AI VENTURE ACADEMY KIDS

Teacher Activity Guide

Episodes A through H

Eight classroom-ready mini-lessons connecting careers, artificial intelligence, and responsible decision-making

Suggested learners	Kindergarten through Grade 5
Lesson length	20 to 30 minutes per episode
Settings	Classrooms, libraries, career days, clubs, and homeschooling

Prepared for educators and families by The AI Venture Academy

Teacher review and adult supervision are recommended for all technology use.

How to Use This Guide

This guide turns each short career video into a complete mini-lesson. Students first connect the featured career to a real-world problem, then practice a related skill, and finally reflect on how artificial intelligence can assist people without replacing human judgment. Select the questions and activity steps that best fit your learners.

Suggested Lesson Flow

1 Prepare	Preview the video and gather the listed materials.
2 Activate	Ask one discussion question before viewing.
3 Watch	Pause briefly when students notice a tool, problem, or decision.
4 Explore	Complete the mini classroom activity.
5 Reflect	Use the exit ticket as a quick learning check.

Responsible AI Routine

- Ask a clear question and identify the purpose.
- Protect privacy. Do not enter names, contact details, passwords, medical information, photographs, or other personal data.
- Check outputs for accuracy, bias, safety, and age appropriateness.
- Compare important claims with a trusted source or qualified adult.
- Credit sources and explain what the learner created or changed.
- Let people make final decisions, especially in health, safety, education, and security.

Series Learning Outcomes

- Connect eight careers to problems they help solve.
- Use career-specific vocabulary in speaking, drawing, building, or writing.
- Recognize appropriate ways AI can support professional work.
- Explain why human expertise, evidence, ethics, privacy, and verification remain essential.
- Communicate a career idea to classmates or family members.

Episodes and Classroom Connections

Use this map to select an episode that connects with current instruction. Each mini-lesson can stand alone or become one part of an A-to-Z career exploration unit.

Letter	Career	Primary connection	Student product
A	**Architect**	Geometry, design, community needs	Learning-space plan
B	**Biochemist**	Life science, observation, evidence	Observation record
C	**Cybersecurity Specialist**	Digital citizenship, privacy, safety	Message safety decision
D	**Doctor**	Health literacy, communication, judgment	Health-information sort
E	**Engineer**	Design cycle, testing, measurement	Paper bridge prototype
F	**Farmer**	Agriculture, weather, sustainability	Watering plan
G	**Graphic Designer**	Visual literacy, art, communication	Career poster
H	**Health Informatics Specialist**	Data quality, privacy, health systems	Cleaned fictional dataset

Preparation Notes

- Preview each video and activity before use.
- Adapt reading, writing, and materials to student age and access needs.
- Use fictional examples for health, cybersecurity, and data activities.
- If students use an AI tool, use only an educator-approved platform and follow school or district policy.
- A video can introduce a lesson even when students do not directly use AI.

EPISODE A

A Is for Architect

Designing spaces where people live, learn, and work

Learning Objectives

- Describe one responsibility of an architect.
- Identify shapes, measurements, and user needs in a building design.
- Explain how AI can help explore ideas while people make the final decisions.

Vocabulary

Word	Student-friendly meaning
architect	a professional who plans and designs buildings
blueprint	a detailed drawing or plan for a structure
scale	the relationship between a drawing and the real object
model	a representation used to test or explain an idea

Discussion Questions

- What problem was the architect trying to solve?
- Who should an architect listen to before designing a school or home?
- What could go wrong if an AI suggestion were used without checking it?

Mini Classroom Activity

Activity: Design a Learning Space

Materials: Paper, pencil, ruler, crayons or markers

1. Ask students to name one problem in a classroom, library, or playground.
2. Draw a simple floor plan that solves the problem. Include at least three labeled features.
3. Circle one place where an AI design tool could offer options. Add a check mark beside the feature a person must verify.
4. Partners explain how their design helps its users.

Exit ticket: Name one choice that should remain a human responsibility in architectural design.

Differentiate or extend: Older learners calculate a simple scale, such as 1 inch = 4 feet. Younger learners build the space with blocks.

EPISODE B

B Is for Biochemist

Studying the chemistry of living things

Learning Objectives

- Describe what a biochemist studies.
- Sort observations from explanations.
- Explain why scientists test AI-generated patterns with evidence.

Vocabulary

Word	Student-friendly meaning
biochemistry	the study of chemical processes in living things
molecule	a tiny group of atoms joined together
sample	a small amount examined during an investigation
evidence	information used to support a conclusion

Discussion Questions

- What kinds of questions might a biochemist ask?
- Why must samples be labeled carefully?
- How can AI find patterns, and why must a scientist still test them?

Mini Classroom Activity

Activity: Evidence Detectives

Materials: Three clear cups, water, food coloring, labels, observation sheet

1. Prepare three safe teacher-led samples with different colors or concentrations.
2. Students record only what they observe before suggesting an explanation.
3. Compare observations and discuss how a computer might group similar samples.
4. Identify what additional evidence would be needed before reaching a conclusion.

Exit ticket: Write one observation and one question a biochemist could investigate.

Differentiate or extend: Emphasize that students never taste laboratory materials and that real laboratory work requires trained supervision.

EPISODE C

C Is for Cybersecurity Specialist

Protecting information, devices, and digital systems

Learning Objectives

- Identify common examples of private information.
- Apply a pause-check-ask routine to a suspicious message.
- Describe how AI can help detect unusual activity but can also produce false alarms.

Vocabulary

Word	Student-friendly meaning
cybersecurity	protecting computers, networks, and information
password	a secret string used to access an account
phishing	a trick that tries to steal information
alert	a warning that something may need attention

Discussion Questions

- What information should children keep private online?
- What clues can make a message suspicious?
- Why should a person review an AI security alert?

Mini Classroom Activity

Activity: Pause Check Ask

Materials: Teacher-made message cards marked safe, suspicious, or unsure

1. Read a message card without clicking or responding.
2. Students pause, identify clues, and place the card under Safe, Suspicious, or Unsure.
3. For every suspicious or unsure card, practice asking a trusted adult.
4. Create a class rule: Stop, do not share, and ask for help.

Exit ticket: List two clues that could make an online message suspicious.

Differentiate or extend: Do not ask students to share real passwords, usernames, addresses, or account information.

EPISODE D

D Is for Doctor

Helping people prevent illness, understand symptoms, and receive care

Learning Objectives

- Describe how doctors collect information before making decisions.
- Distinguish between an AI suggestion and a medical diagnosis.
- Practice communicating symptoms clearly to a trusted adult or health professional.

Vocabulary

Word	Student-friendly meaning
symptom	a change a person feels or notices
diagnosis	a health professional's identification of a condition
treatment	care intended to improve health
medical record	information about a person's health and care

Discussion Questions

- What information does a doctor need before recommending care?
- How might AI help organize health information?
- Why should AI never replace a qualified health professional?

Mini Classroom Activity

Activity: Health Information Sort

Materials: Cards showing symptoms, measurements, questions, and unrelated details

1. Students sort cards into Helpful for the doctor and Ask for more information.
2. Discuss why accurate details and privacy matter.
3. Role-play a patient describing a pretend symptom and a doctor asking respectful follow-up questions.
4. Identify where a computer may assist and where professional judgment is required.

Exit ticket: Complete the sentence: AI may help a doctor by ___, but the doctor must ___.

Differentiate or extend: Keep all scenarios fictional. Do not collect or discuss students' personal medical information.

EPISODE E

E Is for Engineer

Designing, building, testing, and improving solutions

Learning Objectives

- Use the engineering cycle to address a simple problem.
- Compare a design against clear criteria.
- Explain how AI can generate options while engineers test safety and performance.

Vocabulary

Word	Student-friendly meaning
engineer	a professional who designs solutions to problems
prototype	an early version built for testing
constraint	a limit such as time, cost, size, or materials
iterate	to improve a design through repeated testing

Discussion Questions

- What problem did the engineer need to solve?
- How does testing improve a design?
- Why is the fastest AI-generated design not always the best one?

Mini Classroom Activity

Activity: Build a Paper Bridge

Materials: Two sheets of paper, tape, two books, coins or counters

1. Place two books a short distance apart and define the goal: bridge the gap.
2. Sketch two possible designs, then select one to build.
3. Test how many counters the bridge holds and record the result.
4. Change one feature, retest, and explain the improvement.

Exit ticket: What did you change after testing, and why?

Differentiate or extend: Compare designs using three criteria: strength, material use, and ease of construction.

EPISODE F

F Is for Farmer

Growing food and caring for land, plants, and animals

Learning Objectives

- Identify information farmers use to make decisions.
- Read a simple set of weather or plant observations.
- Explain that AI recommendations must be checked against local conditions and farmer knowledge.

Vocabulary

Word	Student-friendly meaning
agriculture	the work of growing crops and raising animals
crop	a plant grown for food or another useful product
irrigation	supplying water to crops
sensor	a device that detects and measures conditions

Discussion Questions

- What daily decisions do farmers make?
- How could sensors and AI help conserve water?
- What local knowledge might a computer not understand?

Mini Classroom Activity

Activity: Plan the Watering Schedule

Materials: Three pretend plant cards with soil-moisture and weather information

1. Read each plant card and identify whether the soil is dry, damp, or wet.
2. Use the weather forecast to choose Water now, Check later, or Do not water.
3. Pairs explain the evidence behind each decision.
4. Discuss how a farmer would inspect the field before following an automated recommendation.

Exit ticket: Name two pieces of information a farmer should check before watering.

Differentiate or extend: Start a class plant log and compare predictions with actual observations over one week.

EPISODE G

G Is for Graphic Designer

Using images, type, color, and layout to communicate ideas

Learning Objectives

- Identify the audience and purpose of a visual message.
- Apply contrast, readability, and hierarchy to a simple design.
- Explain why designers must review AI-created images for accuracy, fairness, and ownership.

Vocabulary

Word	Student-friendly meaning
graphic design	visual communication using images and text
audience	the people a message is intended to reach
layout	the arrangement of elements on a page or screen
contrast	a visible difference that helps elements stand out

Discussion Questions

- What message should viewers understand first?
- How do color and type affect readability?
- What should a designer check before using an AI-generated image?

Mini Classroom Activity

Activity: Create a Career Poster

Materials: Paper, crayons or markers, optional magazines for collage

1. Choose one career and one audience, such as younger students or families.
2. Write a short headline and select one main image.
3. Arrange the headline, image, and two facts so the message is easy to follow.
4. Use a partner checklist for readability, accuracy, respectful representation, and originality.

Exit ticket: What is the first thing viewers should notice in your design?

Differentiate or extend: If an approved AI tool is used, students document the prompt and explain what they changed themselves.

EPISODE H

H Is for Health Informatics Specialist

Making health information useful, accurate, secure, and available

Learning Objectives

- Describe how organized health data supports care and public health.
- Identify accuracy, privacy, and access as important data responsibilities.
- Explain how AI can assist with patterns while specialists verify data and protect people.

Vocabulary

Word	Student-friendly meaning
health informatics	the use of information and technology to support health
data	recorded facts or measurements
privacy	protection of personal information
data quality	how accurate, complete, and useful data are

Discussion Questions

- Why must health information be accurate?
- Who should be allowed to see private health information?
- How could incorrect data affect an AI result?

Mini Classroom Activity

Activity: Clean the Clinic Data

Materials: Teacher-made fictional table with missing, duplicate, and inconsistent entries

1. Review a fictional data table containing no real names or health information.
2. Circle missing values, duplicates, and inconsistent spellings.
3. Correct what can be corrected and mark what requires clarification.
4. Discuss why clean data and privacy matter before any AI analysis.

Exit ticket: Describe one data-quality problem and how it could affect a decision.

Differentiate or extend: Older learners calculate how many records are complete; younger learners sort matching information cards.

Culminating Activity Career and AI Showcase

After students explore several episodes, invite them to present one career and demonstrate how AI may assist that professional. The showcase can be completed individually, with partners, or in small groups.

Student Task

1. Select one featured career or another teacher-approved career.
2. State one important problem the professional helps solve.
3. Use at least three accurate career vocabulary words.
4. Show one responsible use of AI and one limitation or risk.
5. Create a product: poster, model, one-minute talk, role-play, or digital slide.
6. Answer one audience question using evidence from the video or a trusted source.

Simple Four-Point Rubric

Criterion	4 Strong	3 Ready	2 Developing	1 Beginning
Career understanding	Accurate and detailed	Mostly accurate	Some accurate ideas	Needs support
Vocabulary	3+ terms used correctly	2 terms used correctly	1 term used correctly	Terms are missing
AI understanding	Benefit and limitation explained	Benefit explained; limitation partly clear	Basic AI connection	AI connection unclear
Communication	Clear, organized, audience-ready	Understandable and organized	Some ideas need clarification	Difficult to follow

Teacher Observation Checklist

- ☐ Student identifies the career and a problem it addresses.
- ☐ Student uses relevant vocabulary.
- ☐ Student distinguishes AI assistance from human responsibility.
- ☐ Student checks accuracy or explains how checking should occur.
- ☐ Student protects privacy and uses respectful examples.
- ☐ Student communicates an idea clearly.

Reproducible Student Career Card

Name _____ Date _____

My career is

_____

_____

This professional helps people by

_____

_____

Three words I learned

_____

A tool this professional uses

_____

_____

AI could help by

_____

_____

A person must still check or decide

_____

_____

One question I still have

_____

_____

Family Conversation and Home Extension

Families can support career exploration without requiring children to use an AI tool. Watch one episode together, ask the questions below, and let the child draw, build, explain, or act out an idea.

Conversation Starters

- What did this professional create, protect, study, improve, or organize?
- Which part of the job looked most interesting?
- What knowledge or skill would someone need for this career?
- Where could AI be helpful?
- What should a person verify before trusting an AI suggestion?
- Which career should the series explore next?

Home Career Interview

Invite the child to interview a trusted adult about work. The adult does not need to hold one of the featured careers.

- What problem does your work help solve?
- What tools or information do you use?
- How do you check that your work is correct?
- Has technology changed your work?
- What advice would you give a young learner?

Safety Reminder for Families

Children should use digital and AI tools only with adult supervision and through age-appropriate, approved services. Never enter private information, passwords, photographs, health details, school records, or home addresses. Treat AI output as a suggestion to examine, not as a guaranteed fact or professional decision.

Teacher Notes

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