

LEARNING DIMENSIONS

of Making and Tinkering

Valuable learning experiences can be gained through making and tinkering.

Use this framework to notice, support, document, and reflect on how your tinkering environment, activities, and facilitation may have supported or impeded such outcomes.

Initiative & Intentionality

- Actively participating
- Setting one's own goals
- Taking intellectual & creative risks
- Adjusting goals based on physical feedback and evidence

Problem Solving & Critical Thinking

- Troubleshooting through iterations
- Dissecting the problem components
- Seeking ideas, tools, and materials to solve the problem
- Developing work-arounds

Conceptual Understanding

- Making observations and asking questions
- Testing tentative ideas
- Constructing explanations
- Applying solutions to new problems

Creativity & Self-Expression

- Playfully exploring
- Responding aesthetically to materials and phenomena
- Connecting projects to personal interests and experiences
- Using materials in novel ways

Social & Emotional Engagement

- Working in teams
- Teaching and helping one another
- Expressing pride and ownership
- Documenting / sharing ideas with others