

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 can be applied in coding

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 move at a time if no live demo is available.
- 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

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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, and move extra examples into the discussion after the demo.
- Reveal the worked transcript one move at a time with a predict pause before each act, and ask students for both the next phase and the next action each time.
- In the discussion after Direct the agent, make sure the class hears that observe and adjust is debugging: run a test, read what went wrong, fix it.
- Put the goals for Be the agent on the board so each pair can pick one.
- Model one tiny loop with the whole class before pairs start Be the agent.
- The director speaks only after a full loop, to allow another loop or to stop, not in the middle of one.
- Circulate the room to monitor pair work and catch rule breaks.
- Keep the 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 them to wait after reporting the observation and stating the adjust.
- Directors planning or doing the work themselves: Reiterate that 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).