Co-designing involves supporting youth by working with them in sustainable and non-hierarchical ways individually, in groups and through youth representatives to collaboratively create experiences, artefacts, spaces, processes and desired outcomes.

This guide provides:
- One example of how to enact the Core Equitable Practice (CEP) of Co-designing, as described in the Co-designing Insights 2.3 document.
- Examples of how youth may seek to co-design, drawing on our partner educators’ implementation of informal STEM programs.
- Ways to notice these bids and readily respond to them in ways that value youth for who they are and what they bring to the learning environment.

Questions for Group Discussion
- How have youth had opportunities to co-design in my/our program because of who they are, what they have experienced and/or what they know? How have youth been denied that opportunity?
- How have I/we responded to such bids? Which new learning outcomes, if any, emerged from my/our response to bids for authority sharing?

Things to Keep In Mind
- Youth bids can require multiple responses at once. For example, youth bids to co-design by presenting their expertise and knowledge can also require the core equitable practice of authority sharing.
- This tool can be used alongside the Equity Compass tool to enhance discussions on youth bids goals and outcomes.

Why do youth make bids? Youth often actively seek to do the following:
- To disrupt the ways in which everyday knowledge and practice of STEM and schooling position students as deficient, or without power and authority.
- To amplify their already-present brilliant and agentic acts of everyday knowing and practice and to have their transformative potential made visible.
- To be rightfully present and legitimately belong as fully human in ISL.
Disrupting: Demanding a space to explore learning in youth-centered ways

Maria noticed that William was frustrated. He was ripping off the switch he had sewn onto a felt spaceship bookmark he made. An LED light was going to be the spaceship’s “fire,” the conductive thread its flight path, and the battery/battery holder/switch the “Earth.” Maria thought William was frustrated by the sewing -- it was new to him. She asked him what was wrong, and he said the bookmark was "stupid" and he did not want to make it. Maria suggested he could make something else, and had shown him a phone carrier (like a small purse) she had made as an example, and he said, "I'd rather make a fanny pack."

So Maria sat down with William and helped him sketch out what a fanny pack could look like using the materials they had available.

Bid: Asking to change the focal activity
Response: Noticing asking questions, and supporting shifts in activity
Co-designing: Youth and educator work together for more meaningful projects

Amplifying: Presenting youth-authored ideas to be heard, shared, and followed

Team leader Erin said she first only saw value in a youth leadership boards/councils as a “learning experience." Youth gathered ideas for activities and projects using an interactive board to share ideas and a tactile group voting device to make decisions. Erin described these tools as a stepping stone to more frequently position youth in leadership roles.

Eventually, the stepping stones turned into real shared action. For example, “There was a real interest around climate change, so we did a workshop on climate change the following week.” Youth continued to co-design center activities and contribute their design for the planner leaflet (see the photo on the right for some of the young people’s images). Erin said “We’ve also had our leaflets done; you can see all of their designs on the front. As soon as they saw that, and they walked through the building they immediately saw that they had ownership over their program.”

Bid: Sharing past experiences and interests
Response: Noticing bid and adjusting workshop and including youth designs in materials
Co-designing: Activities and materials shaped by youth and adults

Rightfully Present: Brainstorming events and spaces to lead others, both peers and adults

Educator Maria shared, “Youth in our program kept saying how much they wanted their friends and families to have the chance to make things with electric art like they did. This gave us the idea that we should co-design what those experiences could be. It would not have been the same if adults did the planning, as the youth are the experts on how they want electric art to matter in their lives.”

After four weeks (12 sessions) of co-designing among 16 youth and makerspace educators, over 100 people joined their workshop. Youth transformed their makerspace and an adjacent room into spaces where visitors of all ages could create their own electric art. In rooms decorated with ongoing electric projects, visitors made light-up wristbands and canvas art. Youth also led lessons on energy, circuitry, and making (e.g., using multimeters, soldering, solar panels, and power tools). In one corner, visitors rode a bicycle renovated to power their smartphone. Youth also designed “snack zones” and “chill zones,” where visitors could enjoy music, food, and electric-art games, especially if their maker projects became “frustrating” or they “needed to blow off steam.”

Bid: Stating the importance of friends and family experiencing STEM maker activities
Response: Listening and working with youth to realize their vision of STEM
Co-designing: Creating an event together to include family and friends in STEM

Reflecting:
- Which example of youth bids resonates with your experience?
- Share and add youth bids for co-designing that you have experienced.
- How might you respond to co-design materials, activities, and spaces with youth in your program?