3rd Grade Lesson Plan: Talking to AI About Math

Common Core State Standards (CCSS) Alignment:

- **CCSS.MATH.CONTENT.3.OA.A.1**: Interpret products of whole numbers (e.g., 5 × 7 represents the total number in 5 groups of 7 objects each).
- **CCSS.MATH.CONTENT.3.OA.B.5**: Apply properties of operations as strategies to multiply and divide.
- **CCSS.MATH.CONTENT.3.NBT.A.2**: Fluently add and subtract within 1,000 using strategies and algorithms.
- **CCSS.MATH.PRACTICE.MP2**: Reason abstractly and quantitatively (understanding how AI processes numbers).

Lesson Title: Talking to AI About Math

Objective:

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

1. Use AI to help solve and check math problems.
2. Understand how AI processes math and provides answers.
3. Recognize real-world applications of AI in solving mathematical questions.

Materials Needed:

✅ Device with access to the **Elementary School AI Voice Assistant**
✅ Whiteboard and markers
✅ Math problem cards (multiplication, addition, subtraction)
✅ Paper and pencils for problem-solving

Lesson Structure:

1. Introduction (10 minutes)

👩‍🏫 **Teacher-Led Discussion:**

- Ask: *"Have you ever used a calculator or asked a smart device for help with a math question?"*
- Explain that **AI can do math too!** It listens, thinks, and gives answers based on numbers and patterns.
- Show an example: *"What is 6 × 3?"* Let students answer, then ask the **AI voice assistant** to check.
- Ask: *"How do you think AI figures out the answer?"* (Guide them toward understanding AI follows rules like we do in math.)

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2. Activity (15 minutes)

🤖 **Part 1: Solving Math Problems with AI**

- Divide students into **pairs or small groups**.
- Give each group **a set of math problems** (addition, subtraction, multiplication).
- Students **solve the problems on their own first**.
- Then, they **ask the AI assistant to check their answers** (e.g., *"What is 245 + 127?"*).
- Discuss: *"Did the AI answer match yours? How did you solve it differently?"*

👀 **Part 2: AI Math Challenges**

- Ask the AI assistant: *"Give us a multiplication problem."*
- Have students **solve it before the AI gives the answer**.
- Repeat with different **levels of difficulty** (e.g., two-digit addition, three-digit subtraction).

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3. Discussion & Reflection (10 minutes)

🗣️ **Guided Class Discussion:**

- Ask: *"How do you think AI learned to do math?"* (Guide them toward understanding AI follows rules, just like we do.)
- Discuss real-life AI **math helpers**:
    - AI in **calculators**
    - AI in **shopping apps** (adding up prices)
    - AI in **video games** (keeping score)

✍ **Closing Activity:**

- Have students **write a question they would like to ask an AI about math**.
- Exit question: *"Why do you think AI is useful for checking math work?"*

Assessment:

✅ Observe students as they solve problems and check with AI.
✅ Ask guiding questions:

- "How did you solve this problem?"
- "Did AI solve it the same way as you?"
  ✅ Use students' written AI questions as an informal assessment of their understanding.

Extension Activities:

📚 **For Early Finishers:**

- Ask the AI: *"Give me a word problem with multiplication."* Have students **solve it and explain their thinking**.
  🔍 **For Extra Challenge:**
- Introduce **division problems** and have students test how AI handles them.

By incorporating the **AI voice assistant**, students will **engage in interactive problem-solving**, developing both math skills and an understanding of how AI processes numbers! 🚀🎉