

Data Detectives: Exploring the "Why" Behind the World

Subject: Social Science / Research Skills

Target Age: 11 Years Old (Grade 6)

Duration: 60-90 Minutes

Learning Objectives

By the end of this lesson, the learner will be able to:

- Distinguish between **Quantitative** (numbers) and **Qualitative** (stories/feelings) research.
- Identify and define three major types of qualitative research: **Ethnography**, **Narrative Inquiry**, and **Case Study**.
- Choose the appropriate research method for a real-world scenario.
- Design a "Mini-Research Plan" to answer a specific question using qualitative methods.

Materials Needed

- A notebook or "Researcher's Journal"
- A pen and colorful markers
- A small bag of multi-colored candies (M&Ms or Skittles) or a handful of different LEGO bricks
- Access to a "subject" (a family member, a pet, or even a specific room in the house)
- Printable or hand-drawn "Data Detective" badges (optional)

1. Introduction: The Hook (10 Minutes)

The Mystery of the Broccoli Ice Cream:

Imagine a local ice cream shop releases "Broccoli Blast" ice cream. They sell exactly 0 scoops in a week. The owner knows the *number* (0), but they don't know *why*. Is it because of the color? The smell? The name? Or do people just hate broccoli in dessert?

Discussion Question: How would you find out exactly why people didn't buy it? Would you give them a math test, or would you talk to them?

The Transition: "In the world of science, numbers are called *Quantitative* data. But the stories, feelings, and 'whys' are called *Qualitative* data. Today, we are becoming Qualitative Detectives."

2. Body: Content & Practice (40 Minutes)

Part A: The "Big Three" Methods (I Do)

Explain that qualitative researchers aren't just "asking questions"; they use specific "detective styles."

Introduce these three:

1. **Ethnography (The Cultural Explorer):** This is when a researcher "lives" with a group to understand their culture.
Example: Living with a group of gamers for a month to understand why they use certain slang.
2. **Narrative Inquiry (The Storyteller):** This focuses on one or two people and their life stories.
Example: Interviewing your Great-Grandpa to find out what it was like to go to school 70 years ago.
3. **Case Study (The Deep Diver):** This looks at one specific event, place, or organization in great detail.
Example: Studying one specific successful lemonade stand to see exactly what made it work.

Part B: The Candy Experiment (We Do)

Let's practice the difference between Quantitative and Qualitative right now.

1. Place your bag of candy or LEGOs on the table.
2. **The Quantitative Task:** Count how many red ones there are. Record the number. (This is math!)
3. **The Qualitative Task:** Pick one piece. Describe its texture, the way the light hits it, and how it makes you feel when you look at it. Does it remind you of a memory? Write a three-sentence "narrative" about this specific piece.
4. **Reflection:** Which task told you more about the *experience* of the candy?

Part C: Choose Your Method (We Do)

Read the following scenarios and decide which of the "Big Three" methods fits best:

- **Scenario 1:** You want to know how the "Skater" kids at the local park decide who gets to go next on the half-pipe. (*Answer: Ethnography—you need to hang out and watch the group!*)
- **Scenario 2:** You want to know the history of how your mom decided to become a teacher. (*Answer: Narrative—you are looking for her personal story.*)
- **Scenario 3:** A tree in your backyard is turning purple while all the others stay green. You want to investigate just that one tree. (*Answer: Case Study—you are focusing on one specific "case."*)

3. Application: The "Data Detective" Project (You Do) (30 Minutes)

Now, it's time for the student to conduct a mini-qualitative study. Choose **one** of the following missions:

Option A: The Kitchen Ethnography

Sit in the kitchen for 15 minutes while someone is cooking or cleaning. Don't help! Just watch. Write down the "unspoken rules" of the kitchen. Who goes where? What sounds are made? What is the "culture" of the kitchen?

Option B: The Toy Narrative

Interview a family member about their favorite toy when they were 11. Ask: "How did it make you feel?" "Where did you play with it?" "What happened to it?" Write down their story.

Option C: The Room Case Study

Pick one room in your house. Investigate it like a crime scene. What do the objects in the room tell us about the person who lives there? (e.g., "The pile of books suggests they like adventure.")

Success Criteria: Your "Research Report" must include:

- The Method used (Ethnography, Narrative, or Case Study).
- Three detailed observations or interview quotes.
- One "Why" conclusion (e.g., "The kitchen is busy because it's the heart of the house.")

4. Conclusion: Closure & Recap (10 Minutes)

- **Summary:** Qualitative research is about depth, not breadth. It's about the "Quality" of information.
- **Recap:** Have the student explain the difference between a "Cultural Explorer" (Ethnography) and a "Storyteller" (Narrative).
- **Final Thought:** "Next time you see a 'Top 10' list (Quantitative), remember that behind those numbers are 10 unique stories (Qualitative) waiting to be told!"

Assessment

Formative: Checking the "Choose Your Method" scenarios for accuracy during the lesson.

Summative: The "Data Detective" Project. Evaluate based on whether the student correctly applied the chosen method and focused on descriptive "Qualitative" details rather than just counting things.

Adaptability & Differentiation

- **For Struggling Learners:** Focus only on *Narrative Inquiry*. Have them interview you about your day. Scaffolding: Provide a list of "Interview Starter" questions (Who, What, Where, Why).
- **For Advanced Learners:** Introduce the concept of **Researcher Bias**. Ask: "How does *your* opinion change what you see when you are watching the kitchen?"
- **Digital Variation:** Instead of writing in a notebook, the student can record a "Podcast Interview" (Narrative) or a "Video Documentary" (Ethnography) using a phone or tablet.