5th Grade Lesson Plan: Understanding AI Decision-Making Through Data

Common Core State Standards (CCSS) Alignment:

- **CCSS.MATH.CONTENT.5.OA.B.3:** Analyze patterns and relationships.
- **CCSS.MATH.CONTENT.5.MD.B.2:** Represent and interpret data.

Lesson Title: Understanding AI Decision-Making Through Data

Objective:

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

1. Understand how AI makes decisions based on data.
2. Recognize the role of data collection and interpretation in AI.
3. Analyze and create simple datasets to explore AI-driven decisions.

Materials Needed: ✅ Chart paper and markers
✅ Sample datasets (printed or digital)
✅ Access to an AI voice assistant at Elementary School
✅ Computers or tablets with internet access

Lesson Structure:

1. Introduction (10 minutes)

💡 **Teacher-Led Discussion:**

- Ask: "Have you ever noticed how AI can recommend videos or predict what you want to search?"
- Explain that AI makes decisions based on patterns in data.
- Discuss real-world examples (e.g., recommendation systems, weather predictions).

2. Activity (15 minutes)

🔍 **Exploring AI and Data**

- Provide students with simple datasets (e.g., favorite school subjects, daily weather patterns).
- Ask students to identify trends and patterns in the data.
- Explain how AI looks at large sets of data to find similar patterns and make predictions.

🤖 **AI in Action**

- Demonstrate using an AI voice assistant to answer a data-driven question.
- Discuss how AI might use past information to provide an answer or make a suggestion.

3. Hands-On Practice (15 minutes)

📝 Creating a Dataset & AI Simulation

- Divide students into small groups and have them create a dataset (e.g., class preferences for recess activities).
- Have them analyze the data and predict possible AI decisions based on the trends.
- Compare their predictions with AI-generated suggestions from an online tool.

4. Discussion & Reflection (10 minutes)

🗣️ Guided Class Discussion:

- Ask: "How does AI use data to make smart decisions?"
- Discuss potential biases in AI decision-making and the importance of diverse datasets.

✍️ Closing Activity:

- Have students write a question they would like to ask an AI about data predictions.
- Exit question: "Why do you think AI needs a lot of data to work well?"

Assessment: ✅ Observe student engagement in discussions and activities.
✅ Review students' dataset analysis and predictions for accuracy and depth of understanding.

Extension Activities: 📚 For Early Finishers:

- Encourage students to explore real-world datasets (e.g., weather reports, sports statistics) and find patterns.

🔍 For Extra Challenge:

- Introduce basic coding concepts related to data sorting and AI decision-making using platforms like Scratch or Google Sheets.

By engaging in hands-on data analysis and AI exploration, students will develop a foundational understanding of AI decision-making! 🚀