Name _____

Loop It Like a Pro

Ever notice how every time you fix something - a LEGO build, a video edit, or a ChatGPT prompt - it gets a little better? That's called *iterative refinement*, and it's what real creators, scientists, and problem-solvers do all the time. In this activity, you'll trace how a simple idea improves step by step through feedback, reflection, and revision. Read the sample conversation below and then explain which stage of the **Iterative Refinement Loop** each part shows, along with what's happening in that moment. Be thoughtful and descriptive - this is about seeing how ideas evolve, not just identifying steps.

The Conversation: "The Mystery of the Vanishing Homework"

Student (1): Write a story about a missing homework assignment.

ChatGPT (1): Once upon a time, a student named Alex lost their homework on the way to school. They searched their backpack but couldn't find it anywhere.

Student (2): Can you make it more exciting, like a mystery story?

ChatGPT (2): Alex noticed muddy footprints near the locker. A secret note said, "Meet me at the library." It was clear someone had taken the homework on purpose!

Student (3): Add a twist ending - something no one expects.

ChatGPT (3): Alex followed the clues, only to discover the "thief" was actually their future self, sent back in time to save them from turning in the wrong homework!

Student (4): Perfect - that's exactly what I wanted. Thanks!

<u>**Your Task: Refinement Cycle Mapping**</u>

Now that you've read the exchange, look closely at each turn in the conversation. For each numbered part, decide which stage of the **Iterative Refinement Loop** it represents - *Prompting*, *Evaluation*, *Refinement*, or *Reflection*. Then, write a few thoughtful sentences explaining what's happening there and why it fits that stage. Use complete sentences and show your reasoning.

Start your responses like this: In **Student (1)**, the stage is **Prompting** because the student is giving ChatGPT a starting task without much detail. This is the first spark of the loop.

In **ChatGPT (1)**, the stage is **Evaluation**, because now the student must decide if the response meets the goal. Continue this pattern for each part, showing how the loop keeps circling until the student is satisfied.

<u>**Think Deeper**</u>

1. Which part of the conversation shows the biggest improvement in the story? Explain why that step mattered most.

2. At what point does the student recognize that the loop can stop? How can you tell?

3. How could this same refinement process help you with your own writing, art, or projects? Give an example from your life.