Sustained interest in the content	**Ability to utilize tools for learning, not just for the sake of novelty**	**Sustained interest in the content**
Whole-class participation	**Everyone can be confident in some part of a difficult task when it is multimodal**	**Whole-class participation**
Persistence through a difficult task	**Ability to utilize tools for learning, not just for the sake of novelty**	**Persistence through a difficult task**
Accessibility for multiple levels of pre-existing student knowledge and skills	**Everyone can be confident in some part of a difficult task when it is multimodal**	**Accessibility for multiple levels of pre-existing student knowledge and skills**

Collect multiple data points from a simulation	**Use authentic data (overlays) to make sense of concepts**	**Collect multiple data points from a simulation**
Decide what variable is best for the situation	**Access information and experiences that are generally unavailable in everyday life**	**Decide what variable is best for the situation**
Construct a specific claim, and provide evidence and reasoning to support the claim	**Use authentic data (overlays) to make sense of concepts**	**Construct a specific claim, and provide evidence and reasoning to support the claim**
Explore the simulation freely before focusing on specific features	**Access information and experiences that are generally unavailable in everyday life**	**Explore the simulation freely before focusing on specific features**

The only way to become proficient in content is to interact with it. Learning by watching is useful but doesn't provide deeper confidence and ability to do a task.	Simulations, as a tool, are used over a short timeframe. This scale is effective for tasks focused on learning content, but it is not long enough for skill development, which occurs gradually.	The only way to become proficient in content is to interact with it. Learning by watching is useful but doesn't provide deeper confidence and ability to do a task.
While knowledge itself is important, content must be paired with relevant skill development when teaching how to think. The ability to use knowledge or apply it to solving problems relies on understanding how to use appropriate tools.	Brains use memories and knowledge like paths; the more significant the "landmarks" and the frequency of the "visits," the easier it is to remember the way along the path.	While knowledge itself is important, content must be paired with relevant skill development when teaching how to think. The ability to use knowledge or apply it to solving problems relies on understanding how to use appropriate tools.
When students are given autonomous learning opportunities more often, they show more autonomy and become more empowered learners.	Simulations, as a tool, are used over a short timeframe. This scale is effective for tasks focused on learning content, but it is not long enough for skill development, which occurs gradually.	When students are given autonomous learning opportunities more often, they show more autonomy and become more empowered learners.
Simulations change how learners distribute their mental energy (cognitive load) to increase how much goes toward working through learning-specific complexity.	Brains use memories and knowledge like paths; the more significant the "landmarks" and the frequency of the "visits," the easier it is to remember the way along the path.	Simulations change how learners distribute their mental energy (cognitive load) to increase how much goes toward working through learning-specific complexity.