

Lesson Plan: Corvid Detectives - An Intelligence Investigation

Materials Needed:

- **Research Tools:** Computer with internet access, library card or access to books, notebook or digital document for note-taking.
 - **Recommended Digital Resources:** YouTube (for channels like National Geographic, BBC Earth, Cornell Lab of Ornithology), Audible/Libby (for audiobooks on animal intelligence), university websites with ornithology departments.
 - **Project Creation Tools (choose based on project):**
 - Poster board, markers, colored pencils, and drawing paper.
 - Video recording device (phone or camera) and simple video editing software (like iMovie, Clipchamp, or CapCut).
 - Word processing software (Google Docs, Word) or presentation software (PowerPoint, Google Slides).
 - Clay, recycled materials (cardboard tubes, boxes), or building blocks for designing puzzles.
 - **Optional Field Study Tools:** Binoculars, a bird identification app or field guide, a dedicated "observation notebook."
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Lesson Details

Subject(s): Science (Biology, Ethology/Animal Behavior), Language Arts (Research, Writing, Public Speaking), Art & Design

Grade Level: Age 11 (Approximately 6th Grade)

Time Allotment: This is a flexible, multi-week passion project. Plan for 3-5 sessions per week for 2-3 weeks, with each session lasting 45-60 minutes.

1. Learning Objectives (Your Mission)

By the end of this project, you will be able to:

- **Identify and Compare:** Clearly describe the key physical and behavioral differences between crows and ravens.
 - **Analyze Intelligence:** Explain at least three specific examples of intelligent behavior in corvids (like tool use, problem-solving, or social memory).
 - **Synthesize Information:** Gather information from multiple sources (videos, articles, books) and organize it to support a central idea.
 - **Create and Present:** Design and produce a creative project that effectively teaches others about the intelligence of crows and ravens.
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2. The Hook (15-20 minutes)

Let's start by sparking your curiosity! Watch a short, fascinating video together. Search for "**BBC Crow Vending Machine**" or "**Crow Solves an 8-Step Puzzle.**"

After watching, discuss these questions:

- What surprised you the most about what the crow did?
- Do you think all birds are this smart? Why or why not?
- This project is about crows AND ravens. What do you already know about them? What do you wonder?

Let's write down our "I wonder..." questions. These will guide our investigation!

3. The Investigation (Broken into several sessions)

Phase 1: Becoming a Detective - Research & Note-Taking

Your first job is to gather clues. Your goal is to become an expert on what makes crows and ravens so special. Use a notebook to create two sections: one for Crows and one for Ravens.

For each bird, try to find answers to these questions:

- **Who are they?** What do they look like (size, beak shape, tail feathers)? Where do they live? What do they sound like?
- **How do they live?** Are they social (live in big groups) or more solitary?
- **How are they smart?** Look for stories and studies about:
 - **Tool Use:** Do they use objects to get food?
 - **Problem-Solving:** How do they figure out tricky puzzles?
 - **Memory & Facial Recognition:** Can they remember people?
 - **Social Intelligence:** Do they play, hold "funerals," or teach each other?

Teacher Tip: Guide the student to use a simple Venn Diagram to visually compare and contrast the two birds as they gather information. This will be very helpful for the final project.

Phase 2: Choosing Your Creative Mission - The Project

Now that you're an expert, it's time to share your knowledge! This is where you get to be creative. Choose **one** of the following projects to complete. This is your chance to show what you've learned in a fun way.

- **Option A: The "Corvid News Network" Report**

The Goal: Create a 2-3 minute video news report. You are the field reporter sharing a "breaking story" about crow and raven intelligence.

Must Include: An introduction, a segment comparing the physical traits of crows vs. ravens, and a feature on a specific example of their intelligence (like the puzzle-solving you watched).

- **Option B: The "Urban Explorer's Field Guide"**

The Goal: Design a multi-page, illustrated guide (digital or on paper) for someone who wants

to identify crows and ravens in their own neighborhood.

Must Include: Detailed drawings of each bird, a "How to Tell Them Apart" checklist, a map of where they live, and a section titled "Amazing Feats of Intelligence" with illustrations.

- **Option C: The "Aesop's Fable Challenge" Designer**

The Goal: The fable of the crow and the pitcher shows a bird solving a problem. Your job is to design your own intelligence test for a corvid. You don't have to build it with real birds!

Must Include: A detailed drawing or model of your puzzle, a step-by-step explanation of how a bird would solve it, and a written paragraph explaining which specific type of intelligence (e.g., causal reasoning, tool use) your puzzle is designed to test.

- **Option D: "A Raven's Diary" - Creative Writing**

The Goal: Write a short story (500-750 words) from the first-person perspective of a crow or a raven.

Must Include: The story should showcase the bird's daily life and challenges, weaving in at least three factual examples of its intelligence that you discovered during your research. For example, describe how it remembers the face of a kind human or uses a stick to get a grub.

4. Differentiation (Side Quests)

- **Need a little help?** We can focus on just one bird instead of two. I can also provide you with a pre-made template for your notes or for the Field Guide project to help you get organized.
- **Ready for an extra challenge?** Try to find a safe, public place (like a park) to do some real-life observation. Take your notebook and see if you can spot any crows. Document their behavior. Can you see them interacting with each other or their environment in interesting ways? (Remember to always observe wildlife from a respectful distance).

5. Assessment & Reflection (The Debrief)

When your project is complete, you will present it! We will then talk about the project using these questions as a guide:

- **Clarity of Comparison:** How well did your project explain the key differences between crows and ravens?
- **Evidence of Intelligence:** Did you clearly showcase specific, research-based examples of their intelligence?
- **Creativity & Effort:** Did you have fun with the project and make it your own? Is it clear that you put thought and care into it?
- **Presentation:** Did you explain your project clearly and confidently?

Final Reflection Questions:

- What was the single most fascinating thing you learned about these birds?
- Did this project change how you think about birds or animals in general?

- If you were to continue this investigation, what new question would you want to explore next?