AI Education Curriculum: Lessons 5-6

Lesson 5: Hands-On AI - Using AI Tools Effectively

Duration: 90 minutes (can be split into two 45-minute sessions)

Learning Objectives

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

- Navigate and use at least 3 different AI tools effectively
- Write clear, specific prompts that produce desired outputs
- Identify the strengths and limitations of various AI platforms
- Apply best practices for fact-checking and verifying AI-generated content

Materials Needed

- Computers/tablets with internet access
- Student accounts for various AI platforms (or demo accounts)
- Handout: "Prompt Engineering Checklist"
- Assessment rubric for tool exploration

Lesson Structure

Opening (10 minutes)

Hook: Show two AI-generated outputs - one excellent, one poor - from the same prompt to different tools. Ask: "What made the difference?"

Today's Mission: Students will become "AI Tool Detectives" - exploring, testing, and mastering different AI platforms.

Core Content Delivery (25 minutes)

Popular AI Tools Overview

Text Generation Tools:

- **ChatGPT (OpenAI)**: Conversational AI, great for brainstorming, writing assistance, explanations
  - Strengths: Natural conversation, creative writing, problem-solving
  - Limitations: Knowledge cutoff, can hallucinate facts
- **Claude (Anthropic)**: Helpful for analysis, research, and detailed explanations

    - Strengths: Careful reasoning, good at following instructions
    - Limitations: More conservative, may decline some requests
- **Microsoft Copilot**: Integrated with Office suite, web search capabilities
    - Strengths: Real-time information, Office integration
    - Limitations: More basic than specialized tools

Image Generation Tools:

- **DALL-E 2/3**: Natural language to image, good for realistic and artistic styles
- **Midjourney**: High-quality artistic images, strong aesthetic sense
- **Stable Diffusion**: Open-source, highly customizable, runs locally

Code Generation Tools:

- **GitHub Copilot**: Code completion and generation within IDEs
- **Replit**: Web-based coding with AI assistance

Productivity Tools:

- **Notion AI**: Writing assistance within Notion workspace
- **Grammarly**: Grammar, tone, and style improvement

Hands-On Activities (40 minutes)

Activity 1: AI Tool Exploration (All Levels - 20 minutes)

Instructions:

1. Form groups of 2-3 students
2. Each group receives 3 different AI tools to test
3. Use the same prompt across all three tools: "Create a study guide for [subject you're currently learning]"
4. Document differences in output quality, style, and usefulness

Debrief Questions:

- Which tool gave the most helpful output? Why?
- How did the tools differ in their approach to the same request?
- What surprised you about the tools' capabilities?

Activity 2: Prompt Engineering Workshop (Intermediate+ - 20 minutes)

The Prompt Engineering Challenge:

Students work through increasingly complex prompting scenarios:

Round 1 - Basic Prompt: "Write about climate change"

Round 2 - Improved Prompt: "Write a 200-word explanation of climate change causes for a 10th-grade audience, including 3 specific examples"

Round 3 - Advanced Prompt: "You are a climate scientist speaking to 10th graders. Write a 200-word explanation of the top 3 human causes of climate change. Include one specific statistic for each cause and end with one actionable step students can take. Use an encouraging but informative tone."

Prompt Engineering Checklist:

- ☐ Specify your role/audience
- ☐ Define the format (length, structure)
- ☐ Include specific requirements
- ☐ Set the tone/style
- ☐ Provide context or examples
- ☐ Ask for specific elements (statistics, examples, etc.)

Activity 3: Multi-Tool Workflow Creation (Advanced - 15 minutes)

Challenge students to create a workflow using 3+ AI tools for a specific project:

Example Workflow: "Create a Presentation on Renewable Energy"

1. ChatGPT: Generate outline and key talking points
2. DALL-E: Create custom images for slides
3. Grammarly: Polish the final script
4. Notion AI: Organize research notes and sources

Students present their workflows and explain their tool choices.

Best Practices Deep Dive (10 minutes)

Effective Prompting Strategies

1. **Be Specific**: Instead of "help with math," try "explain how to solve quadratic equations using the quadratic formula, with a step-by-step example"
2. **Provide Context**: "I'm a high school student preparing for finals..."
3. **Use Examples**: "Write in a style similar to..." or "Format like this example..."

4. **Iterate**: Start simple, then add details based on the response

Fact-Checking AI Outputs

- **Cross-reference**: Check claims against reliable sources
- **Look for specifics**: Vague statements are red flags
- **Verify dates and statistics**: AI can mix up timeframes
- **Use multiple sources**: Don't rely on AI alone for important information

When to Use (and Not Use) AI

Good for:

- Brainstorming and ideation
- First drafts and outlines
- Learning new concepts
- Automating repetitive tasks

Avoid for:

- Final answers without verification
- Sensitive personal decisions
- Current events (without fact-checking)
- Academic integrity violations

Closing & Assessment (5 minutes)

Exit Ticket: Students write one new thing they learned about AI tools and one strategy they'll use in their next AI interaction.

Lesson 6: AI and Society - Impact on Jobs, Privacy, and Power

Duration: 90 minutes (can be split into two 45-minute sessions)

Learning Objectives

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

- Analyze how AI is changing the job market and identify strategies for adaptation
- Evaluate privacy risks in AI systems and make informed decisions about data sharing
- Examine how AI affects power distribution in society

- Propose solutions for ensuring equitable AI development and deployment

Materials Needed

- Research handouts on job market trends
- Privacy audit worksheet
- Case study materials on AI bias and power
- Poster paper or digital collaboration tools

Lesson Structure

Opening (10 minutes)

Hook: Show a timeline of jobs that have disappeared (elevator operator, switchboard operator) and new jobs that emerged (web designer, social media manager). Ask: "What pattern do you notice?"

Essential Question: How can we shape AI's impact on society to benefit everyone?

Core Content Delivery (30 minutes)

Economic Impact of AI

Jobs AI May Replace:

- **Routine Cognitive Tasks**: Data entry, basic analysis, simple customer service
- **Pattern Recognition**: Medical imaging analysis, legal document review
- **Predictable Physical Tasks**: Assembly line work, driving, warehouse operations

Jobs AI Creates:

- **AI Development**: Machine learning engineers, AI trainers, prompt engineers
- **AI Oversight**: AI auditors, ethics specialists, human-AI interaction designers
- **Enhanced Roles**: Teachers using AI tools, doctors with AI diagnostics, creative professionals with AI assistance

The Reskilling Imperative:

- **Continuous Learning**: Skills needed will evolve rapidly
- **Human-Centric Skills**: Creativity, emotional intelligence, complex problem-solving
- **AI Collaboration**: Learning to work effectively with AI systems

Economic Inequality Concerns:

- **The AI Divide**: Gap between those with AI access/skills and those without
- **Concentration of Power**: Large tech companies controlling AI development
- **Global Disparities**: AI benefits may not reach all communities equally

Privacy in the AI Age

Data Collection Mechanisms:

- **Explicit Data**: Information you knowingly provide
- **Implicit Data**: Behavior patterns, preferences inferred from usage
- **Sensor Data**: Location, biometrics, environmental data from devices

Surveillance Capabilities:

- **Predictive Analytics**: AI predicting behavior before it happens
- **Behavioral Profiling**: Creating detailed personality and preference profiles
- **Real-time Monitoring**: Continuous tracking through various devices and platforms

Digital Rights and Consent:

- **Informed Consent**: Understanding what data is collected and how it's used
- **Right to Explanation**: Understanding AI decisions that affect you
- **Data Portability**: Ability to move your data between services
- **Right to Deletion**: Removing your data from systems

Interactive Activities (40 minutes)

Activity 1: Future Job Market Research (All Levels - 20 minutes)

Instructions:

1. Students choose a career they're interested in
2. Research how AI might impact that field in the next 10 years
3. Create a "Future Job Profile" including:
    - Current job responsibilities
    - Tasks AI might automate
    - New skills that will become important
    - How the role might evolve

Research Questions:

- What aspects of this job require human judgment, creativity, or emotional intelligence?
- How could AI tools enhance rather than replace human workers in this field?
- What new opportunities might AI create in this industry?

Activity 2: Personal Privacy Audit (Intermediate+ - 15 minutes)

Privacy Audit Worksheet:

Students examine their own AI tool usage:

1. **Tool Inventory**: List all AI tools you've used in the past month
2. **Data Assessment**: For each tool, identify what data it collects
3. **Privacy Settings**: Check and adjust privacy settings where possible
4. **Risk Evaluation**: Rate each tool's privacy risk (Low/Medium/High)
5. **Action Plan**: Decide which tools to continue using and with what precautions

Reflection Questions:

- Were you surprised by how much data these tools collect?
- What privacy trade-offs are you comfortable making?
- How can you use AI tools while protecting your privacy?

Activity 3: AI Regulation Policy Proposal (Advanced - 20 minutes)

Scenario: You've been appointed to a government committee on AI regulation. Your task is to propose policies that address one of these challenges:

1. **Economic Disruption**: How should governments help workers adapt to AI automation?
2. **Privacy Protection**: What rights should people have regarding AI that uses their data?
3. **Algorithmic Bias**: How can we ensure AI systems treat everyone fairly?
4. **Concentration of Power**: How can we prevent AI from increasing inequality?

Policy Proposal Format:

- **Problem Statement**: Clearly define the issue
- **Proposed Solution**: Specific policy recommendations
- **Implementation**: How would this work in practice?
- **Potential Challenges**: What obstacles might arise?

Discussion & Synthesis (8 minutes)

Socratic Seminar Discussion Questions

Round 1: Individual Reflection (2 minutes) Students write their thoughts on:

- How can society ensure AI benefits everyone, not just the wealthy?

Round 2: Small Group Discussion (3 minutes) Groups discuss:

- What rights should people have regarding AI that affects them?

Round 3: Full Class Synthesis (3 minutes) Share insights and identify common themes.

Closing & Assessment (2 minutes)

Final Reflection: Students complete this statement: "The most important thing society needs to address about AI is _____ because _____."

Assessment Rubric

Participation in Activities (60%)

- **Excellent (4)**: Actively engages with all activities, provides thoughtful insights, demonstrates deep understanding
- **Proficient (3)**: Completes activities thoroughly, shows good understanding of concepts
- **Developing (2)**: Participates but with limited depth, shows basic understanding
- **Beginning (1)**: Minimal participation, understanding is unclear

Research Quality (25%)

- **Excellent (4)**: Uses credible sources, presents accurate information, makes clear connections
- **Proficient (3)**: Generally reliable sources, mostly accurate information
- **Developing (2)**: Some questionable sources, minor inaccuracies
- **Beginning (1)**: Unreliable sources, significant inaccuracies

Critical Thinking (15%)

- **Excellent (4)**: Demonstrates sophisticated analysis, considers multiple perspectives, proposes creative solutions
- **Proficient (3)**: Shows good analytical thinking, considers some different viewpoints
- **Developing (2)**: Basic analysis, limited perspective-taking
- **Beginning (1)**: Minimal analysis, single perspective

Extension Activities

1. **Research Project**: Deep dive into AI's impact on a specific industry
2. **Debate Preparation**: Argue for or against specific AI regulations
3. **Community Interview**: Talk to local workers about AI's impact on their jobs
4. **Digital Wellness Plan**: Create a personal plan for healthy AI tool usage

Resources for Further Learning

Articles & Reports:

- "The Future of Work in the Age of AI" - World Economic Forum
- "AI and Employment" - Brookings Institution
- "Algorithmic Accountability" - AI Now Institute

Tools for Continued Exploration:

- AI Ethics courses (edX, Coursera)
- Privacy-focused browsers and tools
- AI news aggregators and newsletters

Discussion Platforms:

- Student debate forums on AI ethics
- Community groups discussing technology policy
- Academic conferences on AI and society (for advanced students)

Lesson 7: AI Creativity and Human Collaboration

Duration: 90 minutes (can be split into two 45-minute sessions)

Learning Objectives

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

- Analyze AI's current and potential role in various creative fields
- Distinguish between different models of human-AI collaboration
- Create original work using AI as a collaborative partner
- Evaluate the benefits and challenges of human-AI creative partnerships

Materials Needed

- Access to creative AI tools (DALL-E, ChatGPT, music generation tools)
- Art supplies for hybrid projects
- Collaboration framework template
- Examples of AI-assisted creative works

Lesson Structure

Opening (10 minutes)

Hook: Display two creative works side by side - one created by AI alone, one through human-AI collaboration. Don't reveal which is which initially. Ask students to guess and discuss what they notice.

Essential Question: Can machines be truly creative, or do they need human partners to create meaningful art?

Core Content Delivery (25 minutes)

AI in Creative Fields

Visual Arts and Design:

- **Generative Art**: AI creating original visual compositions
- **Style Transfer**: Applying artistic styles to new images
- **Design Assistance**: Logo creation, layout suggestions, color palette generation
- **Example Tools**: DALL-E, Midjourney, Adobe Sensei, RunwayML

Music and Audio Creation:

- **Composition**: AI generating melodies, harmonies, and full arrangements
- **Sound Design**: Creating unique audio effects and soundscapes
- **Performance Enhancement**: Real-time accompaniment and improvisation
- **Example Tools**: AIVA, Amper Music, Boomy, OpenAI Jukebox

Writing and Content Development:

- **Creative Writing**: Poetry, stories, screenplays
- **Content Generation**: Marketing copy, social media posts, articles
- **Language Translation**: Creative adaptation rather than literal translation
- **Editing and Revision**: Style improvement, structure suggestions
- **Example Tools**: GPT models, Jasper, Copy.ai, Sudowrite

Scientific Research and Discovery:

- **Hypothesis Generation**: AI suggesting new research directions
- **Data Pattern Recognition**: Finding insights in complex datasets
- **Molecular Design**: Creating new compounds and materials
- **Mathematical Proof Assistance**: Helping solve complex mathematical problems

Collaboration Models

AI as Tool vs. AI as Partner:

AI as Tool:

- Human maintains full creative control
- AI performs specific, directed tasks
- Similar to using any other creative software
- Human makes all creative decisions

AI as Partner:

- Iterative back-and-forth creative process
- AI contributes ideas and suggestions
- Shared creative decision-making
- Emergent creativity from the collaboration

Augmented Intelligence vs. Artificial Intelligence:

Augmented Intelligence (IA):

- AI enhances human capabilities
- Human creativity remains central
- Technology amplifies human strengths
- Focus on human-AI symbiosis

Artificial Intelligence (AI):

- AI operates independently
- Minimal human input after initial setup
- AI makes autonomous creative decisions
- Focus on AI capability development

Maintaining Human Agency:

- **Creative Intent**: Ensuring human vision drives the process
- **Value Alignment**: AI outputs reflect human values and goals
- **Skill Development**: Humans continue developing their own creative abilities
- **Critical Evaluation**: Humans assess and refine AI contributions

Hands-On Creative Projects (40 minutes)

Project 1: AI-Assisted Creation (All Levels - 20 minutes)

Choose Your Adventure: Students select one creative medium and create something using AI assistance:

Option A: Visual Storytelling

1. Use ChatGPT to generate a short story concept (3-4 sentences)
2. Create visual illustrations using DALL-E or similar
3. Combine into a mini comic or storyboard
4. Add your own text, dialogue, or narrative elements

Option B: Music Video Concept

1. Use AI to generate song lyrics on a theme of your choice
2. Create visual concepts using image generation AI
3. Plan a music video combining the elements
4. Present your concept with mood boards and story outline

Option C: Interactive Presentation

1. Choose a topic you're passionate about
2. Use AI to help generate content, visuals, and structure
3. Add your personal experiences, opinions, and insights
4. Create an engaging presentation that blends AI assistance with your voice

Reflection Questions:

- How did AI enhance your creative process?
- What did you contribute that AI couldn't?
- Where did you feel most in control? Least in control?

Project 2: Collaboration Comparison (Intermediate+ - 15 minutes)

The Creative Challenge: Create two versions of the same creative work:

1. **Version A**: Created entirely by you without AI assistance
2. **Version B**: Created through human-AI collaboration

Process:

1. Choose a simple creative task (poem, short story, simple drawing, song lyrics)
2. Set a 7-minute timer for each version
3. Document your creative process for both
4. Compare the results

Analysis Framework:

- **Quality**: Which version do you prefer? Why?
- **Process**: How did your creative process differ?
- **Efficiency**: Which was faster to create?
- **Originality**: Which feels more uniquely "yours"?
- **Satisfaction**: Which was more enjoyable to create?

Project 3: Collaboration Framework Design (Advanced - 20 minutes)

The Challenge: Design a human-AI collaboration framework for a specific creative field of your choice.

Framework Components:

1. **Field Selection**: Choose your creative domain (film, game design, architecture, etc.)
2. **Role Definition**: What should humans do? What should AI do?
3. **Workflow Design**: Step-by-step collaboration process
4. **Quality Control**: How to maintain standards and authenticity
5. **Ethical Guidelines**: Ensuring fair use and proper attribution

Example Framework: Film Pre-Production

- **Human Role**: Vision, story concept, character development, emotional direction
- **AI Role**: Script formatting, scene descriptions, dialogue options, visual concept generation
- **Workflow**:
    1. Human creates story outline

2. AI generates scene-by-scene breakdown
3. Human refines and adds emotional depth
4. AI provides visual reference generation
5. Human makes final creative decisions

Presentation Format: Create a one-page visual framework that could be used by other creators in your chosen field.

Discussion and Synthesis (12 minutes)

Gallery Walk (8 minutes)

Students display their creative works and frameworks around the room. Everyone walks around to view others' work, leaving sticky note feedback:

- One thing they found impressive
- One question about the creative process
- One insight about human-AI collaboration

Synthesis Discussion (4 minutes)

Guiding Questions:

- What surprised you most about creating with AI?
- When did AI enhance your creativity vs. limit it?
- How might human-AI collaboration evolve in creative fields?
- What concerns do you have about AI in creativity?

Closing & Assessment (3 minutes)

Creative Reflection: Students write a "collaboration review" as if they were reviewing a human creative partner:

- What were AI's greatest strengths as a collaborator?
- What did you bring to the partnership that was essential?
- Would you collaborate with AI again? Why or why not?

Lesson 8: The Future of AI - Trends and Possibilities

Duration: 90 minutes (can be split into two 45-minute sessions)

Learning Objectives

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

- Identify and analyze current trends in AI development
- Evaluate different predictions about AI's future trajectory
- Distinguish between realistic near-term developments and speculative long-term possibilities
- Develop informed, nuanced perspectives on AI's potential impact on society

Materials Needed

- Timeline creation materials (digital or physical)
- Research access to current AI news and developments
- Scenario planning worksheets
- Presentation tools for sharing predictions

Lesson Structure

Opening (10 minutes)

Hook: Show a prediction about technology from 20 years ago (smartphones, internet, social media). Discuss what they got right, wrong, and couldn't predict. Ask: "What will people in 2045 think about our AI predictions today?"

Frame the Learning: Today we become "AI Futurists" - learning to make informed predictions while staying humble about uncertainty.

Core Content Delivery (30 minutes)

Emerging Technologies

Large Language Models Evolution:

- **Current State**: GPT-4, Claude, specialized models for different domains
- **Near-term Trends (2-5 years)**:
  - Multimodal AI (text, image, video, audio integration)
  - Longer context windows (remembering entire books, conversations)
  - Specialized domain expertise (legal, medical, scientific)
  - Real-time learning and adaptation
- **Potential Developments**:

- Personal AI assistants with persistent memory
- AI tutors adapted to individual learning styles
- Real-time language translation for any communication

Artificial General Intelligence (AGI):

- **Definition**: AI that matches or exceeds human intelligence across all domains
- **Current Expert Predictions**: Anywhere from 10 years to never
- **Key Challenges**:
  - Common sense reasoning
  - Transfer learning across domains
  - Consciousness and self-awareness (if necessary)
  - Safety and alignment with human values

AI Hardware Advances:

- **Quantum Computing**: Potential for exponentially faster AI training and inference
- **Neuromorphic Chips**: Brain-inspired computing for more efficient AI
- **Edge AI**: Powerful AI running on personal devices without internet
- **Biological Computing**: Using living cells for computation

Brain-Computer Interfaces (BCIs):

- **Current**: Medical applications for paralysis, depression treatment
- **Near-term**: Enhanced communication, direct information access
- **Speculative**: Direct brain-AI integration, augmented memory and cognition

Future Scenarios

Optimistic AI Futures:

- **Personalized Education**: AI tutors for every student, adapted to their needs
- **Healthcare Revolution**: Early disease detection, personalized treatments, drug discovery acceleration
- **Climate Solutions**: AI-optimized renewable energy, carbon capture, sustainable agriculture
- **Scientific Acceleration**: AI researchers helping solve major challenges faster
- **Creative Renaissance**: AI tools enabling more people to express creativity
- **Economic Abundance**: AI handling routine work, humans focusing on meaning and relationships

Potential Risks and Challenges:

- **Job Displacement**: Widespread unemployment without adequate transition support
- **Privacy Erosion**: Pervasive surveillance and predictive control
- **Autonomy Loss**: Over-dependence on AI for decision-making
- **Inequality Amplification**: AI benefits concentrated among the wealthy
- **Misinformation**: Sophisticated fake content and manipulation
- **Control and Alignment**: AI systems pursuing goals misaligned with human values

Preparing for Uncertainty:

- **Adaptive Skills**: Focus on learning how to learn, critical thinking, creativity
- **Ethical Frameworks**: Developing principles for navigating AI decisions
- **Civic Engagement**: Participating in democratic processes shaping AI policy
- **Technological Literacy**: Understanding AI capabilities and limitations

Interactive Activities (40 minutes)

Activity 1: AI Future Timeline Creation (All Levels - 15 minutes)

Instructions:

1. Students work in pairs to create a timeline from 2025-2050
2. Research current AI developments and project them forward
3. Include both technological milestones and societal impacts
4. Use different colors for "likely," "possible," and "speculative" predictions

Timeline Categories:

- **Technology Milestones**: New AI capabilities, hardware breakthroughs
- **Social Changes**: How people interact with AI daily
- **Economic Shifts**: Changes in work, education, healthcare
- **Policy Developments**: Regulations, international agreements
- **Ethical Milestones**: Important decisions about AI rights, responsibilities

Guiding Questions:

- What AI developments seem most inevitable in the next 5 years?
- What current trends might accelerate or slow down?

- What completely unexpected developments might occur?

Activity 2: Technology Trend Analysis (Intermediate+ - 20 minutes)

The Trend Detective Challenge: Students choose one emerging AI technology and conduct a deep analysis:

Research Framework:

1. **Current State**: What exists today?
2. **Key Players**: Who's developing this technology?
3. **Technical Challenges**: What barriers need to be overcome?
4. **Market Forces**: What economic factors will drive development?
5. **Social Factors**: How might society react to this technology?
6. **Prediction**: Where will this be in 10 years?

Technology Options:

- Autonomous vehicles
- AI in healthcare diagnosis
- Personalized AI tutors
- AI content creation
- Robotics and automation
- AI in scientific research
- Voice and conversation AI
- AI in financial services

Deliverable: Create a "Technology Forecast Report" with:

- Executive summary of your prediction
- Evidence supporting your analysis
- Potential roadblocks or surprises
- Implications for society

Activity 3: Advanced Research Paper (Advanced - 25 minutes)

Mini Research Challenge: Students begin work on a focused research paper about a specific AI advancement.

Paper Structure:

1. **Introduction**: Why this advancement matters
2. **Technical Background**: How the technology works (simplified)
3. **Current Progress**: State of development today
4. **Analysis**: Barriers, opportunities, competing approaches
5. **Future Implications**: Potential impacts on society
6. **Conclusion**: Your informed prediction about this technology's future

Advanced Research Topics:

- The path to Artificial General Intelligence
- AI consciousness and machine sentience
- Quantum computing's impact on AI development
- AI alignment and safety research
- Brain-computer interfaces and human enhancement
- AI in space exploration and scientific discovery
- The economics of post-scarcity AI societies

Research Standards:

- Use credible academic and industry sources
- Distinguish between facts and predictions
- Consider multiple perspectives and expert opinions
- Acknowledge uncertainty and conflicting viewpoints

Synthesis and Future Planning (8 minutes)

Prediction Sharing (5 minutes)

Lightning Round: Each student/group shares one prediction in 30 seconds:

- What AI development are you most excited about?
- What AI challenge are you most concerned about?
- What's one way you plan to prepare for AI's future impact?

Personal Future Planning (3 minutes)

Individual Reflection: Students write responses to:

1. How will you continue learning about AI developments?
2. What skills will you focus on developing to thrive in an AI-enhanced world?
3. How will you contribute to shaping AI's positive impact on society?

Closing & Assessment (2 minutes)

Future Self Letter: Students write a brief message to themselves 10 years in the future, making predictions about AI and describing their hopes for how they'll be involved with or affected by AI technology.

Assessment Rubric

Research Quality and Evidence (40%)

- **Excellent (4)**: Uses current, credible sources; distinguishes fact from speculation; acknowledges uncertainty
- **Proficient (3)**: Generally reliable sources; mostly accurate information with minor gaps
- **Developing (2)**: Some questionable sources; limited depth of research
- **Beginning (1)**: Unreliable sources; significant inaccuracies or unsupported claims

Critical Thinking and Analysis (35%)

- **Excellent (4)**: Demonstrates sophisticated analysis; considers multiple perspectives; makes logical connections
- **Proficient (3)**: Shows good analytical thinking; considers some different viewpoints
- **Developing (2)**: Basic analysis with limited perspective-taking
- **Beginning (1)**: Minimal analysis; accepts information without critical evaluation

Communication and Presentation (25%)

- **Excellent (4)**: Clear, engaging presentation; well-organized ideas; effective use of evidence
- **Proficient (3)**: Generally clear communication; mostly well-organized
- **Developing (2)**: Some communication issues; basic organization
- **Beginning (1)**: Unclear communication; poor organization

Extension Activities

For Continued Learning:

1. **AI News Tracking**: Weekly summaries of AI developments with personal analysis

2. **Expert Interview Project**: Interview professionals working in AI-related fields
3. **Science Fiction Analysis**: Read AI-themed science fiction and analyze predictions
4. **Policy Proposal**: Draft legislation for addressing a specific AI challenge
5. **Innovation Challenge**: Design a solution to a problem using emerging AI technologies

Capstone Integration

These lessons serve as preparation for a potential capstone project where students:

- Choose an AI topic they're passionate about
- Conduct extended research combining technical understanding and social impact
- Present findings to authentic audiences (local government, school board, community groups)
- Propose concrete actions for their school or community

Resources for Continued Exploration

Current AI Research and News:

- MIT Technology Review AI section
- AI research papers (simplified summaries)
- Podcasts: "AI Alignment," "The AI Podcast," "Gradient Dissent"
- YouTube channels focused on AI explanation and analysis

Future Studies Resources:

- Institute for the Future publications
- World Economic Forum reports on AI
- Academic courses on technology forecasting
- Scenario planning methodologies

Participation Opportunities:

- Local AI meetups and conferences
- Student AI competitions and hackathons
- Citizen science projects involving AI
- Policy advocacy groups focused on AI governance