



Ways for Learners to use the Agency by Design Framework for Maker-Centered Learning and the Making Moves



Chart the path ahead

Use the making moves when you're stuck in thinking about/working on a challenge or project, or when you're looking for new ideas on how to move forward.

Try the following...

- Look through the moves and choose to try one that you think might help you to move forward in your work or learning, to solve a problem, or to generate creative ideas that will help you to go in a new direction.
- If you're looking for inspiration for your next making project, look at the making moves and try to envision a project or exercise that will help you to practice that move.



Capture learning

Take stock of times when you see, hear, or notice yourself or others using one of the making moves, and try to capture these moves in action.

Try the following...

- Take a photo, capture a video, or make a drawing of a “move” you see in action in your classroom. Create a caption that says what move you captured, and what you think the person using the move is learning or thinking about.
- Listen to what your peers say when they're making, and write down anything they say that make you think they're using one of the making moves (for example: something they are thinking about, a strategy they're trying out, etc.).
- Take a look at the whole list of making moves. Keep track of how many you can see or hear in your classroom, and which ones are absent. Think about what this means for what you might want to work on or learn about next in class.



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Talk about learning

Use the maker capacities to talk about learning with your peers, an educator or mentor, someone who is looking at your work, or someone else in your learning environment.

Try the following...

- Come up with a question for one of your peers about her/his work that incorporates the language of one of the making moves.
- Explain your learning process to a teacher or someone unfamiliar with your work by telling them how you used one or more of the making moves.



Reflect and go further

Reflect on what you've learned, and think of how you might extend and go further with your learning and making.

Try the following...

- Get reflective about how the making moves play out in your learning environment. You might think about: *What did you or your peers learn through using the making moves? How do the making moves connect to things you are learning or doing outside this class? What do you think the making moves might be important for learning?* Share your reflections with others through conversations, journaling, creating an exhibition, or another way.
- Look for a making move you haven't tried out yet, and make a plan to try to use it in a current or future making project.
- Think of a making move you've used where you have the opportunity to get better, or to get more practice at using the move. Make a plan to try to "go deeper" with this move in a current or future project.



Make the Case

Use the language of the capacities and their moves to explain the value of maker-centered learning to teachers, parents, administrators, or others.

Try the following...

- Explain why making is important for learning by using some of the language of the making moves.
- Tell someone how the making moves might be different from, or might extend, the type of work that you do in other learning environments.

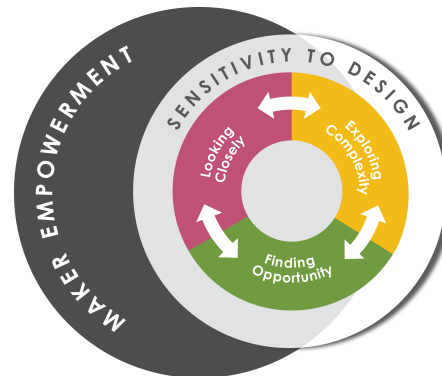


The Agency by Design Framework

A key goal of maker-centered learning is to help young people and adults feel empowered to build and shape their worlds. Acquiring this sense of maker empowerment is strongly supported by learning to notice and engage with the designed dimension of one's physical and conceptual environment—in other words, by having a sensitivity to design.

Maker Empowerment:

A sensitivity to the designed dimension of objects and systems, along with the inclination and capacity to shape one's world through building, tinkering, re/designing, or hacking.



Sensitivity to Design:

Learning to notice and engage with one's physical and conceptual environment by looking closely and reflecting on the design of objects and systems, exploring the complexity of design, and finding opportunity to make objects and systems more effective, more efficient, more ethical, or more beautiful.

Sensitivity to design develops when young people and adults have opportunities to: look closely and reflect on the design of objects and systems, explore the complexity of design, and understand themselves as designers of their worlds. Accordingly, the Agency by Design framework describes three interrelated capacities that help learners develop a sensitivity to design: Looking Closely, Exploring Complexity, and Finding Opportunity. For each of these capacities, there is a set of observable “moves” — or indicators — that learners and educators can use to help design maker-centered learning experiences, and to support, observe, document, and assess maker-centered learning. They apply to individual as well as collaborative learning.



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LOOKING CLOSELY: *Using any and all of the senses to examine objects and systems in order to notice their intricacies, nuances, and details. By looking closely, one may begin to see the complexities inherent in objects and systems.*

- *Notice everything*—Cast a wide net to capture all that you can observe.
- *Revisit*—Look/listen/touch again, and see if you can find something new.
- *Use categories*—Look for different kinds of features or components.
- *Juxtapose*—Look at things side by side; compare, observe relationships.
- *Physically change perspectives*—Look from high, low, far away, close up.

EXPLORING COMPLEXITY: *Investigating the interactions between the various parts and people associated with objects and systems, including the range of values, motivations, and priorities held by the individuals who engage with particular objects and systems.*

- *Explore inner workings*—Explore how things, ideas and systems work—what are their parts and interactions?
- *Explore points of view*—Consider and take different perspectives: What different ways can you look at this?
- *Probe your own perspective*—Examine your own assumptions and beliefs.
- *Look back and forward*—Explore the histories and possible futures: How did this come to be? Where might it be going?
- *Tinker to explore*—Take things apart, put things together, play around with how things work.

FINDING OPPORTUNITY: *Building on close observations and explorations of complexity to see the potential for building, tinkering, re/designing, or hacking objects and systems.*

- *Envision*—Imagine what could be invented, or how things could be changed.
- *Reframe*—Rethink, refocus, or re-define a problem, opportunity, or procedure; hack or repurpose how things work.
- *Source resources*—Be proactive and creative about finding information, advice, and instruction.
- *Prototype and test*—Make models and run tests; try things out to see what works.
- *Make (and draw) plans*—Identify steps; sketch what things could look like and how they could work; illustrate ideas & processes.