Grade: 1

Program Title: Iowa Animal Adaptations

Related Iowa Core Performance Expectations

1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs. [Clarification Statement: Examples of human problems that can be solved by mimicking plant or animal solutions could include designing clothing or equipment to protect bicyclists by mimicking turtle shells, acorn shells, and animal scales; stabilizing structures by mimicking animal tails and roots on plants; keeping out intruders by mimicking thorns on branches and animal quills; and, detecting intruders by mimicking eyes and ears.

1-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents. [Clarification Statement: Examples of patterns could include features plants or animals share. Examples of observations could include leaves from the same kind of plant are the same shape but can differ in size; and, a particular breed of dog looks like its parents but is not exactly the same.] [*Assessment Boundary: Assessment does not include inheritance or animals that undergo metamorphosis or hybrids.*]

Future Considerations: Blend this program with the unit storyline developed by the classroom teacher.

Program alignment with the Iowa Core Science Standards:

Disciplinary Core Ideas (DCIs)	**Investigative Question**	**Investigative Phenomena**	**Practices (SEPs) Students will:**	**Cross Cutting Concepts (CCCs) Students will identify:**
LS1.A Structure and Function All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. **LS3.B Variation of Traits** Individuals of the same kind of animal are recognizable as similar, but can also vary in many ways.	What is it about animals that allows them to survive where they live? How are different animals adapted to their environments?	Live animals, mounts, coverings, tracks or photos of animals	**Ask questions and define problems** when they determine what it will take for an animal to survive in its habitat **Students analyze and interpret data** Using observations, students describe patterns and/or relationships in the natural world to answer scientific questions and solve problems. **Engage in argument from evidence** when they explain how the adaptations are a solution to a problem	**Structure and Function** when examining the structure of some animals that allows them to survive. **Patterns** when they see similar adaptations in similar habitats

			Optional: **Use models** (track molds) **Construct explanation and design solutions** when they invent an animal	

Program components: The presenter will have students use the CCCs, the SEPs and the phenomena to figure out how to answer the investigative question and to grasp the disciplinary core ideas.

Using local naturalists preferred program:

- Hands-on examination of live reptiles, furs, skulls, mounts, feet
- Making animal tracks from molds or actual tracks
- Matching adaptations to habitat using various materials
- Exploring various habitats and observing adaptations
- Invent an animal game
- Animal Adaptations
- Reptiles and Amphibians of Iowa
- Animal feet
- Animal beaks
- Bird Beak Buffet

Extension activities:

Teachers can have each student observe a specific animal in its habitat for a period of time and journal, draw, create a model, and present to the group.