First Grade

Objective:
To identify, compare, and contrast the characteristics of Humans & Birds.

Tools to bring (optional):
- feathers
- bone
- xray picture (leg structure)

Performance tasks:
Students will predict how many similarities and differences they can find between Humans and Birds. If students do not participate you may provide the first or second example until they join and/or show picture cards or artifacts (ie. bones, feathers, x-ray pictures) for visual aid. Students may say any of these answers in any topic.
To conclude lesson, students will be able to identify similarities and differences between birds and humans, and relate to conservation concepts from Liberty (trash board).

Classroom management:
Explain necessity of being quiet throughout presentation.
Pick one (or alternate) quiet student(s) to tally on board similarities and differences.
May hold feathers if respectful

Topic: Physical Differences
Have students identify the physical differences between Humans and Birds:
- wings/arms
- feathers/skin/hair
- claws/nails
- beak/teeth
- egg/birth
- legs (knees)
- bones
- habitat
- food
- tools: hands/claws/beak

Topic: Physical Similarities
Have students identify similarities between humans and birds:
- have same basic body structure (head, body, limbs, mouth, bones, etc.)
- have same basic needs: food, water, shelter and space.
- stages of life: baby, juvenile, adult.
- diurnal
- legs (knees are inside body)

Further Discussion:
Not all flying animals are birds, not all birds can fly.

What other animals can fly?
- bats
- insects

Which birds cannot fly?
- ostriches
- penguins
- emus
- kiwi

First Grade

Topic: Conclusions and relate conservation concepts

- What did you learn today from our discussion about birds? Review similarities and differences broadly.
- Were the results what you expected? Why/why not?

What are some of the ways we (humans) get the things we need?	**How do birds get what they need to live?**
- get food from store - water from tap - live in houses for shelter	- forage/hunt for food- discuss dangers to birds (lead poisoning from bullets, pesticides, etc.) - build own nest- discuss dangers to birds (tree trimming in spring, trash, etc.) - find water- discuss dangers to birds (chemicals left out, chemicals dumped, scarcity) - Discuss any other dangers to birds, emphasizing human responsibility of environment

Topic: Sustainable Solutions

Discuss conservation: preservation, protection, safeguarding

Prompt students to predict what they can do to conserve and help birds not become harmed by the human environment.

- - reduce, reuse and recycle
- - pick up after yourself when you're done camping/fishing, etc.
- - don't litter
- - trim trees in another time of year
- - make a bird house
- - make a bird feeder
- - plant more trees
- - put in a bird bath or pond for wildlife
- - preserve water by taking showers instead of baths and turning off water when brushing teeth
- - don't use chemicals for pesticides, or dump chemicals into ground
- - keep air quality clean by driving less, using less electricity, consuming less

First Grade

Az Standards:
**Strands 1, 2 and 3 are designed to be explicitly taught and embedded within each of the content strands 4, 5 and 6, and are not intended to be taught in isolation. The processes, skills, and content of the first three strands are designed to "umbrella" and compliment the content of Life Science, Physical Science, and Earth and Space Science.

Strand 1: Inquiry Process
Concept 1: Observations, Questions and Hypotheses
PO1: Compare common objects using multiple lenses
PO2: Ask questions based on experiences with objects, organisms, and events in the environment.
PO3: Predict results of an investigation based on life, physical, and Earth and Space sciences. (eg. Animal life cycles, physical properties, Earth materials)
Concept 2: Scientific testing
PO1: Demonstrate safe behavior and appropriate procedures (eg. Use of instruments, materials, organisms) in all science inquiry.
PO2: Participate in guided investigations in life, physical, and Earth and Space sciences.
PO4: Record data from guided investigations in an organized and appropriate format.
Concept 3: Analysis and Conclusions
PO2: Compare the results of the investigation to predictions made prior to the investigation.
Concept 4: Communication
PO1: Communicate the results of an investigation using pictures, graphs, models, and/or words.

Strand 4: Characteristics of Organisms
Concept 1: Characteristics of organisms
PO1: Identify the following as characteristics of living things:
- Growth and development
- Reproduction
- Response to stimulus
PO2: Compare the following observable features of living things:
- Movement: legs/wings
- Protection: skin, feathers, tree bark
- Respiration lungs/gills
- Support: plant stems, tree trunks
PO3: Identify observable similarities and differences (eg. Number of legs, body coverings, size) between/among different groups of animals.
Concept 3: Organisms and Environments
PO2: Compare habitats (eg. Desert, forest, prairie, water, underground) in which plants and animals live.