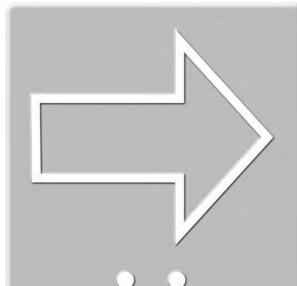


Technology Integration Matrix



ENTRY

The teacher begins to use technology to deliver curriculum content to students.



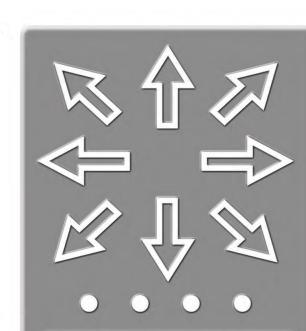
ADOPTION

The teacher directs students in the conventional and procedural use of technology tools.



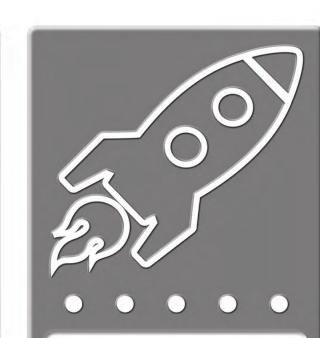
ADAPTATION

The teacher facilitates students in exploring and independently using technology tools.



INFUSION

The teacher provides the learning context and the students choose the technology tools to achieve the outcome.



TRANSFORMATION

The teacher encourages the innovative use of tech tools to facilitate higher-order learning activities that may not have been possible without technology.



ACTIVE

Students are actively engaged in using technology as a tool rather than passively receiving information from the technology.

Active Entry

Information passively received

Active Adoption

Conventional, procedural use of tools

Active Adaptation

Conventional independent use of tools; some student choice and exploration

Active Infusion

Choice of tools and regular, self-directed use

Active Transformation

Extensive and unconventional use of tools



COLLABORATIVE

Students use technology tools to collaborate with others rather than working individually at all times.

Collaborative Entry

Individual student use of tools

Collaborative Adoption

Collaborative use of tools in conventional ways

Collaborative Adaptation

Collaborative use of tools; some student choice and exploration

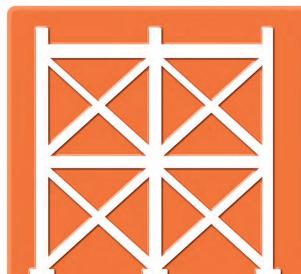
Collaborative

Infusion

Choice of tools and regular use for collaboration

Collaborative Transformation

Collaboration with peers and outside resources in ways not possible without technology



CONSTRUCTIVE

Students use tech tools to connect new information to their prior knowledge rather than to passively receive information.

Constructive Entry

Information delivered to students

Constructive Adoption

Guided, conventional use for building knowledge

Constructive Adaptation

Independent use for building knowledge; some student choice and exploration

Constructive Infusion

Choice and regular use for building knowledge

Constructive Transformation

Extensive and unconventional use of technology tools to build knowledge



AUTHENTIC

Students use tech tools to link learning activities to the world beyond the instructional setting rather than working on decontextualized assignments.

Authentic Entry

Use unrelated to the world outside of the instructional setting

Authentic Adoption

Guided use in activities with some meaningful context

Authentic Adaptation

Independent use in activities connected to students' lives; some student choice and exploration

Authentic Infusion

Choice of tools and regular use in meaningful activities

Authentic Transformation

Innovative use for higher-order learning activities in a local or global context



GOAL-DIRECTED

Students use tech tools to set goals, plan activities, monitor progress, and evaluate results rather than simply completing assignments without reflection.

Goal-Directed Entry

Directions given; step-by-step task monitoring

Goal-Directed Adoption

Conventional and procedural use of tools to plan and monitor

Goal-Directed Adaptation

Purposeful use of tools to plan and monitor; some student choice and exploration

Goal-Directed Infusion

Flexible and seamless use of tools to plan and monitor

Goal-Directed Transformation

Extensive and higher-order use of tools to plan and monitor

The TECHNOLOGY INTEGRATION MATRIX (TIM) provides a framework for describing and targeting the use of technology to enhance learning. The TIM incorporates five interdependent characteristics of meaningful learning environments: active, collaborative, constructive, authentic, and goal-directed. These characteristics are associated with five levels of technology integration: entry, adoption, adaptation, infusion, and transformation. Together, the five characteristics of meaningful learning environments and five levels of technology integration create a matrix of 25 cells, as illustrated above.



