Lesson Plan — Mood2Emoji App (Ages 12–16)

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Topic: Build a Mood2Emoji App — Introduction to Text Classification
Target Age Group: 12–16 years
Duration: 60 minutes
Goal: Help students understand how Artificial Intelligence can interpret human emotions from text and visualize it as emojis.

Lesson Goals:

• Create an end-to-end interactive AI project.
• Introduce students to Natural Language Processing (NLP).
• Understand sentiment polarity (positive, negative, neutral).
• Learn to build a Streamlit web app that converts moods into emojis.
• Promote responsible and ethical use of AI among young learners.

Topics Introduced:

1. What is Artificial Intelligence and Natural Language Processing (NLP)?
2. Sentiment Analysis — understanding how machines read human emotion.
3. The concept of text polarity (from -1 to +1).
4. Emoji mapping — turning text into visual emotions.
5. Data filtering and child-safe AI responses.
6. Ethical AI and empathy in technology.

Detailed Lesson Flow:

Time	Step	Activity
0–10 min	Warm-Up	Teacher introduces AI using fun examples (e.g., Alexa, ChatGPT). Students guess h
10–20 min	Concept Building	Explain sentiment analysis. Discuss positive, neutral, and negative sentences with e
20–30 min	Demo	Show the Mood2Emoji web app built with Streamlit and TextBlob. Type live example
30–45 min	Hands-On Coding	Students write or observe code snippets that classify text mood and display emojis.
45–55 min	Discussion	Explain what polarity scores mean. Demonstrate teacher mode showing (-1 to +1) sc
55–60 min	Wrap-Up & Reflection	Group sharing: How can AI make communication better or worse? Talk about safety

Activity Explanation:

Students will open a pre-built Streamlit app named **Mood2Emoji**. They will type sentences like:
“I am feeling awesome today!” → ■ (Positive)
“It’s a boring day.” → ■ (Neutral)
“I am sad about the test.” → ■ (Negative)

Then, they will modify the code to add their own emoji mappings. The teacher explains how the app uses **TextBlob** for sentiment polarity and converts it into visual feedback.

Learning Outcomes:

• Students understand how AI reads emotions through text.
• Gain hands-on experience with a real coding project (Streamlit + TextBlob).
• Develop logical thinking and flowchart understanding.
• Recognize ethical and responsible AI design.
• Increase curiosity about Artificial Intelligence applications in daily life.

Materials Required:

• Computer with internet access.
• Python (Streamlit, TextBlob libraries installed).
• Pre-created **app.py** file.
• Teacher presentation slides (optional).
• Student worksheet or reflection notebook.

Assessment Criteria:

• Active participation during discussion.
• Ability to identify sentiment polarity correctly.
• Successful execution of Mood2Emoji app.
• Reflection on AI ethics and empathy.

Conclusion:

This lesson blends creativity, coding, and emotional intelligence. By the end of 60 minutes, students not only learn the technical aspect of NLP but also appreciate how responsible AI design can make technology empathetic and inclusive.

Extension Activity (Optional):

• Create your own emoji dictionary (add more moods).
• Modify the app to change background color based on mood.
• Write a short paragraph: “How can AI understand feelings better?”
• Explore other NLP tools like HuggingFace Sentiment models.