, peafowl, quail, partridge, storks, cranes, larks and just about any wild bird that could be hunted successfully were a favorite too. Swans and peafowl were often domesticated, but were only eaten by the social elite and were more praised for their fine appearance (often used to create stunning table decorations) than their meat. As today, geese and ducks were eaten but were not as popular as the chicken.

Sealife caught and eaten included whales and porpoises and seals (marine mammals), beavers (because of the amount of time spent in the water), and herring and cod from the Atlantic Ocean and the Baltic Sea. Mollusks including oysters, mussels and scallops were eaten by coastal and river-dwelling populations, and freshwater crayfish were generally seen as a desirable alternative to meat during fish days. Compared to meat, fish was much more expensive for the inland population, especially in Central Europe, and therefore not an option for most. Fresh water fish such as pike, carp, bream, perch, lamprey, and trout were common.

Coming from the Old French *desservir*, "to clear a table," dessert originated during the Middle Ages. It would typically consist of dragées and mulled wine accompanied by aged cheese, and by the Late Middle Ages could also include fresh fruit covered in sugar, honey or syrup, and boiled-down fruit pastes. Also fritters, crêpes with sugar, sweet custards and darioles, almond milk and eggs in a pastry shell. Marzipan in many forms was well-known in Italy and southern France. The English enjoyed sweet and savory custards, potages, sauces and tarts with strawberries, cherries, apples and plums, and used flower petals of roses and elderberry. In northern France a wide assortment of waffles and wafers was eaten with cheese and hypocras or a sweet malmsey as *issue de table* ("departure from the table"). There were also sugared herbs like candied ginger, coriander, aniseed and other spices were referred to as *épices de chambre* ("parlor spices") taken as digestibles at the end of a meal to "close" the stomach. Sicily was once famous for its confits, nougat candy (*torrone*, or *turrón* in Spanish) and almond clusters (*confetti*). From the south, the Arabs also brought the art of ice cream making that produced delightful sherbets and a few marvelous examples of sweet cakes and pastries; *cassata alla Siciliana* (from Arabic *qas'ah*, the term for the terra cotta bowl with which it was shaped) made from marzipan, sponge cake, and sweetened ricotta and *cannoli alla Siciliana*, originally *cappelli di turchi* ("Turkish hats"), fried, chilled pastry tubes with a sweet cheese filling.. Sometimes castles kept honey bees and used honey to sweeten foods and drinks.

(Adapted from: http://en.wikipedia.org/wiki/Medieval_cuisine)

Name:

Date:

Honey Bee:

Bees help produce fruits. While the bees are collecting nectar from the flowers, they pick up pollen, which they move from one flower to another. The pollen is located on the anther of one flower (see picture) and is picked up by the bee while it is getting nectar from the bottom of the flower. When this same bee flies to another flower, it has pollen on its hairs. The bee bumps into the stigma of the new flower and some of the pollen it was carrying rubs off, sends down a shoot, and fertilization occurs. When a flower is fertilized it makes a fruit!

Honey Bee – draw or make a list of your favorite fruits and vegetables that bees help pollinate (exceptions are bananas, mangos, figs, guava fruit, etc., that are pollinated by bats and chocolate which is pollinated by insects other than bees).

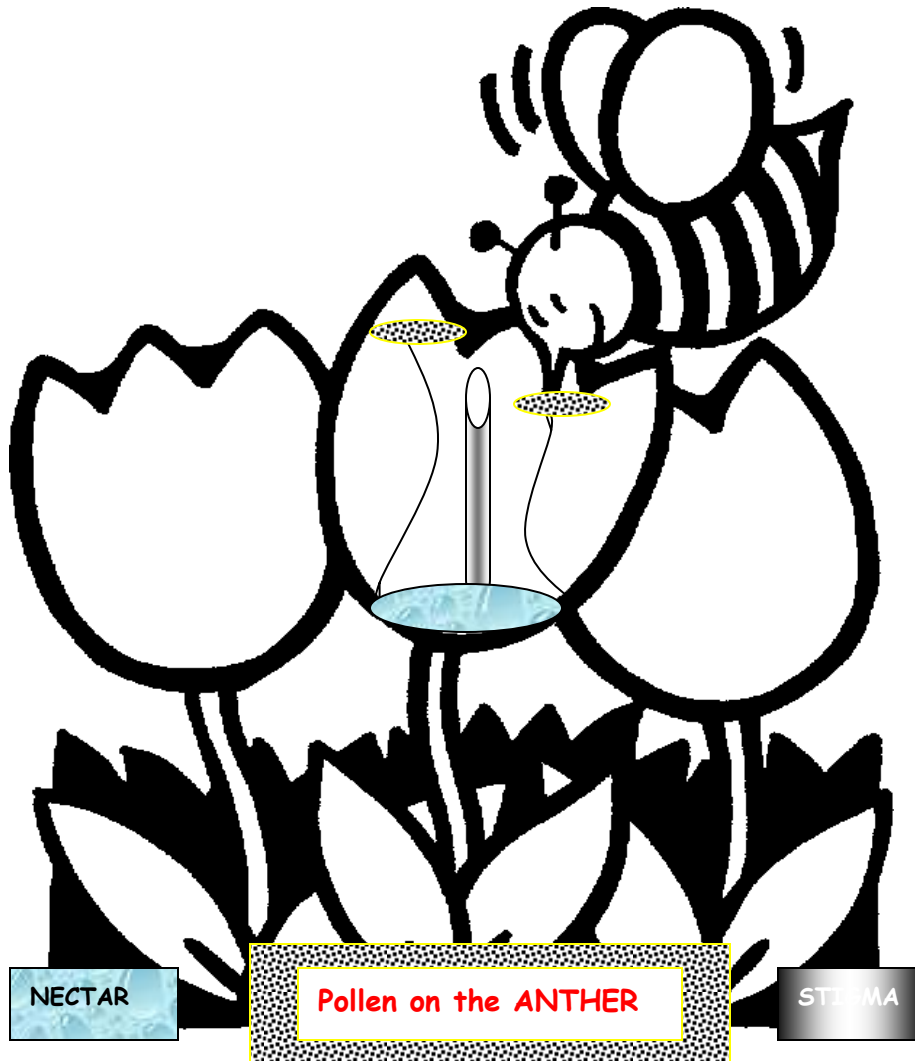


Image Credit: National Institute of Environmental Sciences, NIH

Name:

Date:

Red-Tailed Hawk Robes:

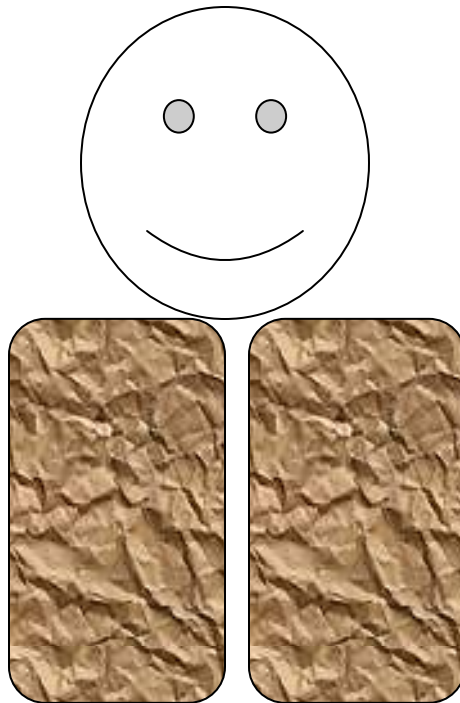
Red-Tailed Hawk: To make regal robes for Red-Tailed Hawks

Need:

1. Paper bag (1 per student)
2. Crayons, colored pencils, or markers
3. Scissors

Directions:

1. Cut a hole in the bottom of the bag in the middle (for head)
2. Cut a line down the front
3. Cut two holes in the side for arms
4. Color the bag with red feathers
5. Have your students put on their costumes and act like hawks



Name:

Date:

Argiope Weaver Spider:

Argiope Weaver - have kids weave with yarn making a slip knot (directions at: http://www.theyarnco.com/slip_knot.php)



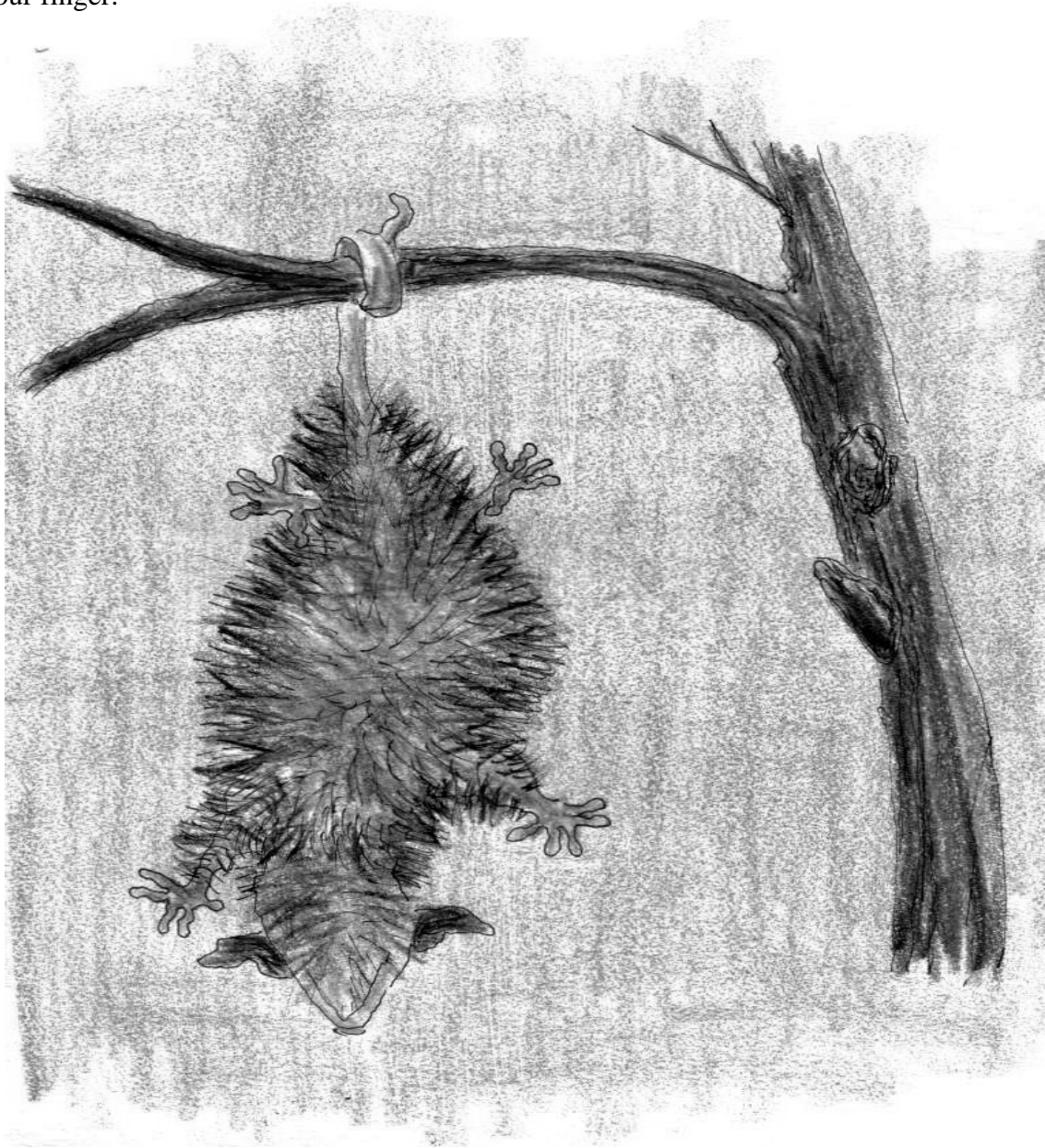
Image credit: <http://www.cdc.gov/nasd/docs/d000001-d000100/d000025/d000025.html>

Name:

Date:

Opossum:

Color in and cut out an opossum puppet. Attach a chenille stem (with glue) where the tail should go, and after it dries, wrap the tail around your finger and let the opossum hang from your finger.



Name:

Date:

Tree Frogs

Tree Frog – Translate this medieval song “Pass Time With Good Company” into modern American English:

Pastyme With Good Company (The Kynges Ballade) by Henry VIII

Passetyme with good companye _____

I love, and shall until I dye; _____

Grugge who wyll, but none deny, _____

So God be pleeyd, this lyfe wyll I: _____

For my pastaunce, _____

Hunt, syng, and daunce, _____

My hert ys sett; _____

All godely sport, _____

To my comfort, _____

Who shall me lett? _____

Passetyme with good companye _____

Instructor Sheet

Tree Frogs

Tree Frog – Translate this medieval song “Pass Time With Good Company” into modern American English:

Pastyme With Good Company (The Kynges Ballade) by Henry VIII

Passetyme with good companye

I love, and shall until I dye;

Grugge who wyll, but none deny,

So God be pleeyd, this lyfe wyll I:

For my pastaunce,

Hunt, syng, and daunce,

My hert ys sett;

All godely sport,

To my comfort,

Who shall me lett?

Passetyme with good companye

Tree Frog – Translate this medieval song “Pass Time With Good Company” into modern American English:

Pastyme With Good Company (The Kynges Ballade) by Henry VIII

Passetyme with good companye

I love, and shall until I dye;

Grugge who wyll, but none deny,

So God be pleeyd, this lyfe wyll I:

For my pastaunce,

Hunt, syng, and daunce,

My hert ys sett;

All godely sport,

To my comfort,

Who shall me lett?

Passetyme with good companye

Pass time with good company(friends)

I love, and shall until I die;

Grudge (begrudge) who will, but none deny,

So God be pleased, this life will I:

For my passing,

Hunt, sing, and dance,

My heart is set;

All goodly sport(s),

To my comfort,

Who shall me let? (Who shall let me?)

Pass time with good company(friends)

Name:

Date:

Crows:

Tell a story as if you lived in medieval times with kings, knights, and dragons, or as if you lived in a swamp, as a human or an animal.

Barred Owls:

Game - Owl and Mouse Game

This is a game that helps students understand predator-prey relationships, as well as adaptations for survival.

1. Have kids line up in a large circle (they will be trees).
2. Choose and blindfold one student (Owl).
3. Choose another student to be the Mouse.
4. The Owl will hoot once, the Mouse will squeak, and the trees remain silent. **Mouse squeaks every time Owl hoots.**
5. The Owl will try to locate the Mouse by sound alone (very much like a real owl).
6. They should walk around inside the ring of "tree" students, the Mouse trying to avoid be eaten (tagged) by the Owl.
7. If the Owl gets too near a tree - the tree may say "tree," otherwise they shouldn't speak at all, so the Owl can hear the Mouse.
8. Play for about a minute or so, and if the Owl tags the Mouse it eats, if not it goes hungry.
9. Pick 2 other players, 1 to be the Owl and 1 to be the Mouse.
10. Play for a few rounds, then quit, or else everyone gets bored. You can always play more another day!

Name:

Date:

Butterfly:

Make a butterfly life cycle bracelet

Need:

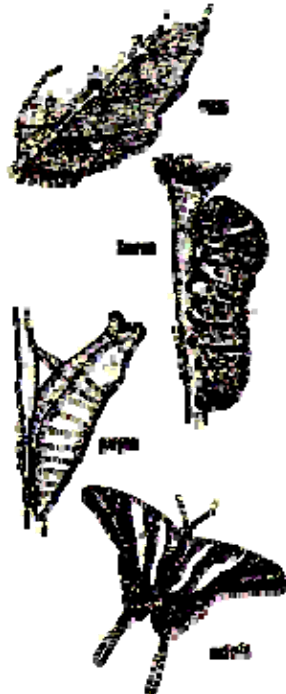
1. Scissors
2. Length of chenille stem (to fit loosely around student's wrist)
3. Hole puncher (single)
4. Crayons, colored pencils or pens

Directions:

1. Color in picture of butterfly life cycle or have your students make their own pictures
2. Color and cut out pictures
3. Hole punch through each one and attach to chenille stem bracelet.
4. Attach bracelet to wrist and wear!

Image credit

<http://mdc.mo.gov/nathis/insects/butterf/>



Dragonfly

Make a dragonfly glow in the dark light:

Need:

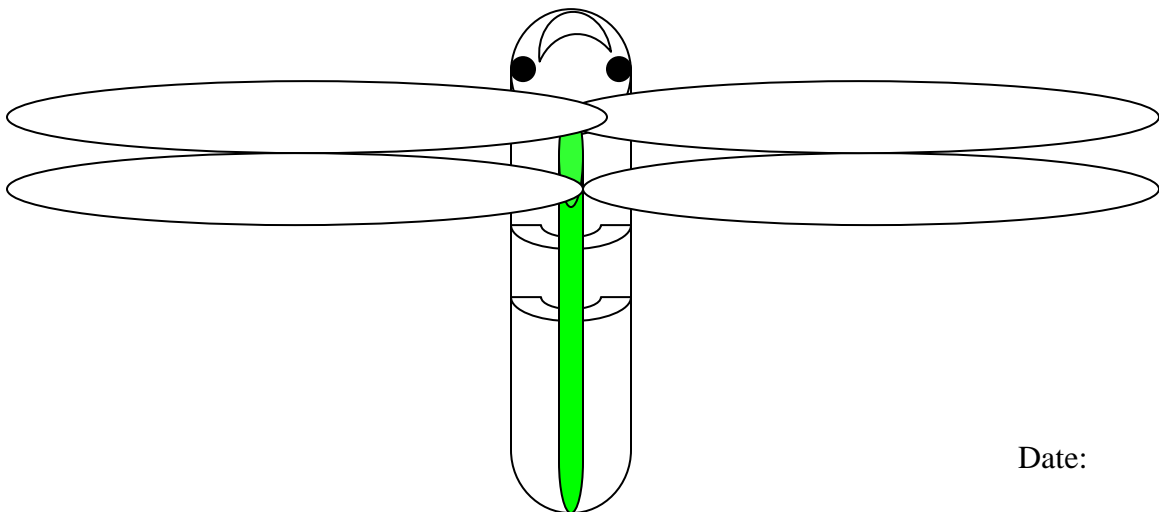
1. Scissors
- Recycled plastic water bottle (12 oz) with lid (remove label).
2. Shiny silver paper or tin foil
3. Glue or tape
4. Glow in the dark sticks (available at most \$1 stores)
5. Permanent marker (optional)

Directions:

1. Using the template for wings, cut out and attach tin foil or shiny silver paper to wings with glue
2. Attach the wings to clean water bottle
3. Have student draw eyes and mouth on the lid of the bottle (a permanent marker works well for this - but be careful).
4. Give each student a sealed light stick and have them place it in the water bottle at night so they can see it glow in the dark!

Wing Pattern - Make 4 wings

Attach Wings to bottle



Date:

Bats

The bats at the Barataria Preserve of Jean Lafitte National Historical Park and Preserve are predators that eat night-flying insects. Bats use sound waves to catch their prey. They emit (send out) high pitched sound waves, which strike an object like a flying insect, and bounce back. The bat then forms a picture of what's in front of them: trees, insects, or even animals like owls that hunt bats!

Sounds like talking, singing, an instrument playing, cars going by, and fish splashing are all made by vibrating air. Any sound we hear is from vibrating waves of air called sound waves. We hear sound because those waves reach our ears and the tiniest bones in our bodies (our ear drums) and cause those bones to move. That movement is changed into electrical signals which are then understood by our brains as sounds! It may seem hard to understand but now you can make your own instrument to feel sound waves!

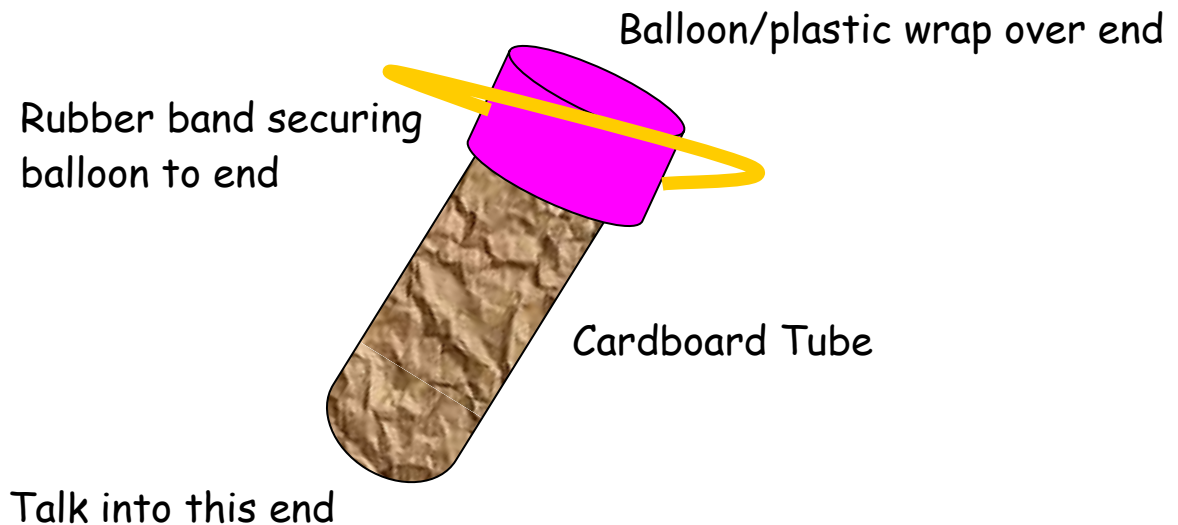
Make a bat sound wave instrument:

Need:

1. Cardboard tube (toilet paper, paper towel, mailing, etc.)
2. Balloon (not inflated), plastic cling wrap, or a plastic zipper bag
3. Scissors
4. Rubber band

Directions:

1. Cut a piece of the balloon, plastic cling wrap or bag to fit around 1 end of the cardboard tube with some hanging over.
2. Secure plastic in place by wrapping a rubber band around the end tube
3. Hold up the tube (the end not covered in plastic) up to your mouth and place your fingers gently on the end of the tube covered in plastic.
4. Talk into the tube and you should feel the plastic vibrate against your finger tips.



Bats

Answer the following questions using the sound wave instrument you just created.

1. If you make a louder sound (amplitude), what happens to the vibrations?
2. Did you use more energy to make the louder sound?
3. Sound travels very quickly through air - the sound you made created a vibration on the other end very quickly. What do you think happens when sound travels through
 - a. Solid matter - like a wall?
 - b. Liquid - like the ocean?

If you have trouble with this think about when you walk - you can walk quickly on the ground, but try walking through the ocean or a wall.

4. Try making a high sound (high pitch). What happens to the vibrations - faster or slower?
5. Try making a low/deep sound (low pitch). What happens to the vibrations - faster or slower?

Instructor Sheet

Bats

Answer the following questions using the sound wave instrument you just created.

1. If you make a louder sound (amplitude), what happens to the vibrations?

The vibrations should increase with amplitude.

2. Did you use more energy to make the louder sound?

Yes, students should feel they blew harder, etc.

3. Sound travels very quickly through air - the sound you made created a vibration on the other end very quickly. What do you think happens when sound travels through

a. Solid matter - like a wall?

Sound travels very slowly through solid matter.

b. Liquid - like the ocean?

Sound travels slower through liquid.

If you have trouble with this think about when you walk - you can walk quickly on the ground, but try walking through the ocean or a wall.

4. Try making a high sound (high pitch). What happens to the vibrations - faster or slower?

The vibrations should increase with higher pitch.

5. Try making a low/deep sound (low pitch). What happens to the vibrations - faster or slower?

The vibrations should decrease with lower pitch.

Alligator:

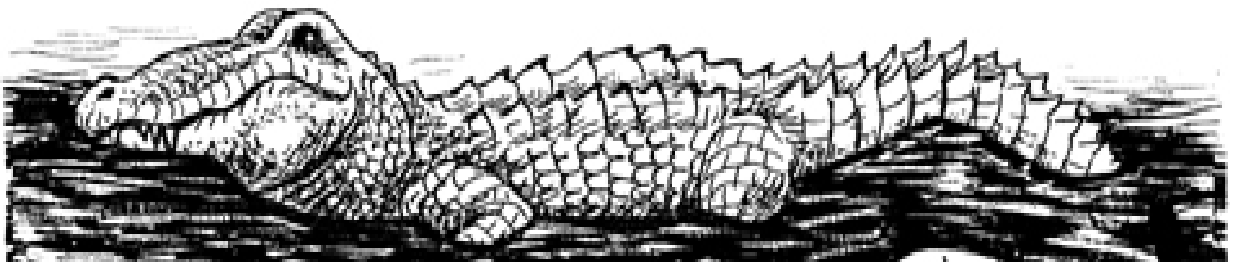
"Alligator" is from the Spanish for "big lizard."

Both are reptiles, but alligators live mainly in the water and lizards live only on the land. Alligators have the same coloring as some lizards but many lizards are brightly colored, unlike the black/green color of American alligators. There are only two types of alligators in the world, American and Chinese, but there are hundreds of types of lizards in the world. American alligators are very large reptiles, reaching up to almost 20 feet and weighing up to 600 pounds. Alligators feed mainly at night, but lizards are active mainly during the day. Alligators have about 80 teeth and grow new ones if one is lost or broken off; lizards have no teeth.

In your opinion

1. Why is "alligator" a good name?

2. Why is it not a good name?



Instructor Sheet

Alligator:

"Alligator" is from the Spanish for "big lizard."

In your opinion

1. Why is it a good name?

Alligators are reptiles like lizards

Alligators are very big and they look a little like big lizards

Alligators have the same color as some lizards

2. Why is it not a good name?

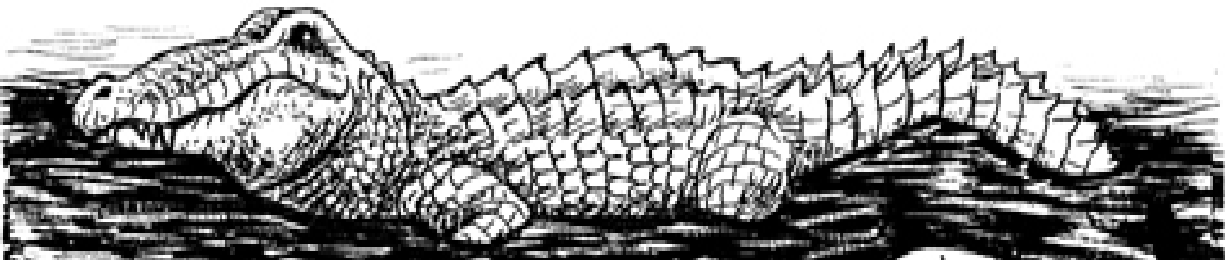
Alligators live mainly in the water

Alligators are much larger than any lizards (at least in the United States)

Alligators have teeth, which lizards do not

There are only 2 types of alligators in the world, American and Chinese, but there are hundreds of kinds of lizards

Alligators feed mainly at night. Lizards are active during the day



Benchmarks and Grade Level Expectations

Benchmarks K-4

Science as Inquiry

A. Abilities Necessary to do Scientific Inquiry

- SI-E-A1 asking appropriate questions about organisms and events in the environment.
- SI-E-A2 planning and/or designing and conducting a scientific investigation.
- SI-E-A3 communicating that observations are made with one's senses.
- SI-E-A6 communicating observations and experiments in oral and written formats.
- SI-E-A7 utilizing safety procedures during experiments.

B. Understanding Scientific Inquiry

- SI-E-B5 presenting the results of experiments.
- SI-E-B6 reviewing and asking questions about the results of investigations.

Life Science

A. Characteristics of Organisms

- LS-E-A2 distinguishing between living and nonliving things;

Earth and Space Science

A. Properties of Earth Materials

- ESS-E-A1 understanding that earth materials are rocks, minerals, and soils;

- ESS-E-A5 observing and communicating that rocks are composed of various substances;

Language Arts: Reading

- ELA-1-E1 Gaining meaning from print and building vocabulary using a full range of strategies (e.g., self-monitoring and correcting, searching, cross-checking), evidenced by reading behaviors using phonemic awareness, phonics, sentence structure, and meaning
- ELA-1-E2 Using the conventions of print (e.g., left-to-right directionality, top-to-bottom, one-to-one matching, sentence framing)
- ELA-1-E3 Adjusting speed of reading (e.g., appropriate pacing, intonation, expression) to suit the difficulty of materials and the purpose for reading (e.g., enjoying, learning, problem solving)
- ELA-1-E5 Reading, comprehending, and responding to written, spoken, and visual texts in extended passages (e.g., range for fiction passages-450-1,000 words; range for nonfiction-450-850 words)
- ELA-1-E6 Interpreting (e.g., retelling, summarizing) texts to generate connections to real-life situations

Language Arts: Writing

- ELA-2-E3 Creating written texts using the writing process
- ELA-2-E4 Using narration, description, exposition, and persuasion to develop compositions (e.g., stories, letters, poems, logs)
- ELA-2-E5 Recognizing and applying literary devices (e.g., figurative language)
- ELA-2-E6 Writing as a response to texts and life experiences (e.g., journals, letters, lists)
- ELA-3-E1 Writing legibly, allowing margins and correct spacing between letters in a word and words in a sentence
- ELA-3-E2 Demonstrating use of punctuation (e.g., comma, apostrophe, period, question mark, exclamation mark), capitalization, and abbreviations in final drafts of writing assignments
- ELA-3-E3 Demonstrating standard English structure and usage by writing clear, coherent sentences
- ELA-3-E4 Using knowledge of the parts of speech to make choices for writing
- ELA-3-E5 Spelling accurately using strategies (e.g., letter-sound correspondence, hearing and recording sounds in sequence, spelling patterns, pronunciation) and resources (e.g., glossary, dictionary) when necessary

Language Arts: Critical Thinking

- ELA-7-E1 Using comprehension strategies (e.g., sequencing, predicting, drawing conclusions, comparing and contrasting, making inferences, determining main ideas) to interpret oral, written, and visual texts
- ELA-7-E2 Using basic reasoning skills, life experiences, and available information to solve problems in oral, written, and visual texts
- ELA-7-E3 Recognizing an author's purpose (reason for writing), and viewpoint (perspective)
- ELA-7-E4 Using basic reasoning skills to distinguish fact from opinion, skim and scan for facts, determine cause and effect, generate inquiry, and make connections with real-life situations

Grade Level Expectations K-4

Science as Inquiry

Abilities Necessary to do Scientific Inquiry

K 1 2 3 4

1 1 1 1 1	Ask questions about objects and events in the environment
2 2 2 2 2	Pose questions that can be answered by using students' own observations, scientific knowledge, and testable scientific investigations
4 5 6 6 7	Use the five senses to describe observations
6 7 8 8 9	Select and use developmentally appropriate equipment and tools (e.g., magnifying lenses, microscopes, graduated cylinders) and units of measurement to observe and collect data
7 8 9 9 10	Express data in a variety of ways by constructing illustrations, graphs, charts, tables, concept maps, and oral and written explanations as appropriate
8 9 10 11 12	Use a variety of appropriate formats to describe procedures and to express ideas about demonstrations or experiments (e.g., drawings, journals, reports, presentations, exhibitions, portfolios)
9 10 11 12 13	Identify and use appropriate safety procedures and equipment when conducting investigations (e.g., gloves, goggles, hair ties)

Understanding Scientific Inquiry

K 1 2 3 4

13 14	Identify questions that need to be explained through further inquiry
14 15	Distinguish between what is known and what is unknown in scientific investigations
20	Determine whether further investigations are needed to draw valid conclusions

Life Science

Characteristics of Organisms

K 1 2 3 4

22 28	Classify objects in a variety of settings as <i>living (biotic)</i> or <i>nonliving (abiotic)</i>
-------	---

Physical Science

Properties of Objects and Materials

K 1 2 3 4

16	Observe and describe common properties of solids, liquids, and gases
17	Sort and classify objects by their state of matter
22	Investigate and explain conditions under which matter changes physical states: heating, freezing, evaporating, condensing, boiling

Earth and Space Science

Properties of Earth Materials

K 1 2 3 4

37	Illustrate how water changes from one form to another (e.g., freezing, melting, evaporating)
35	Examine soils to determine that they are often found in layers
39	Identify the characteristics of soil, according to color, texture, and components, including <i>living (biotic)</i> and <i>nonliving (abiotic)</i> substances
36	Observe and record the properties of rocks, minerals, and soils gathered from their surroundings (e.g., color, texture, odor)
45	Recognize and describe that rock is composed of different combinations of minerals
46	Describe earth processes that have affected selected physical features in students' neighborhoods (e.g., rusting, weathering, erosion)
55	Recognize that sedimentary rocks are composed of particles that result from weathering and erosion (e.g., sandstones, conglomerates)

Language Arts

Standard 1 – READING

K 1 2 3 4

1,5 1-5	1,2,4,5	1-6	1-3	ELA-1-E1
6,7	9			ELA-1-E2
9,10	15	10	10	5,7
11	16	11	11	6
				ELA-1-E6

Standard 3 – GRAMMAR

K	1	2	3	4	
28-30	32	27	28	27	ELA-3-E1
31	33,34	28,29	29,30	28	ELA-3-E2
	35-38	30	31	30,31	ELA-3-E3
	39	31,32	32		ELA-3-E4
32	40-43	33-35,37	33,34,36	32	ELA-3-E5

Standard 2 – WRITING

K 1 2 3 4

19,20	26				ELA-2-E1
21	27	23	22		ELA-2-E2
23	28				ELA-2-E3
25	29	25			ELA-2-E4
	30	26			ELA-2-E5
27	31	27	26		ELA-2-E6

Standard 7 – CRITICAL THINKING

K	1	2	3	4	
	22	17	14		ELA-7-E1
	22	18	15		ELA-7-E2
	24	19,20	16		ELA-7-E3
	25	24	21	19	ELA-7-E4