◄► Field Trip—An Interdisciplinary Zoo Journey◄►

◄► **Subject/Course:** Life Science, English/Language Arts, Math
◄► **Grades**: Pre Kindergarten – 2nd grade

Zoo Atlanta Field Trip Teacher Information

Reservations and Payment

- Reservations are required in advance.
- Payment is due at the admission gates when you arrive with your group. Please have all funds collected and send one person to the payment window.
- For cancellations, date changes, and refunds, please contact Education Reservations at 404.624.WILD.
- Train and carousel rides are additional and can be purchased on site.
- For frequently asked questions, please visit our website at www.zooatlanta.org.

Field Trip Guides

- Our brand new Field Trip Guides were developed by Zoo staff and experienced Georgia teachers.
- All packets are correlated with the new Georgia Performance Standards.
- Download packets that are relevant to the grade(s) you are bringing.
- Please complete and return the evaluation form with your packet so we can be sure we are meeting your needs.

Chaperone Guidelines

- Review the following rules with your group:
  - Stay with the chaperone at all times.
  - Follow any directions given by teachers, chaperones, and Zoo staff.
  - Do not climb on exhibits, fences or rocks or tap on the exhibits with glass.
  - Walk rather than run to avoid getting hurt and scaring the animals.
  - Pick up your trash and recycle.
  - Respect the animals – do not make loud noises.
  - Headphones or mobile phones must be turned off and put away during the visit.
  - Go to a Zoo staff member if you can't find your chaperone.
- Count your group each time you reach a new exhibit to make sure everyone is present.
- Discipline is your responsibility; consult your lead teacher if you need assistance.
- Make sure you know where and when to meet for lunch and for departure.
- Be sure to obtain a Zoo map and daily schedule from the admission booth or from your lead teacher.
- During your visit, encourage the students to ask questions, and then look for their own answers by observing the animals, reading signs and making guesses.
- Attend Zoo activities listed on the back of your map to ensure a full day.
- Have fun!

If you have any additional questions or concerns, please visit our website at www.zooatlanta.org or contact our Education Reservations at 404-624-WILD.

Stage 1-Desired Results

Established Goals:

Pre Kindergarten *Bright From the Start Content Standards*

- **SD 2** Children will acquire scientific knowledge related to life science. **a.** Observes, explores, and describes a wide variety of animals and plant.
- **SD 1** Children will use processes of science to actively explore and increase understanding of the environment. **c.** Uses language to describe observation.
- **MD 3** Children will sort and classify objects. **c.** Classifies objects using more than one characteristic. **d.** Sorts and classifies objects using self-selected criteria. e. Explains sorting or classifying strategy.
- **MD 4** Children will develop a sense of space and an understanding of basic geometric shapes. **a.** Recognizes, describes and compares basic geometric shapes.
- **LD 4** Children will develop and expand expressive language skills (speaking.) **b.** Engages in conversations with adults and children.

Kindergarten:

- **SKL1**. Students will sort living organisms and non-living materials into groups by observable physical attributes. **b**. Group animals according to their observable features such as appearance, size, motion, where they live, etc. (Example: A green frog has four legs and hops. A rabbit also hops.)
- **SKL2**. Students will compare the similarities and differences in groups of organisms. **a**. Explain the similarities and differences in animals. (color, size, appearance, etc.)
- **SKCS5**. Students will communicate scientific ideas and activities clearly. **a**. Describe and compare things in terms of number, shape, texture, size, weight, color, and motion.
- **ELAKLSV**. The student uses oral and visual skills to communicate. The student: **a**. Listens and speaks appropriately with peers and adults.
- **MKP5**. Students will create and use pictures, manipulatives, models, and symbols to organize, record, and communicate mathematical ideas.

1st Grade:

- **ELA1LSV1.** The student uses oral and visual strategies to communicate. The student: **d**. Increases vocabulary to reflect a growing range of interests and knowledge.
- **S1CS5**. Students will communicate scientific ideas and activities clearly. **a**. Describe and compare things in terms of number, shape, texture, size, weight, color, and motion. **c**. Use simple pictographs and bar graphs to communicate data.
- **S1L1**. Students will investigate the characteristics and basic needs of plants and animals. **b**. Identify the basic needs of an animal: air, water, food, shelter.
- **M1P5**. Students will create and use pictures, manipulatives, models, and symbols to organize, record, and communicate mathematical ideas.

2nd Grade:

- **ELA2R3** The student acquires and uses grade-level words to communicate effectively. The student: **d**. Determines the meaning of unknown words on the basis of context.
- **M2D1**. Students will create simple tables and graphs and interpret their meaning. **a**. Organize and display data using picture graphs, Venn diagrams, bar graphs, and simple charts/tables to record results.

- **S2CS5**. Students will communicate scientific ideas and activities clearly. **a**. Describe and compare things in terms of number, shape, texture, size, weight, color, and motion. **c**. Use simple pictographs and bar graphs to communicate data.
- **S2L1**. Students will investigate the life cycles of different living organisms. **a**. Determine the sequence of the life cycle of common animals in your area: a mammal such as a cat or dog or classroom pet, a bird such as a chicken, an amphibian such as a frog, and an insect such as a butterfly.

Understandings: **Students will understand that…** • Animals can be grouped by appearance, size, motion, diet and body temperature or where they live (physical characteristics). • Animals need certain things to survive: food, water, light, air and an environment to live in. • Scientists collect data to learn about animal behavior, physical features and diet. • Living organisms grow and change, and they need air, food, water and shelter. Non-living things do not grow and change, nor do they need air, food, water or shelter. • Animals have different body coverings that serve to keep them warm, dry, hidden and protected. • The life cycle of animals occur in different stages.	**Essential Questions:** • How are living organisms similar in appearance, size, motion, diet, body temperature or where they live? How are they different? • How do the life cycles of living organisms differ among mammals, reptiles, amphibians, birds or insects? • How do the physical characteristics of animals help them to survive? • Why is it important to classify animals? • How do we classify animals? • How are the life cycles of different groups of animals (mammals, reptiles, amphibians, birds, insects) different from each other?
Students will know… • The difference between living and nonliving things. • Physical characteristics, basic needs and life cycle of animals. • Life cycle patterns of animals. • How to sort animals according to physical features. • How to communicate effectively and clearly. **Key words**: skeleton, animal coverings, physical features, backbone, mammals, reptiles, amphibians, fur, feathers, scales, birds, texture, weight, motion, basic needs, appearance,	**Students will be able to**… • Identify the basic needs of an animal. • Identify the life cycles of animals. • Listen, read, and discuss books about animals. • Collect and analyze data on animals. • Describe, sort, compare and explain how animals are grouped by their observable features. • Use graphic organizers to record and analyzed data. • Apply understandings to design an animal habitat in a given environment that meets basic needs.

habitat, shelter	

Stage 2-Assessment Evidence

Performance Tasks:

- Students will create a natural habitat for tadpoles, crayfish, mealworms or other living organisms. They will identify, describe, and record observations using their habitat, of living plants or animals as well as non-living items. They will then show how the habitat provides food and other needs for the organism.
- Students will construct and present an illustration of the needs of plants and animal they have been observing for a month. They will collect and record data about the plant/animal and use their data to identify that living things have similar needs, such as, food, water and sunlight.
- Students will present their projects and report their findings to the class.

Key Criteria

- Identify, sort and explain animal physical features
- Know the basic needs and life cycles of animals
- Distinguish between mammals, reptiles, amphibians, fish and birds.
- Quality of presentation
- Communicate clearly, organized (logical and clear) and stay on topic
- Accurately graph groups
- Accurately sort groups (living and nonliving; appearance, size, motion, and where it lives)

Other Evidence

- Observations, participation, and dialogue with students
- Performance task
- Graphic organizers
- Graphs, charts and tables
- Communication skills
- Journal writings

Stage 3-Learning Plan

Learning Activities

Pre-visit Activities

- Discuss key questions with students prior to your visit: What are animals? What do animals need to survive? What are animals covered with? In what ways do different types of animal coverings helpful? What kinds of foods do animals eat?
- Collect and read books, magazines and videos about animals, their physical features and characteristics, needs, life cycles and other interesting facts. Introduce vocabulary words as needed. See Suggested Reading List.
- Collect pictures and realistic plastic animal models of various Zoo animals from animal magazines, Internet or other resources. Include sample pictures of animals with spots, stripes, solid colors, animals with different and similar sizes, ages, outer coverings, number of legs, fast/slow movements and weights. Allow students to practice sorting animals into different categories.
- Divide students into small groups (3-4). Assign each student a role in their group: “Size

Checker" (notice different sizes of animals), "Cover Checker" (notice the animals' outer "cover"), "Leg Checker" (counts the number of legs), and "Movement Checker" (notices how the animal moves). Explain that they will practice being "Checkers" by observing classroom animal pictures or realistic plastic animal models and record their findings.

- Use a KWL chart to collect information from students about their knowledge of animals. Plan to take pictures, along with students, of Zoo animals for post visit activity.
- Discuss, sort, compare and explain the difference between the various classifications of animals (mammals, reptiles, amphibians, fish, or birds). Discuss and record the number of mammals, reptiles, amphibians, fish and birds they are familiar with. Use photos or websites for research. Use the information to create bar graphs and math problems.

Zoo Activities

- Remind students that as they tour the Zoo, they will take pictures or draw and use an activity sheet to look for animals with specific characteristics:
    - Different sizes (large/small),
    - Different ages (parent/baby)
    - Outer coverings
    - Number of legs
    - Movement (hop, crawl, fly, walk, etc.)
    - Speeds (fast/slow), and
    - Weights (heavy/light)
- Allow students to complete an activity sheet and use 4 of their 5 senses to experience the Petting Zoo: smell, hear, touch, and sight. Find animals with:
    - Similar colors and different colors
    - Spots, stripes, or solid colors
- Have students use graphic organizers to classify and record the number of Zoo animals: mammals, reptiles, amphibians and birds. Upon returning to school, use the information to construct a bar graph. Write a summary based on the data collected. Share your findings.

Post-visit Activities

- Have students share and compare Zoo activity sheets.
- Create a class or individual animal picture books using photographs, magazines pictures or drawings of animals. Have students classify animal pictures into groups according to their
    - Different sizes (large/small)
    - Outer coverings
    - Number of legs
    - Ages (parent/baby)
    - Speeds (fast/slow)
    - Movement: hop, crawl, fly, walk, etc.
    - Weights (heavy/light)
- Review the differences between mammals, reptiles, amphibians and birds. Help students sort Zoo photographs or other animal pictures into groups: mammals, reptiles, amphibians and birds.

- Set up a habitat in your classroom to allow students to observe the life cycle of an insect, such as a Monarch butterfly, or a frog or silkworms emerging from eggs to adulthood. Allow students to keep a record of the life cycle stages. Explain or write

about the experience. Visit Monarchs Across Georgia for information. www.monarchsacrossga.org

- Have students create clay models of animals based on their research.

- Draw and label the stages in the life cycle of an assigned animal: (examples: butterfly, goldfinch, frog, grasshopper, or elephant). Cut into individual stages the completed drawing of each animal's life cycle. Place pictures in a bag. Allow each student to take a picture out of the bag. Have each student find the other students who have the other drawings from the life cycle of the same animals. Each group should reassemble the order of the drawings to illustrate the life cycles of the animals. Allow groups to share their completed life cycles with the class.

- Bring a live animal (hamster, guinea pig, rabbit, etc.) or invite the Zoo Atlanta ZooMobile to your school. Allow students to observe the outer coverings, movement, and physical features of the animal (with and without a magnifying lens). Describe your findings. Measure the animal's body and find other animals or objects that are the same length.

- Take a nature walk on the schoolyard. Identify objects as living or nonliving. Create a class list of items that were observed while out on the schoolyard, grouping the items as living or nonliving.

Suggested Reading

Invertebrates

- Life in a Tidepool by Allan Fowler (Children's Press, 1996)
- Mollusks by *Joy Richardson (*Franklin Watts*,* 1993*)*
- What Lives in a Shell? by Kathleen Zoefield (Harper Collins Children's Books, 1994)
- Starfish, Seashells and Crabs by George Fichter (Western publications, 1993)

Vertebrates

- What Is a Fish? by David Eastman (Troll Communications, 1982)
- Reptiles and Amphibians by Catherine Howell (National Geographic Society, 1994)
- New True Books Bird Series by Alice Flanagan (Children's Press, 1996)
- Mammals by Martyn Branwell (DK Publishing Inc., 1993)

Life Cycles

- Snails by Jens Olesen (Silver Burdett, 1986)
- The Ladybug by Sabrina Crew (Raintree Steck-Vaughn, 1997)
- Octopus by Carol Carrick (Clarion Books, 1978)
- My Puppy is Born by Joanna Cole (Morrow Junior, 1991)
- Our Puppies Are Growing by Carolyn Otto (Harper Collins, 1998)
- Tadpole to Frog by Wendy Pfeffer (Harper Collins, 1994)
- See How They Grow by Jane Burton (Lodestar Books, 1992)
- Butterflies by Gail Saunders-Smith. (Capstone Press, 1998)
- Bugs for Lunch by Darlene Murawski (National Geographic, 2000)
- The Very Hungry Caterpillar; The Very Busy Spider; The Very Quiet Cricket by Eric Carle

- Who Sees You at the (ZOO, FARM, FOREST, OCEAN) (Pop-up Books) by Darla Dijs

Survival

- The Hunt for Food by Anita Gareri (Millbrook Press, 1997)
- When Hunger Calls by Bert Kitchen (Candlewick Press, 1994)
- Time to Eat: Animals Who Hide and Save Their Food by Marilyn Ballie (Firefly Books Ltd., 1995)
- Ants by Ruth Berman (The Lerner publishing Group, 1996)
- Ants by Karen Harty and Chris Marco (Heinemann Library, 1998)

Animal Defenses

- Animals' Defenses by Jeremy Cherfas (The Learner Publishing Group, 1991)
- What Color is Camouflage? by Carolyn Otto (HarperCollins Children's Books, 1996)
- Eyewitness Junior Books Amazing Animal Disguises by Sandie Sowler (Alfred A. Knopf, 1982)
- Amazing Armored Animals by Sandie Sowler (Alfred A. Knopf, 1992)
- How to Hide a Parakeet and Other Birds by Ruth Heller (Putnam Publishing Group, 1995)
- How to Hide a Polar Bear and Other Mammals by Ruth Heller (Putnam Publishing Group

Animal Builders

- Animals That Build Homes by Kyle Carter (Rourke Book Company, 1995)
- Books for Young Explorers, Animals That Build Their Homes by Robert McClung (National Geographic Society, 1976)

Suggested Websites

Zoo Atlanta- http://www.zooatlanta.org

Association of Zoos and Aquariums- www.aza.org

Websites on Animals- http://www.kn.pacbell.com/wired/fil/pages/listanimalsms9.html

Websites on Animals- http://www.kbsearch.com/borrico/index0.html

FOSSweb - Animals Two by Two- http://www.fossweb.com/modulesK-2/AnimalsTwobyTwo

Animal World: Pictures on all the animals- http://www.kbears.com/borrico

Best animal sites, pictures and information- http://www.borrico.com/

Quia - Simple Animals- http://www.quia.com/custom/3406main.html

Zoo Animals- http://edtech.kennesaw.edu/web/zooanim.html

ExZOOberance- http://www.exzooberance.com

Create a graph http://nces.ed.gov/nceskids/Graphing/classic/

ZOO ATLANTA

Animal Characteristics

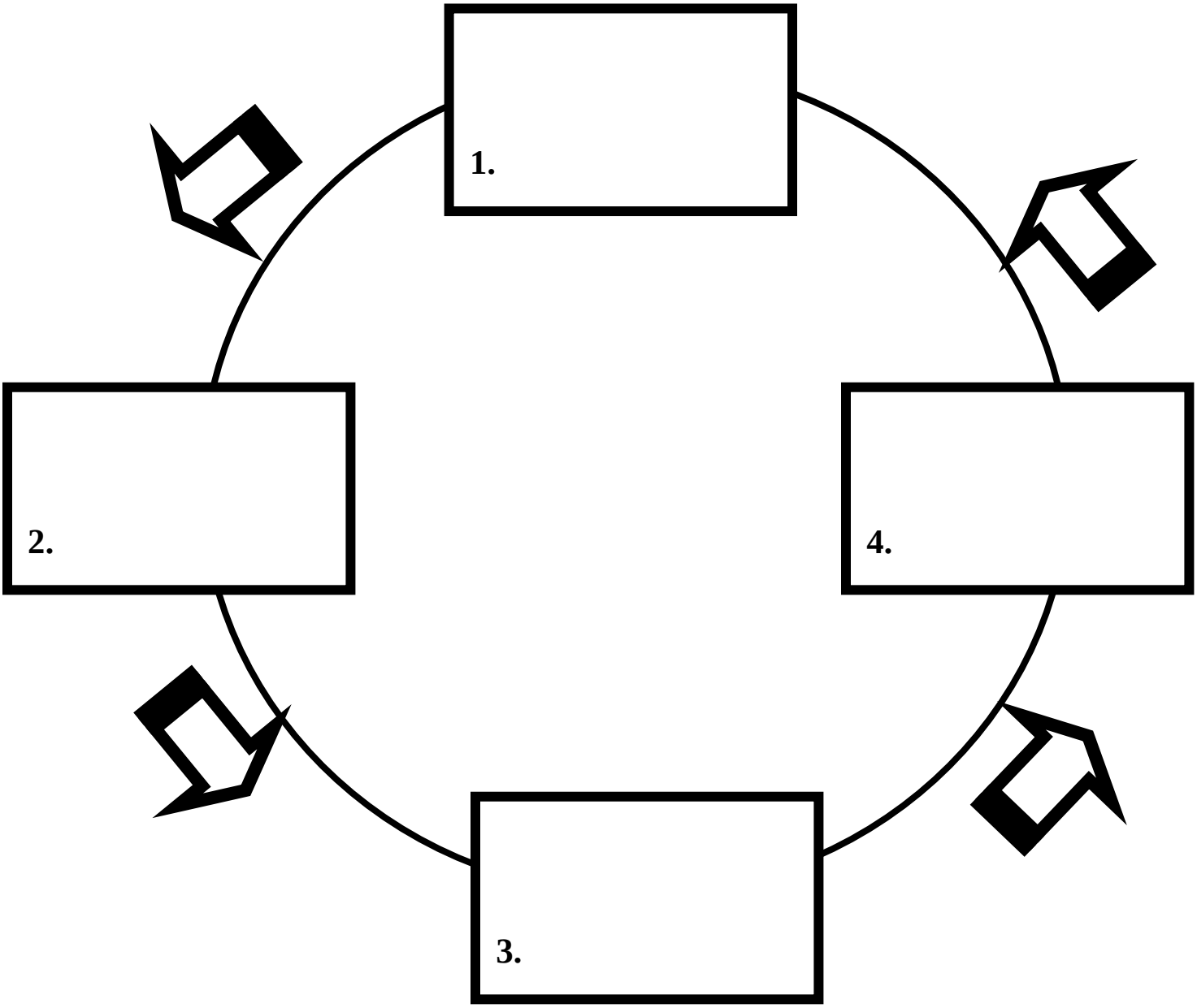
V	W	F	Q	A	L	E	V	N	E	A	Y	V	O	O	N	N	I	T	I
K	L	F	N	F	A	X	W	I	M	R	J	F	S	O	G	Z	G	R	C
S	V	K	S	Q	J	E	P	P	G	S	U	Y	I	C	K	Z	E	B	H
S	D	N	R	S	I	G	H	S	E	L	I	T	P	E	R	T	J	A	F
M	Z	H	E	G	U	I	D	R	E	A	O	B	X	S	L	D	B	S	R
B	L	L	H	N	B	F	U	I	K	M	G	A	H	E	V	I	F	I	J
U	A	T	T	I	U	T	Z	L	E	M	Q	X	H	L	T	V	E	C	J
E	C	N	A	R	A	E	P	P	A	A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

AMPHIBIANS	ANIMAL	APPEARANCE
BACKBONE	BASIC	BIRDS
COVERINGS	FEATHERS	FEATURES
FUR	HABITAT	MAMMALS
MOTION	NEEDS	PHYSICAL
REPTILES	SCALES	SHELTER
SKELETON	TEXTURE	WEIGHT

CYCLE GRAPH

Name:_____Date:_____

Title:

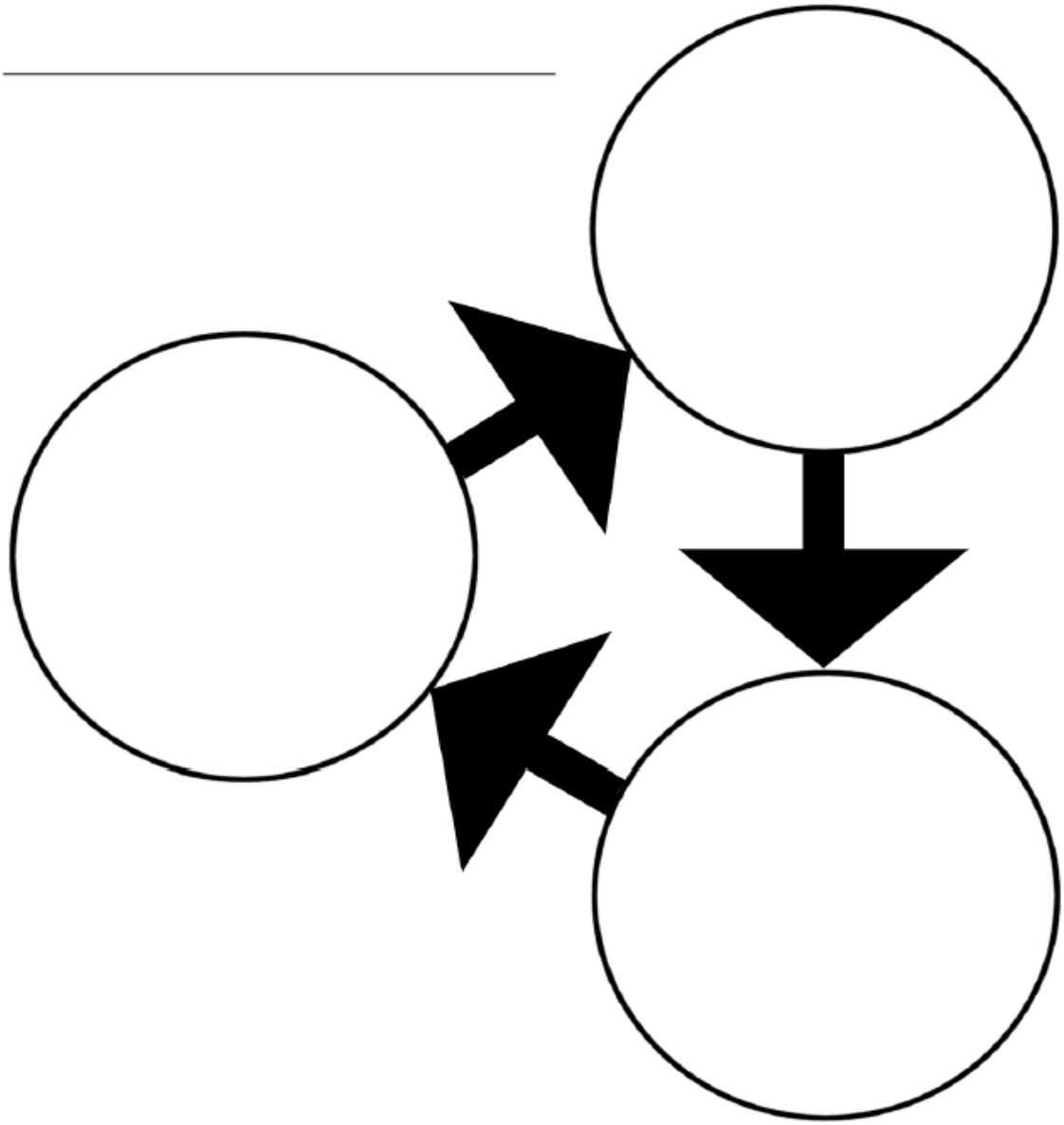


ZOO ATLANTA

Name _____ Date_____

Cycle of

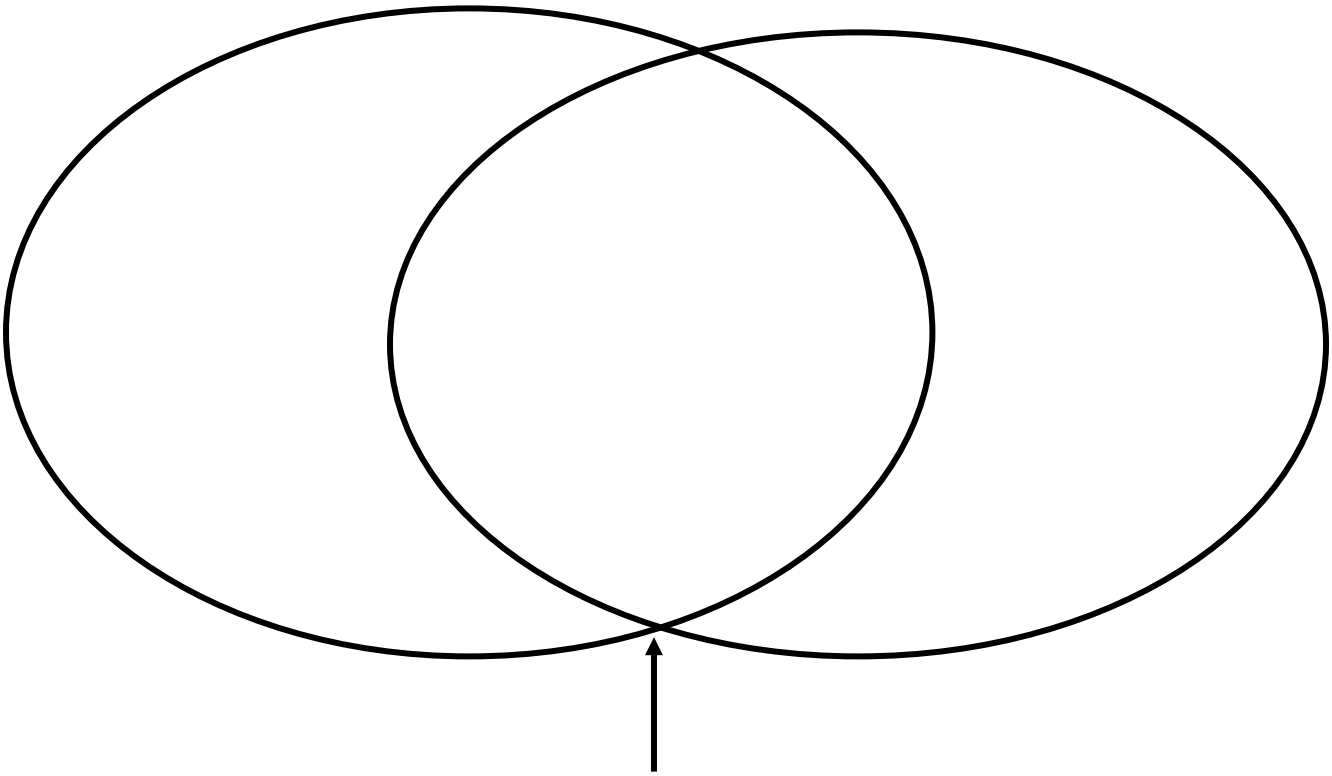
_____



COMPARISON AND CONTRAST

Name:_____**Date:**_____

Features Unique to A: _____ **Features Unique to B:** _____



Features Common to A and B

THREE-WAY VENN DIAGRAM

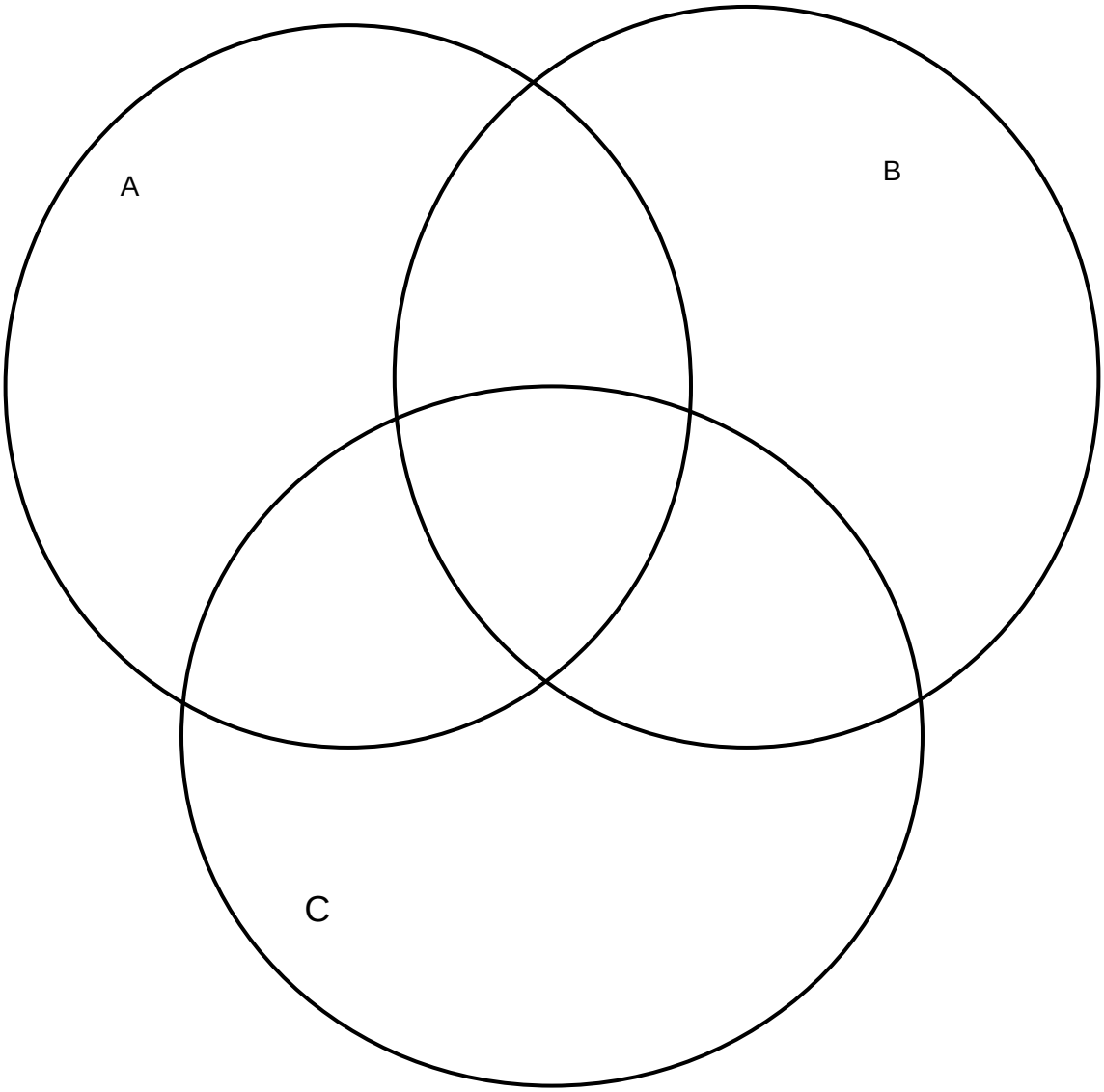
Name:_____ **Date:**_____

Title/Topic_____

Comparing *A* _____

B _____

C_____



ZOO ATLANTA

KWL Chart

Name _____ Date _____

Topic _____		
What I Know	**What I Want to Know**	**What I Learned**

COMPARISON CHART

Name:
_____**Date:**_____

Title/Topic_____

_____ _____

ZOO ATLANTA

Bar Graph

Topic:

19								
18								
17								
16								
15								
14								
13								
12								
11								
10								
9								
8								
7								
6								
5								
4								
3								
2								
1								

_____ _____ _____ _____ _____ _____ _____ _____

ZOO ATLANTA

Rubric

	Exemplary 4	Accomplished 3	Developing 2	Beginning 1
Classification	Consistently demonstrates the ability to sort animals into the proper groups.	Usually demonstrates the ability to sort animals into the proper groups.	Sometimes demonstrates the ability to sort animals into the proper groups.	Rarely demonstrates the ability to sort animals into the proper groups.
Use of Scientific Language	Consistent, accurate usage of terms	Adequate usage of scientific terms.	Occasional use with few errors.	No terms of frequent errors in usage.
Identification	Demonstrates full understanding of living and nonliving items.	Displays a complete and accurate understanding of living and nonliving items.	Displays an incomplete understanding of living and nonliving items.	Demonstrated severe misconceptions about living and nonliving items.
Teamwork	Assumed leadership role within group; strong contributions.	Participated with good contributions.	Participated with weak contributions.	Did not participate in group discussions.
Application to the Real World	Able to apply learning.	Usually finds practical application.	Occasionally relates to real life skills.	No practical application.
Communication	Uses rich, vivid, and powerful description in a variety of ways to clearly communicate observations, data, and conclusions.	Consistently communicates information effectively through accurately recording and describing observations and conclusions.	Communicates plausible facts but lacks clarity in presenting facts and observations.	Is ineffective in communicating information.
Presentation	Presents information in logical, interesting sequence; demonstrates full knowledge (more than required); Maintains eye contact; Uses a clear voice; pronounces words correctly.	Presents information in logical sequence; Feels at ease with expected answers; Maintains eye contact most of the time. Voice is clear; pronounces most words correctly.	Audience has difficulty following presentation because student jumps around; Student Is uncomfortable with information; Occasionally uses eye contact; Voice is low and incorrectly pronounces terms.	Audience cannot understand presentation due to no sequence; Does not have grasp of information; Reads all of the report with no eye contact; Mumbles or incorrectly pronounces terms.