

Rolling Hills Wildlife Museum

R.H.I.N.O. Teachable Curriculum

This curriculum is based off the Kansas State Science Education Standards.

Science Standard:

1.1.1 1.1.4
3.1.1

Grade Level:

Third & Fourth Grades

Standards as a Unit Outcome:

Students will plan and conduct a simple investigation to compare and contrast structural characteristics of animals.

Cognitive Levels

(According to Benjamin Bloom's Taxonomy of Educational Objectives)

Knowledge Comprehension Application Analysis

Components:

1. Students will practice identifying and describing structural characteristics of animals.
2. Students will plan and conduct a simple investigation to compare and contrast structural characteristics of animals.

Notes to the Teacher:

The following teachable curriculum contains two components and one summative assessment. The first component is designed as a pre-visit activity. Please implement this in your classroom just days before your school field trip to Rolling Hills Wildlife Museum. The second component is designed as a self-guided activity for you and your class while on your field trip to the museum. The summative assessment is for you to use in measuring the retention of information by each student from this teachable curriculum. There is also an evaluation form following the summative assessment. Please complete this evaluation form and return to Rolling Hills Education Department in the self-addressed envelope included. We utilize evaluation forms to measure the success of our programs and not you or your class. Teachers submitting evaluation forms will be entered into a drawing for a free \$35.00 voucher towards your next education program scheduled with Rolling Hills.

Benjamin Bloom's Taxonomy of Education Objectives is the major educational theory utilized in the development of this teachable curriculum. Parts of other educational theories may also be evident to you. If you have any questions about this curriculum format, please contact Rolling Hills Education Department at (785) 827-9488, ext. 17. We are more than happy to assist you in any way we can.

R.H.I.N.O. Teachable Curriculum

Standards as a Unit Outcome: Students will plan and conduct a simple investigation to compare and contrast structural characteristics of animals.

Component:
Students will practice identifying and describing structural characteristics of animals.

Criterion:
Students will identify four structural characteristics of animals and describe them to peers.

Formative Assessment:

See “Talking About Animals” teacher instructions for game play instructions. The following deals with grading.

Each student has the potential to earn 10 points. The student describing the animal structure will receive two points for every structure that is guessed correctly in the 30-second time period given to describe each structure they are assigned. On the score card, the structures listed under the teammates name are the ones for which the other student gets points for. For example, if Jim and Sam are teammates, the structures on the scorecard listed under Jim’s name will determine Sam’s score. If there is a blank line, the teammate was unable to describe the structure well enough to his/her teammate.

Presentation Methods:	Activities:	Resources:
Individual Worksheet	The teacher will pass out the “Structures of Life” worksheet for each student to complete in five or ten minutes.	“Structures of Life” copies for every student
Class Discussion	When time is up, the class will discuss their answers together by making a list of all the different animals thought of for each question.	“Talking About Animals” teacher instructions
Lecture	<p>The teacher will write the question number on the board and answers shared by every student.</p> <p>The teacher will then explain that the questions all featured common animal structures.</p> <p>(The teacher should refrain from comparing structures at this point. This lesson plan deals with identifying only.)</p>	<p>“Talking About Animals” scorecards</p> <p>“Talking About Animals” game cards</p>

Extensions:

Corrective: Students can be paired up and reassigned the “Structures of Life” worksheet. They can be asked to assist each other in determining the answer. Make sure they only put one animal down. This will encourage debate among the pair strengthening their reasoning for their choice.

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Standards as a Unit Outcome: Students will plan and conduct a simple investigation to compare and contrast structural characteristics of animals.

Component:

Students will plan and conduct a simple investigation to compare and contrast structural characteristics of animals.

Criterion:

Students will summarize two similarities and four differences between six different pairings of five different animals.

Formative Assessment:

The following school day, students should pull out their worksheets. On a separate piece of paper, students need to make comparisons about the different types of pigs. They should make a column labeled “Pig Type” on both sides to make three columns total. The middle column should be labeled, “Similarities.” About a quarter of the way down the page, repeat the above instructions, only labeling the middle column, “Differences.” Students must identify four similarities and eight differences between the various pig species. For example, the warthog has large tusks and the Russian boar has small tusks with the animals in the side column and the different sized tusks in the middle. Each comparison should be worth one point to total twelve points. Three points should be awarded on overall behavior at the museum.

Presentation Methods:

Lecture

Cooperative Learning (the small groups that travel around with each chaperone may discuss the worksheet together)

Activities:

Before the class visits Rolling Hills Wildlife Museum, the teacher will remind everyone about animal structures and how they did an excellent job identifying animal structures. During the field trip, everyone is going to be asked, again, to identify structures of animals. However, students have to prepare a little on their own for this activity

The teacher will ask students to develop a way for them to record the structures of five different pig species, warthog, red river hog, peccary, giant forest hog, Russian boar, while they visit the museum. The teacher will inform the students that they will all be provided with a clipboard.

Note: the class is more than welcome to bring binoculars or monoculars to get close viewings of the different pigs.

Resources:

Student-developed worksheets (paper)

Clipboards for every student

Pencils

Extensions:

Enrichment: Repeat this activity for a combination of cats: lion, tiger, leopard, cheetah, jaguar, ocelot, caracal, African wildcat. Have the students develop their own worksheet and their own way to compare and contrast the structures.

Summative Assessment for Outcome:

Students will plan and conduct a simple investigation to compare and contrast structural characteristics of animals.

Assessment:

Investigation Report

Administration Guidelines:

Discuss with the students how they examined structures of animals in class over the past couple of days. They used previous knowledge and a field trip with a worksheet to conduct these examinations. Explain that now they are going to be given two animals, and it is their job to determine how they are going to compare their structural characteristics. In their investigation, they must (write these on the board) write how they conducted their investigation, what are the structural characteristics of both animals (list as many as possible), and the comparisons, at least three similarities and three differences. Below are possible animal combinations for comparisons.

Zebra vs. Quarter Horse; Red-footed Tortoise vs. Red-eared Slider; Lion vs. Siberian Tiger; Bottle Nose Dolphin vs. Blue Whale; African Elephant vs. White Rhino; Reticulated Giraffe vs. Quarter Horse; Veiled Chameleon vs. Green Iguana; Polar Bear vs. Black Bear; Prairie Rattle Snake vs. King Cobra; Bald Eagle vs. Black-capped Chickadee

Criteria for Assessment:

Students should be assessed on overall merits of their designed investigation, the number of observed structural characteristics and the number of logical comparisons made between the two animals.

If the designed investigation allowed for the student ample opportunity to record all structural characteristics, they should receive ten points. For example, the student searched for multiple pictures showing various angles of the animal's body would meet the requirements for ten points. If they conduct a thorough investigation of one animal and not the other, award seven points. If they conduct semi-thorough investigations for both animals, award 5 points. Award 3 points for semi-thorough investigation of one animal and a poor investigation of the other. Finally, award only 1 point if both animals were investigated poorly. One point should be awarded for up to three structural characteristics per animals for a total of 6 points. One point should be awarded for each of six comparisons, three similarities and three differences. If students identify more comparisons, you can either award extra credit or allow extras to replace other illogical comparisons. The total point value for this assessment is 22 points.

Extensions:

Enrichment – Have the class plan an investigation to find out what type of animals are found in the playground. Let them work in small groups and pick a time to visit the playground with few other classes out there.

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Talking About Animals

Teacher Instructions

Talking About Animals is a fun game that is taken from a popular family board game. Please read the following instructions and explain them to your students.

The class will need to be placed in groups of four. Each group will then be broken into two teams. Each person in the group needs to receive a “Talking About Animals” game card. Make sure each person in a group has a different card. They are also to be instructed that these cards are for their eyes only. They cannot show their card to their teammate, or they will be disqualified from the game.

Explain to the class that each group will have one person talking at a time. The goal is to describe one of the structural characteristics listed on their game card well enough so that their partner will be able to figure it out and say it out loud. They cannot state any of the words on their card, or they receive no points for the animal structure they are trying to describe. The two students from the other team are there to make sure the other team follows the instructions. Once one teammate has described a characteristic listed, a member of the other team will then take their turn. Teams should go back and forth taking turns describing and answering. In addition, team members should take turns. In other words, each student will describe all five structures listed on their card, but they will do so every fourth turn while waiting for the other team to go and guessing what their teammate is describing.

Next, the scorecards should be passed around to each group. The groups of four students need to decide who is Team A and who is Team B, then write their names on the appropriate lines. Underneath each student name is five lines. These five lines represent the five structural characteristics they are to guess from their teammate’s description. When they guess it correctly, they need to record the structure on the line under the name of the student who guessed it. Only team members can guess their teammate’s structure they are trying to describe. No points are awarded to other teams for guessing the structure, and if they blurt out the answer during the game, the team that is supposed to guess it gets the point. Thus, it actually hurts a team to help guess because it gives the opponents the point.

Finally, each team should be given 30-seconds to describe and guess one structure. If you do not have enough stopwatches for each group, the teacher should watch the clock and have every group start and stop together.



Talking About Animals

Score Card



TEAM A

Name: _____ Name: _____

1. _____ 1. _____

2. _____ 2. _____

3. _____ 3. _____

4. _____ 4. _____

5. _____ 5. _____

TEAM B

Name: _____ Name: _____

1. _____ 1. _____

2. _____ 2. _____

3. _____ 3. _____

4. _____ 4. _____

5. _____ 5. _____



Self-guided Curriculum Evaluation



Please complete the following form and return it to Rolling Hills Education Department, 625 N. Hedville Rd., Salina, KS 67401. This evaluation is very important for the future of this free program and the education programming as a whole. In addition, to show our appreciation for your time, you will be entered into a drawing for a free \$35.00 voucher good toward any future education program at Rolling Hills Wildlife Adventure during the 2005-2006 school year.

Teacher's Name: _____ Grade: _____

School: _____

Address: _____ City: _____ Zip Code: _____

We Visited: _____ Rolling Hills Zoo Only _____ Rolling Hills Wildlife Museum Only _____ Both

1. Did you schedule your field trip at least two weeks prior to your group's visit? _____ Yes _____ No
2. Did you receive your curriculum packet well enough in advance to help you prepare for your field trip? _____ Yes _____ No
3. Did you feel the format of the curriculum packet was confusing? _____ Yes _____ No
4. Was the curriculum packet a determining factor in making your decision to take your class field trip to Rolling Hills Wildlife Adventure? _____ Yes _____ No

Please Rate the Following

	<i>Disagree</i>			<i>Agree</i>	
1. This curriculum packet was the major factor in our decision to visit Rolling Hills Wildlife Adventure	1	2	3	4	5
2. The curriculum packet was helpful in preparing for our class field trip	1	2	3	4	5
3. Activities related to our classroom curriculum	1	2	3	4	5
4. Did your class enjoy the activities in the curriculum	1	2	3	4	5

1. What part of the curriculum did your students have most difficulty with if any? _____

2. What was the high, low and average scores your class received on the summative assessment for this curriculum packet? _____ High Score _____ Low Score _____ Average Score

3. Do you have any suggestions as to what themes or standards we should focus next year's spring fever curriculum around? _____

On the back of this paper, please include any suggestions you may have about making Spring Fever better and more user friendly.

!! THANK YOU !!

www.rollinghillswildlife.com