

AI agents, software that plans and acts

40 minutes

Strand 2: Let's get connected

Outcome 2.8

WHAT THIS LESSON DOES

Learn the difference between chatbots that answer questions and AI agents that plan and act in loops to reach goals. Direct an agent through a coding task and then switch roles to act as the agent yourself.

CURRICULUM OUTCOMES

Outcome	What the specification asks for
2.8	Identify different AI models and how they apply in coding, from generative AI and code assistants to recommendation systems, classifiers and agents.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Explain what an AI agent is (a model given a goal that can plan, use tools, and take a series of actions in a loop) and how it differs from a chatbot that just answers (LO 2.8)
- Identify how AI agents are applied in coding, for example an agent that writes code, runs it, reads the error, and fixes it (LO 2.8)

BEFORE THE BELL

- Write the four phases plan act observe adjust on the board.
- Prepare to reveal the agent transcript one beat at a time if no live demo is available.
- Prepare the four goals (with example acts) as a pick-one board strip for Be the agent.
- Be ready to model one tiny Scratch bounce loop in about 60 seconds before pairs start Be the agent.
- Optional: school-approved AI coding agent on the board; otherwise reveal the transcript in the teacher notes one beat at a time
- Write or project the four goals (with example acts) as a pick-one board strip before pairs start

AI agents, software that plans and acts

HOW THE LESSON RUNS

4 min	introduction	Start
4 min	content	Agent or chatbot?
5 min	activity	Direct the agent: the goal and the roles
9 min	content	Watch the agent, then debrief it
5 min	content	Be the agent: the rules
7 min	content	Run two loops in pairs
3 min	content	Make sense
2 min	content	Reflect
1 min	summary	What you covered

TEACHING MOVES

- Keep Agent or chatbot? to naming the four phases and chatbot-waits / agent-keeps-going only; move extra examples into the demo debrief.
- Reveal the worked transcript one beat at a time with a predict pause before each act; hold students to next phase / next action on the card.
- In the Direct the agent debrief, land that observe and adjust is debugging: run a test, read what went wrong, fix it.
- Show Be the agent goals on the board as a pick-one strip; keep the student card to role rules only.
- Model one tiny loop whole-class before pairs start Be the agent.
- Director only gates after a full loop (another loop or stop), not mid-loop.
- Circulate the room to monitor pair work and catch rule breaks.
- Keep reflection as a short whole class discussion only.

WHAT TO WATCH FOR

- Thinking any AI is an agent: Stress the need for a goal and the loop.
- Skipping steps when acting as agent: Remind to wait after reporting observation and stating the adjust.
- Directors planning or doing the work themselves: Reiterate they only state the goal, allow another loop, or stop.

DIFFERENTIATION

- Support: Give pairs a card listing the four phases for reference.
- Extension: Let advanced students create their own coding goal to direct.
- Support: Start the pair activity with a simple goal together as a class (the 60-second model already does this).