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## Plants and Animals of Glacier National Park:



### A Guided Inquiry Unit

Glacier National Park is filled with many varied and interesting plants and animals. Young children everywhere, no matter where they live, are fascinated by the plants and animals that surround them. Students in Montana, particularly those students that live near Glacier National Park, have the rare opportunity to investigate and observe many special and rare plants and animals in their natural habitat. This unit of study attempts to build upon what our students may already know about these living things, and as a result, enrich their understanding and

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appreciation of the special ecosystem that is Glacier National Park. Although this unit has been written especially for the students of the East Glacier Park School, it can be easily adapted and used for students living in other areas.

1. **Unit Title:** Plants and Animals of Glacier National Park: A Guided Inquiry Unit
2. **Unit Author:** Amy Conrey Andreas/ K-12 Reading Specialist, 5-12 English Teacher, High School Librarian
3. **Curriculum/ Subject of Unit:** The classroom teacher and the librarian will work together at every stage of the guided inquiry project, through the initial collection of materials, to the introduction and incorporation of technology. The primary subject focus (as stated in the Unit Overview/ Rational (see below) is science, but students will need to use and develop skills in almost all academic areas in order to be successful. Reading, writing, math, art/ design, research/ information skills, and technology will be incorporated within the unit.
4. **Grade Level of Unit:** Grade 1
5. **Unit Duration:** 9 weeks (4th quarter, 2nd semester) with an introductory observation field trip in September. The Unit will be referenced throughout the school year in preparation for the 4th quarter activities.
6. **Unit Materials/ Resources:** Student research/ field notes/ inquiry journals, September field trip in and around Glacier, Classroom collection of non-fiction resources from both school and local library on Glacier National Park Plants and Animals (students will help select the materials from each library), Blackfeet Language Teacher, Glacier National Park Interpretive Rangers and Blackfeet Fish and Wildlife employees, iPads, apps (Little Bird

Tales) StoryBird and Glogster. All student interactive posters and projects will be uploaded to online magazine publisher ISSUU, Joomag or other similar service.

- 7. Unit Overview/ Rationale:** As stated in the Montana Science Content Standard 3, Students will use the the inquiry process to demonstrate knowledge of characteristics, structures, and functions of living things, the process and diversity of life, and how living organisms interact with each other and their environment. Students will use their prior knowledge of the plants and animals of Glacier in combination with new knowledge and experience to define, identify, and classify Glacier National Park carnivores and herbivores. Students will also define and illustrate the food chain of a particular animal. Students will use iPads, apps (LittleBird Tales), StoryBird and Glogster to create digital storybooks, interactive posters, and pamphlets representative of the findings of their research. The Glogs will be presented in person as part of an end of the year community gallery walk. Community members will have the opportunity interact with student projects and learn from the students individually as they tour the gallery walk. The pamphlets will be provided to the community businesses and the East Glacier Park entrance to distribute to tourists throughout the summer season. Additionally, all student created materials will be compiled in an online magazine that will be distributed via Twitter, Facebook, and the school website.
- 8. Essential Questions/ Focusing Questions of Unit:** How are the plants and animals of Glacier National Park dependent on one another? Are all the plants and animals equally important? What, if any, threats exist to these plants and animals and the food chain as whole? How can we be good neighbors to the plants and animals that live in and around the border of the park?
- 9. Goals:**

The students will develop an understanding of the Glacier National Park plants and animals, the food chain, and how plants and animals are interdependent upon one another within and around the park.
- 10. Objectives:**
  - a. The students will construct a food chain.
  - b. The students will predict how an event at one level of the food chain will impact the entire food chain.
  - c. The students will classify organisms by their roles in the food chain (producers, decomposers, consumers).
  - d. The students will use web 2.0 tools to illustrate their understanding of the roles of, and interrelatedness of, the plants and animals of Glacier National Park.

## 11. Standards

### **A. National/ NETS-S/ Profile for Technology Literate Students:**

The following experiences with technology and digital resources apply to the Glacier National Park Guided Inquiry Unit and are examples of learning activities in which students might engage during PK–Grade 2 (ages 4–8) based on the ISTE Standards. At the completion of this unit students will be able to:

- A. Illustrate and communicate original ideas and stories using digital tools and media-rich resources. (ISTE Standards 1, 2)
- B. Identify, research, and collect data on an environmental issue using digital resources and propose a developmentally appropriate solution. (ISTE Standards 1, 3, 4)
- C. In a collaborative work group, use a variety of technologies to produce a digital presentation or product in a curriculum area. (ISTE Standards 1, 2, 6)
- D. Demonstrate the safe and cooperative use of technology. (ISTE Standard 5)
- E. Communicate about technology using developmentally appropriate and accurate terminology. (ISTE Standard 6)
- F. Demonstrate the ability to navigate in virtual environments such as electronic books, simulation software, and Web sites. (ISTE Standard 6)

### **B. National/ 21st Century AASL:**

STANDARD 1: Inquire, think critically, and gain knowledge. (1.1.1; 1.1.2; 1.2.1; 1.2.2; 1.2.6; 1.3.1; 1.3.4; 1.4.4)

STANDARD 2: Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge. (2.1.1; 2.1.2; 2.1.3; 2.1.4; 2.1.5; 2.1.6; 2.2.4; 2.3.1; 2.4.3)

STANDARD 3: Share knowledge and participate ethically and productively as members of our democratic society. (3.1.1; 3.1.2; 3.1.3; 3.1.4; 3.1.5; 3.1.6; 3.2.1; 3.2.2; 3.3.4; 3.4.1; 3.4.2)

STANDARD 4: Pursue personal and aesthetic growth. (4.1.5; 4.2.1; 4.3.2; 4.4.1)

### **C. State/ MT Library/ Information Literacy:**

#### **Montana Library Media Standards**

#### **S1.1gr1.A,B,C; S1.2.gr1.A; S1.3.gr1.A**

Standard 1: A student must identify the task and the resources needed

1. Define the problem

- A. identify the topic
  - B. recognize task-related vocabulary and keywords
  - C. recognize the problem or task
  - D. discuss the steps needed to solve the problem or task
2. Identify the types of information needed
    - A. discuss possible resources
  3. Choose from a range of resources

- A. choose resources from a limited selection plan, do

**Essential Vocabulary: keyword, topic, resource, plan, print, non-print, digital, community resources**

**S2.1.gr1.A; S2.2.gr1.A; S2.3.gr1.A,B,C; S2.4.gr1.A,B,C,D,E,F,G; S2.5.gr1.A; S2.6.gr1.A**

Standard 2: A student must locate sources, use information, and present findings.

1. Locate resources needed to solve the problem.
  - A. locate major sections in the library (e.g., fiction, nonfiction, biography, reference, periodicals)
2. Evaluate resources.
  - A. explore non-fiction resources
3. Locate information within the source.
  - A. discuss parts of the book
  - B. view and listen for information
  - C. explore the text using guide words, headings, etc.
4. Extract information from resources needed to solve problems
  - A. demonstrate active listening
  - B. discuss main ideas and details
  - C. discuss contextual clues
  - D. read and listen for purpose
  - E. listen and identify relevant information
  - F. retell relevant information
  - G. credit sources
5. Organize information to solve problems.
  - A. sequence and sort information
6. Create a product that presents findings
  - A. design original work following established guidelines.

**Essential Vocabulary: non-fiction, reference, catalog, call number, relevant, details, spine, spine label, author, illustrator, copyright, table of contents, sequence**

**S3.1.gr1.A,B,C; S3.2.gr1.A,B**

Standard 3: A student must evaluate the product and learning process

1. Assess the quality of the product
  - A. compare the product to the criteria
  - B. reflect on final product
  - C. discuss ideas for improvement of the product
2. Describe the process
  - A. discuss the steps that were used
  - B. discuss how well the process worked

**Essential Vocabulary: review**

**S4.1.gr1.A; S4.2.gr1.A,B,C; S4.3.gr1.A**

Standard 4: A student must use information safely, ethically and legally.

1. Legally obtain and use information
  - A. define ownership
2. Identify the owner of ideas and information
  - A. explore the owner of ideas and information
  - B. recognize that information comes from a source
  - C. credit sources
3. Participate and collaborate in intellectual and social networks following safe and effective practices
  - A. interact appropriately in social situations (blended learning)

**Essential Vocabulary: copyright, district technology use guidelines, plan, blended learning, author, illustrator**

**S5.3.gr1.A.B**

Standard 5: A student must pursue personal interests through literature and other creative expressions

3. Access and understand multiple resources from diverse cultures including Montana American Indians
  - A. view and listen to available cultural resources (print, non-print, online references, community)
  - B. view and listen to a variety of cultural materials (including Montana Indians)

Essential Vocabulary: Blackfeet, Flathead, tribe(s)

**D. State/ MT Technology:**

**Montana Technology Content Standards:**

**S1.1.gr1.A,B,C; S1.2.gr1.A,B,C; S1.3.gr1.A,B,C**

A student must use digital tools and resources for problem solving and decision making. By the end of the unit the students will be able to do the following:

1. Identify and investigate a problem and generate possible solutions.
  - A. identify a problem with teacher assistance
  - B. investigate the problem using digital tools with teacher assistance
  - C. generate possible solutions using digital tools with teacher assistance
2. Collect data and information using digital tools.
  - A. give an example of data
  - B. collect data with a digital tool with assistance
  - C. collect information using digital tools with assistance
3. Organize collected data and information using a variety of digital tools.
  - A. list possible categories to be used for sorting data
  - B. sort collected data using a digital tool with assistance
  - C. organize information using digital tools with assistance

**Essential Vocabulary: digital tools, data**

**S2.3.gr1.A; S2.4.gr1.A**

A student must collaborate and communicate globally in a digital environment.

3. Communicate the results of research and learning with others using digital tools.
  - A. observe and discuss digital presentations digital presentation
4. Explore how technology has expanded the learning environment beyond the traditional classroom.
  - A. establish a connection with others using a digital tool with assistance

**Essential Vocabulary: digital presentation**

**S3.1.gr1.A; S3.2.gr1.A,B,C; S3.3.gr1.A; S3.4.gr1.A; S3.5.gr1.A**

A student must apply digital tools and skills with creativity and innovation to express his/herself construct knowledge and develop products and processes.

1. Use digital tools for personal expression.
  - A. use digital tools for personal expression digital tools
2. Use various digital media to share information and tell stories
  - A. explore various digital tools to create an illustrated story
  - B. create an illustrated story using a digital tool
  - C. share the story digital media
3. Use technology to discover connections between facts.
  - A. use technology to discover facts with guidance
4. Understand ownership of digital media.
  - A. identify self and others as digital authors copyright

5. Use digital tools and skills to construct new personal understandings.
  - A. explore the use of digital tools digital tools

**Essential Vocabulary: digital media, digital tools, copyright**

#### **S4.2.gr1.A**

A student must possess a functional understanding of technology concepts and operations.

2. Use appropriate terminology when communicating about current technology
  - A. Use appropriate terminology when communicating about current technology

**Essential Vocabulary: mouse, monitor, keyboard, screen, cursor, iPad, app (application)**

### **E. State/ Subject Content Standards:**

#### **Science Content Standard**

##### **S3.2.gr1.A,B,C,D**

Students, through the inquiry process, demonstrate knowledge of characteristics, structures and function of living things, the process and diversity of life, and how living organisms interact with each other and their environment. At the end of the unit students will be able to do the following:

2. Identify, measure, and describe basic requirements of energy and nutritional needs for an organism.
  - A. Define herbivore and carnivore
  - B. Classify herbivore/carnivore
  - C. Define a food chain
  - D. Illustrate a food chain

**Essential Vocabulary: food chain, herbivore, carnivore, dependent, interdependent, ecosystem**

##### **S5.1.gr1.A,B,C; S5.4.gr1.A,B**

Students, through the inquiry process, understand how scientific knowledge and technological developments impact communities, cultures and societies. At the end of the unit students will be able to do the following:

1. Describe and discuss examples of how people use science and technology
  - A. Identify technology as the knowledge, processes and products used to solve problems and make lives easier
  - B. Identify technology in the school
  - C. Explain how technology is used in the school technology
4. Use scientific knowledge to make inferences and propose solutions for simple environmental problems



- A. Identify an environmental problem
- B. Discuss the scientific issues relevant to the environmental problem environment, issue, problem

**Essential Vocabulary: technology environment, issue, problem**

**12. Technology Used:** iPads, digital cameras, StoryBird, educational app Glogster, and online magazine publication creator ISSUU, Joomag, or other similar service.

**13. Collaboration**

**A. Classroom teacher, B. School Librarian:** The classroom teacher and school librarian will work together as co-teachers on this entire unit.

**C. Instructional Team:** Included teachers aides, Glacier National Park Interpretive Ranger, Fish and Wildlife Employees that will present animals, plants, and information to students throughout the project, community members that will provide feedback to students during the Community Gallery Walk, and students (students will learn from other students during the creation of their projects, sharing knowledge, experiences, and expertise along the the way).

**D. Student:** Students will work with other students (within their inquiry teams) that have selected similar plants and animals. All students will share knowledge, materials, and reflect with other students along the way.

**14. Anticipatory Set/ Object Based Learning (lead-in):** September All-Day Glacier Field Trip. The field trip will be taken at the beginning of the year primarily in order to ensure full access to the park. Students will be told in advance that this field trip relates to a project they will be completing during the second half of the year. The students will know they will be selecting an animal in Glacier National Park that they will be learning more about. They will also know that they will be learning about Glacier's Animals throughout the year. Students will also learn that they will present their learned information to the community and will help assemble information on their elected animals that will be distributed to tourists in and around the park at the end of the school year. A Glacier National Park Interpretive Ranger will accompany the students on the field trip, along with their teacher, the school librarian, the Blackfeet language teacher, Blackfeet Fish and Wildlife Representatives, and a teacher's aide. Students will begin the day in East Glacier. They will be given their Plants and Animals of Glacier field notes/ Inquiry Journals. Students are instructed that they are now officially plant and animal investigators and that they are to record as many details about the the plants and animals they see. They can write the names (Blackfeet and English), draw pictures of the animals, tell stories about the animals, record where they saw the animals and what they were doing and if they were aware of being

observed, etc. All students will also be given an iPad to use so they can take pictures or record video of any plants or animals they see. Students will travel from East Glacier to West Glacier where they will take their first exploratory break. From West Glacier students will travel up towards Logan Pass, stopping for any special plants or animals along the way. Students will have lunch at Logan Pass and then climb to the Hidden Lake Overlook. All staff/ teachers will aid students in recording information and taking pictures, etc. The entire day will focus only on plants, animals and observations about where they are located, what they are doing, eating, etc. After the hike, students will continue on to St. Mary. Any opportunities to view notable plants and animals will be taken as the students return to East Glacier via Kiowa and Looking Glass Road.

**15. Process Model:** Guided Inquiry Design Framework. See Step by Step Procedures for examples of framework within the **Week One: Lesson 1.**

**16. Step by Step Procedures for 4th Quarter/ Lesson 1/ Information Literacy Activities (CT/ LMS/ Instructional Team/ Student):**

4th Quarter/ Week One: Lesson 1/ Session Plan (Open)

Learning Goals: Students will use their field notes/ inquiry journals (created during beginning of year Glacier NP Field Trip) to reflect upon what they know or learned about Glacier plants and animals. **Students will begin to immerse themselves in information related to the plants and animals they are most interested in.** Students will begin to naturally generate questions they have about these plants and animals and identify where they might find answers to these questions.

Location: Classroom

Team: Classroom Teacher, Librarian, Glacier National Park Interpretive Ranger, Blackfeet Fish and Wildlife Representatives, Blackfeet Language Teacher, Teacher's Aide (all team members were participants in beginning of year Glacier field trip).

Inquiry Unit: Plants and Animals of Glacier National Park

Week 1: Lesson 1/  
OPEN

Goal: Students will be reminded of their prior knowledge and experiences with the plants and animals of Glacier National Park and students will be given the opportunity to learn more about them. **BIG QUESTION OF THE DAY:** Are all the park's plants and animals important or are some more important than others? Students will begin to identify plants and animals they are particularly interested in.

Starter: 20 mins

Students will **review their field notes/ inquiry journals from the beginning of year Glacier field trip**. After spending a few minutes reflecting/ perusing journals, the whole class will come together to watch a **10 minute video that highlights/ reviews the field trip they all took together through the park**. The video will contain photos and video taken by students, teachers, and other participants. The video will help students **recall details of the field trip, activate prior knowledge, and will help students generate questions** they may have regarding the plants and animals of the park.

After Video the whole class will work together to begin filling in a large **whole class KWHL Chart on Glacier Plants and animals**. (Know, Want to know, How will I learn it, Learned). As a class students will work to fill in first three areas of chart.

Week 1: Lesson 1/  
OPEN

**Goal: Students will be reminded of their prior knowledge and experiences with the plants and animals of Glacier National Park and students will be given the opportunity to learn more about them. BIG QUESTION OF THE DAY: Are all the park's plants and animals important or are some more important than others? Students will begin to identify plants and animals they are particularly interested in.**

Worktime: 50  
minutes

After the video, students will be divided into **inquiry groups**. Inquiry groups will work together to **generate questions and find answers** related to Glacier plants and animals. Introduce **interactive Glacier Plant and Animal bulletin board** to students. Pictures of the plants and animals students will learning about today are up on the board, with room for others to be added. As the class works their way through the unit, facts and details about the animals will be added. Thumb tacks and brightly colored yarn will eventually be added to **illustrate connections between the plants and animals**.

Students will be given **handouts with pictures of plants and animals** they will be learning about from today's guest special guests. Students will add facts and details about the plants and animals as they rotate through the stations. These handouts will be added to their **inquiry journals** and will be used as springboards for further research.

Students will then be surprised with the introduction of some special guests: A **Glacier National Park Interpretive Ranger, Representatives from Blackfoot Fish and Wildlife Department, and their Blackfoot Language Instructor**. Students will rotate through **mini-presentations** from each group of guests. The Interpretive Ranger and Fish and Wildlife have a collection of pelts, claws, skeletons, plants, and small live animals they can bring in as part of their educational presentations. The Blackfoot Language teacher will share animal names, stories, traditional plants, and relay the significance of these plants and animals in traditional Blackfoot culture and life. **All presenters will focus on sharing information related to the plants and animals in the park and will relay to students information about how the plants and animals are related (introducing the terminology decomposers, producers, consumers)**. Students will learn more about these terms in Week One, Lesson 2...this lesson serves as an introduction to the concepts which will be explored in depth within the overall unit.

After rotating through the presentations the whole class will come together once again and will use their handouts and new knowledge and experiences to **expand the class KWHL**. Students will work together to **add knowledge and generate questions** related to where the plants and animals live, what plants and animals are dependent upon one another, where can these plants and animals be found, what kind of habitat do they need, etc.

Reflection: 10  
minutes

Students will be asked to write an entry in their **Inquiry journals summarizing the events of the class period and will be asked to reflect on what they still wonder about in relation to these plants and animals? What connections between the plants and animals surprised them? What would they like to explore further?** The teacher, librarian, and aide will circulate to help students as they complete this part of the lesson.

Week 1: Lesson 1/  
OPEN

Goal: Students will be reminded of their prior knowledge and experiences with the plants and animals of Glacier National Park and students will be given the opportunity to learn more about them. **BIG QUESTION OF THE DAY: Are all the park's plants and animals important or are some more important than others? Students will begin to identify plants and animals they are particularly interested in.**

Notes

With the remaining time, students will be asked to **share their written responses**. Written responses and participation in class discussion/ activities will reflect if student needs any remediation before advancing through the unit.

**Week One: Lesson Two** will provide a more detailed introduction to **decomposers, producers, and consumers. Term herbivore and carnivore will also be introduced**. Students will begin to identify where the animals discussed in Lesson 1 fall within these categories. School library resources (online, books, etc) will be introduced by librarian and students will begin to look for answers to questions they have about the plants and animals in the park.

**17. Unit Closure/ Object Based Learning (Reflect Anticipatory Set):** Students will have a deeper understanding and appreciation of the unique ecosystem that surrounds them. Students will begin to see how certain plants and animals are dependent upon one another and have a better understanding of their role in the overall environment based on their first hand experience with the plants and animals and other individuals that know these plants and animals well.

## 18. Unit Evaluation

**A. Authentic Assessments:** Completion of **Glogster Interactive Plant/ Animal Food Chain/ Ecosystem Virtual Posters, Development of plant or animal pamphlet**, and participation in the **Plants and Animals of Glacier Community Gallery Walk**. Students projects and participation will illustrate there deep understanding of the important roles of and connections between the plants and animals in the park.

### **B. Major Assignments:**

**Week One: Guided Inquiry Phases = Continuation of Opening (Began during field trip at the beginning of year) and initiation of the Immersion Phase)**

Students begin the unit by recalling the field trip from the beginning of the year and begin learning more about the animals and plants that populate the park. Students spend time thinking about what they already know about the plants and animals of the park. Students are introduced to new information related to the animals and begin exploring their roles as decomposers, producers, and consumers. Students select a plant/ animal to begin their focus on food chain/ ecosystem. Students will utilize their photos, videos, and notes taken on Glacier Field Trip and the resources collected on

that same day by other students. Additionally, students will use classroom resources, student/ group conversations, and presentations as arranged by the teacher and librarian in conjunction with the expertise of the Glacier National Park Interpretive Ranger (present during at least 2 periods each week of unit), Blackfeet Fish and Wildlife employees, and the Blackfeet Language Teacher.

#### Week Two: **Guided Inquiry Phase = Explore**

Students begin to expand their use of sources to find information related to the plants and animals they are studying. Students begin keeping track of the discoveries they are making and take note of developing questions to ponder which will guide their inquiry along the way. Students share observations, thoughts, questions within their inquiry circles. Students are grouped into inquiry circles based on the plants and animals they have selected as their main interests. Students develop food chain (on paper) as related to their selected plant or animal. Students will utilize their videos/ photos, the classroom resources collected by teacher and librarian and the GNP Interpretive Ranger to complete this phase of the project. As many of the available other instructional partners will be included at this point.

#### Week Three: **Guided Inquiry = Identify**

Student Inquiry circles will research information to include on projects for each step of the food chain with help from teacher, librarian, aide, and GNP Interpretive Ranger, Blackfeet Language teacher, Fish and Wildlife. Students identify the big questions that will guide the focus/ direction of their projects.

#### Week Four: **Guided Inquiry Phase = Gather**

Students will begin the week by again having access to the Blackfeet Fish and Wildlife department, Glacier National Park Interpretive Ranger, and other local animal/ plant experts. Students will have a chance to visit with these experts to find answers to their questions they have developed so far. Students will also continue to explore online and library materials related to their topics. Students will write, edit, and revise information to include include in projects. Students will spend time reflecting on what they have learned since Week One.

#### Weeks Five and Six: **Guided Inquiry Phase = Create**

Students will use they information they have gathered to create plant animal pamphlets, Glogs, and StoryBird online flip books. All Inquiry groups will individually work together t to create the projects and all members will contribute.

#### Week Seven: **Guided Inquiry Phase = Share**

Students will practice presentations within their inquiry groups using their Glogs and StoryBird books. All groups will provide feedback to other groups.

Week Eight: **Guided Inquiry Phase = Evaluate**

Reflections on projects/ additions/ changes to projects/ growth during project.

Week Nine: Community presentations/ reflections on growth and discussion of things they would change/ add to final product

**C. Handouts/ Teaching Materials:** Student field notes/ Inquiry journals/ Inquiry logs/ library resources, online, books, magazines, etc./ Glacier Food Chain worksheets and handouts. Handouts used in Week One: Lesson One is included in the resources section.

## 19. Curricular Areas

**A. Subject/ Relation:** Science/ food chains, ecosystems

**B. Subject/ Relation: Language Arts/ Reading and Writing/** Students will be reading about these plants and animals and writing about what questions they have and what they have learned throughout the entirety of the project.

**C. Subject/ Relation: Information Research/ Library Media Use/** Even at this very young age, students will learn about the Information Search Process and how to find and use mostly non-fiction library resources. Students will learn how to generate research questions related to the Unit theme.

**D. Possible Curricular Extension:**

Some art will be included within this unit but it is certainly an area that could be expanded. Students could study artistic representations of the plant and animal life of Glacier and then select a favorite artist or particular genre of art for additional research. Math could certainly be expanded within this unit. Measuring, weighing, analyzing life spans, etc. could all play an important role in learning more about the plants and animals of the park.

## Adapted Learning

**A. Developmental Level:**

Erickson: School age years, psychosocial crisis/ Industry vs. Inferiority. Am I good at what I do? Moving from play to focus on academic success. Child is realizing they can

gain acceptance by doing well in school. Praise children and encourage them for doing their best.

Maslow: Basic needs/ physiological, safety, and love and belonging must be met in order for students to be able to build esteem. In order to do well in school, the first three levels of Piaget pyramid must be secure.

Piaget: Pre-operational into concrete operational. Has developed a use of language and is able to think symbolically. Starting to solve concrete problems in a logical fashion.

**B. Multiple Intelligences:** This unit contains many activities and a lot of opportunities for customizing.

**C. Gender:** Plants and animals tend to be a subject that appeals to both girls and boys. Allowing students to have a choice regarding which plants and animals to study helps alleviate any concerns in this area.

**D. Socioeconomics:** All materials needed to do well and exceed the unit requirements will be provided for students. All students in our area have extensive knowledge and experience with plants and animals. Rich or poor, in Montana, you are surrounded by wilderness and your family members probably hunt or garden for pleasure or subsistence.

**E. Rural/ Urban:** Obviously this unit would work best in a rural environment, but certainly this type of unit could be adapted for use almost anywhere! Thankfully, even in our most populated cities there are green spaces and animals to explore. Zoos and local parks could be utilized even on the smallest of budgets.

**F. Race/ Culture/ Ethnicity:** The majority of students at the East Glacier Park school are members of, or descendants of, the Blackfeet tribe. All plants and animals will be represented using both Blackfeet and English names (as provided by Blackfeet Language teacher). Cultural significance of plants and animals will also be covered with students as they are selecting their plants and animals, learning about them, and preparing their projects. Students will be expected to know and use the Blackfeet terminology during their community presentations.

**G. Adaptations:** The special education teacher and aide will be used to help with any students with a learning disability. The use of technology within many parts of the project will help with any writing/ handwriting issues. Audio books could also be made available as additional resources on plants and animals. Students that have extreme social phobias could present their findings/ research in other ways during the Community Gallery Walk. The project is multifaceted and easily adaptable depending on the needs and strengths of each individual student.



## **H. Extensions:**

### **Gifted Extensions**

This unit already allows for a lot of adaptation/ personal choice that could be used to address the needs of gifted students. Areas in which the student is gifted (math, art, writing) could be expanded and highlighted within the original project.

### **Regular Ed. Extensions**

This unit could easily be adapted/ expanded into a year-long science curriculum/ theme for the 1st grade class. The year long unit could follow the existence of the plants and animals through the various seasons. Certainly more Science and Math could be introduced within the unit as well as writing and reading. The year-long unit could still culminate in the Community Gallery Walk, Glogs, and pamphlets.

## **21. Works Cited/ Resources:**

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Student Worksheet For Week One: Lesson One below:

[Student Worksheet/ Handout for Week One: Lesson One](#)

