Cambio

cam·bio | \ ˈkambē ˌō \
meaning “change”
noun (Spanish)

STEM Identity Balance: Tool + Activities

When we think about STEM, we frequently frame it through a dominant lens—rooted in Western, or Eurocentric, scientific traditions. That lens is often portrayed as a neutral or objective point of view, and frequently represented by a white, male perspective of STEM.

Adopting a broader lens can help us recognize and acknowledge that STEM is practiced and engaged in by all sorts of people in many different ways, with many different perspectives and for many different purposes. This activity encourages museum teams to have a conversation about the ways in which their museum currently conceives of and portrays STEM. This conversation can help you consider how to shift to a more inclusive, expansive view and set of experiences.

PREPARATION

Set-up: You may choose to use this digitally, or print it and use pens and sticky notes.

Participants: We recommend doing this activity as a department, or bringing together a cross-departmental, cross-functional group focused on engaging your target communities. You could also consider completing the activity individually and then convening a group to share each person’s perspective(s).

Time: Entirely up to you—be sure to give yourselves enough time to really delve into these different concepts, and then place your organization on the balancing beam.

PROCESS

1. Think about the cultural practices of any group you might be part of (this could be a hobby-related group, a group focused on a sport or other specific skill set, an ethnic/racial group, a gender-related group, etc):
    - Who is considered part of the group, and who isn’t?
    - What are the norms within the group? What happens if someone doesn’t know the norms?
    - What patterns and behaviors are considered acceptable within the group?
    - What happens when someone does something within the group that is considered unacceptable?
    - Are there certain places where the dominant group norms are practiced, highlighted, or touted?

    The *dominant* group is the group that sets the norms and decides when something is unacceptable. In relation to STEM, Western or Euro-centric science has established a set of

rules, and practices that are currently the dominant norms. However, if we expand our thinking to identify other patterns and behaviors, and recognize that many others are practicing STEM but in different ways, we also acknowledge and value other ways that STEM is taking place in the world.

2. To think about this further and apply it to your museum practice, study the included chart, thinking about notions of STEM and asking yourselves the questions included in each of the title areas.
   - WHO
   - WHAT
   - WHEN
   - WHERE
   - WHY
   - HOW

   As you dialogue, think about general conceptions of STEM in society and in your local area, and the ways in which your museum mirrors or shifts common perceptions of STEM.

3. Using the STEM Identity Balance (included here), identify ways in which your current museum practice tends toward dominant or non-dominant practice and why. Think about specific programs, offerings, and exhibits and where they might fall on the balance. Consider this for each of the WHO, WHAT, WHEN, WHERE, WHY, HOW questions.

4. Print out the STEM Identity Balance pages and note where different museum experiences and program offerings fall on the balance. Take a look at the overall balance of your multiple-plank balance. While we don't assume that all of the planks should fall on the non-dominant side, it can be helpful to understand the balance of your museum experiences and offerings and whether they work well for different audiences.

5. Use this conversation to identify areas in your museum where you might change or shift what your museum offers to acknowledge and recognize different ideas about who does STEM, when and where STEM is practiced, the timeline of knowledge, and how people engage with STEM. The acknowledgement of lived experience and the strengths those experiences and perspectives bring is an important element in broadening our understanding of STEM as a cultural endeavor.

For more curricular resources focused on engaging with Latinx audiences, reconceptualizing STEM, or shifting organizational practices, go to CambioExperience.org/Resources.

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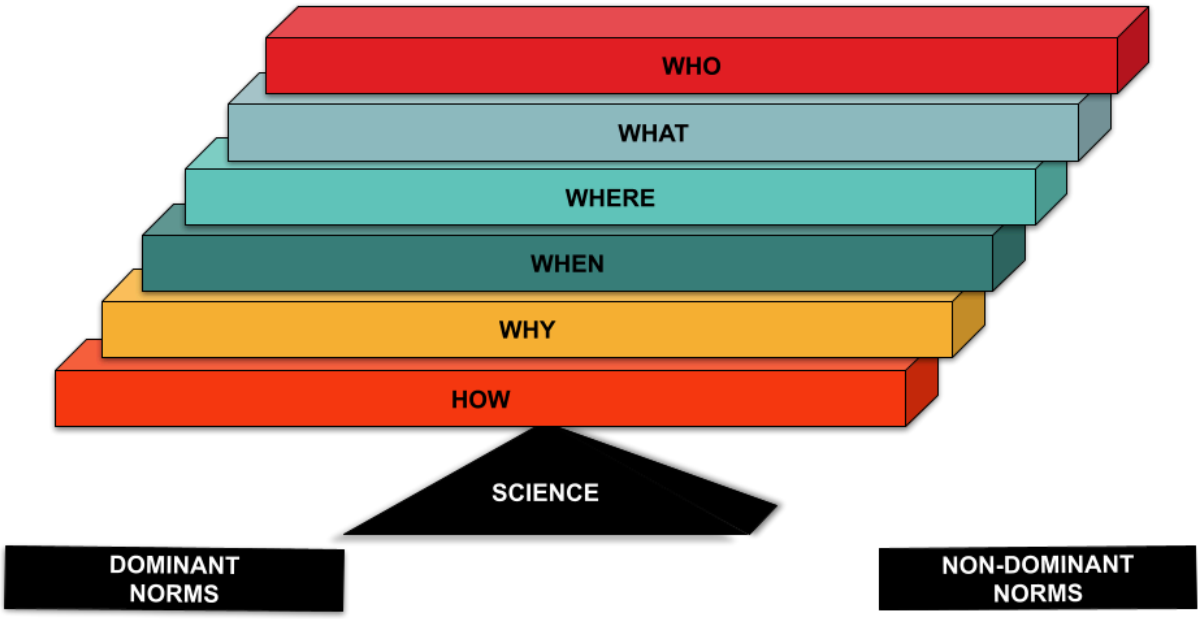
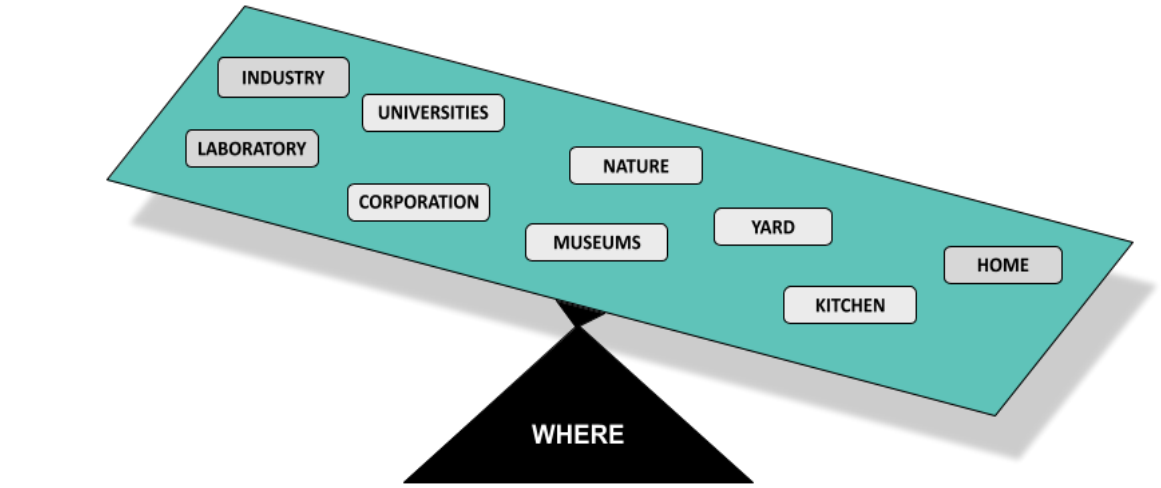
Notions of STEM Chart

Who	Who does STEM? Who has STEM expertise? What does a scientist look like? How does a scientist behave? Who belongs?
What	How is knowledge acquired? What is considered to be science?
Where	Where does STEM take place? How are people connected to the places where STEM happens?
When	What are the timeframes of practicing science?
Why	Why do we do science? Is it for the pursuit of knowledge? To know more? To understand how the world works? To understand how humans can benefit?
How	The Tools of science; Processes of science, e.g., inquiry

STEM Identity Balance

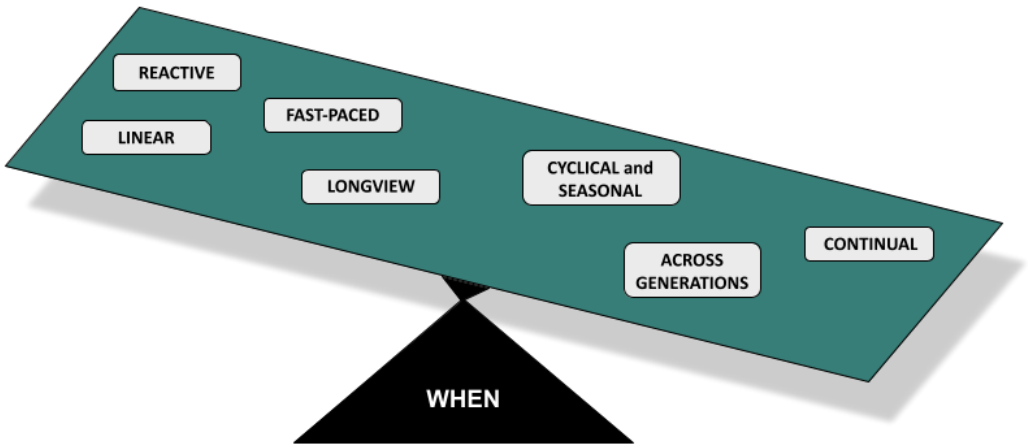


Dominant and Non-Dominant STEM Examples



DOMINANT NORMS

NON-DOMINANT NORMS

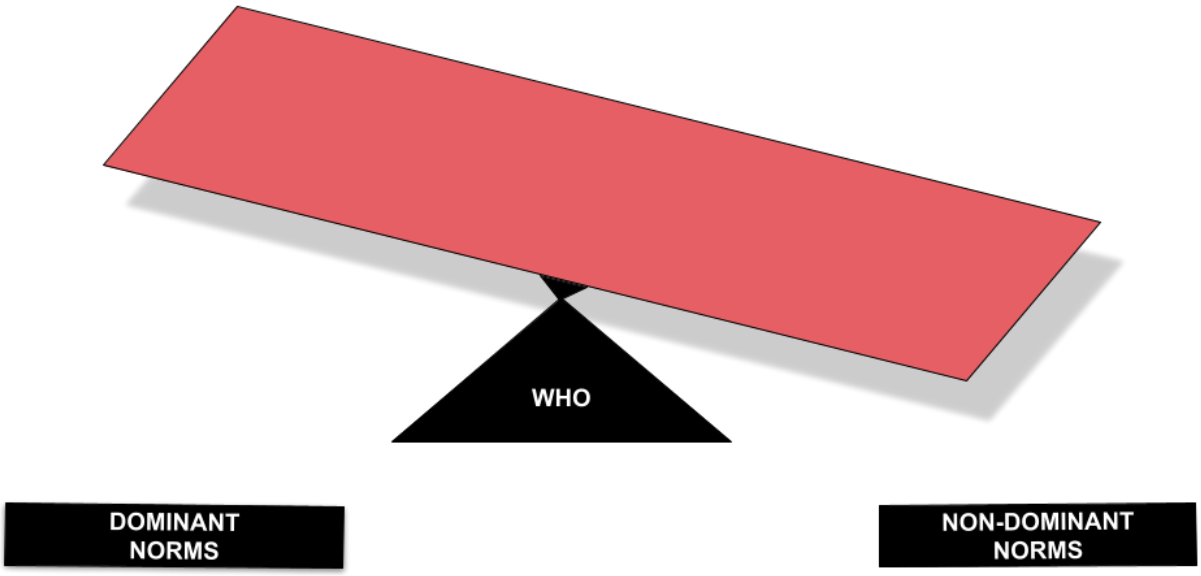


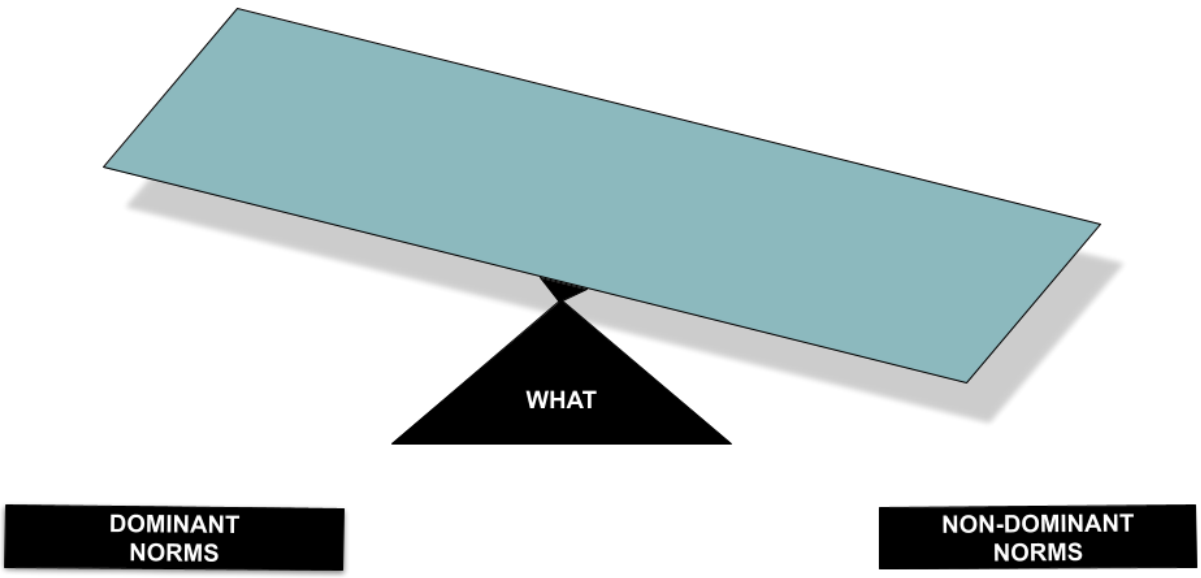
DOMINANT NORMS

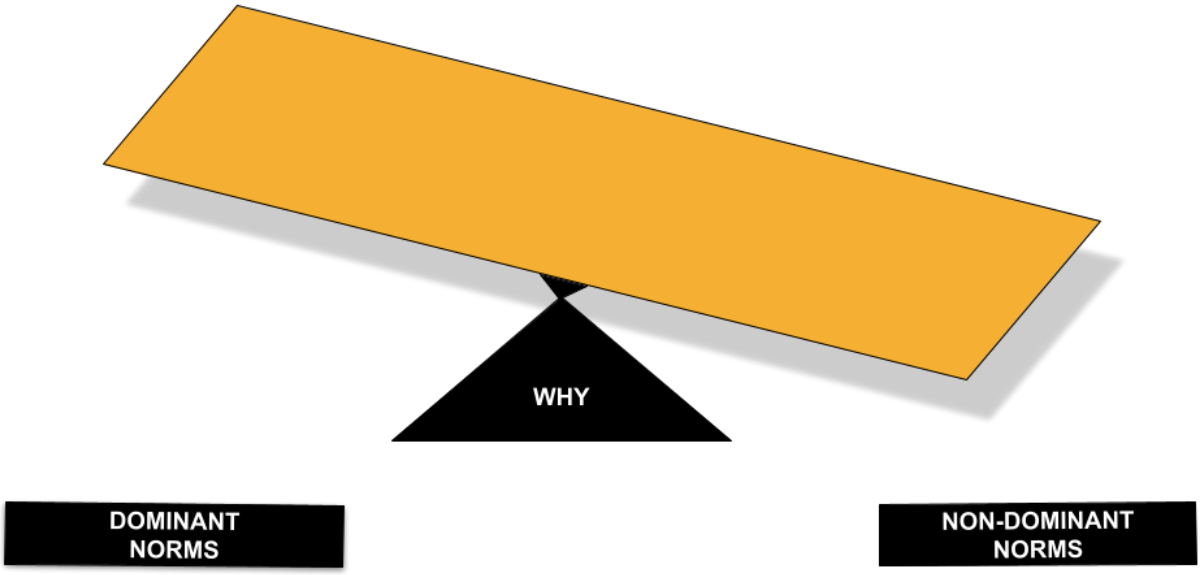
NON-DOMINANT NORMS

Dominant and Non-Dominant STEM Worksheet

Fill in each balance to reflect for your institution's practices and approach.






WHY
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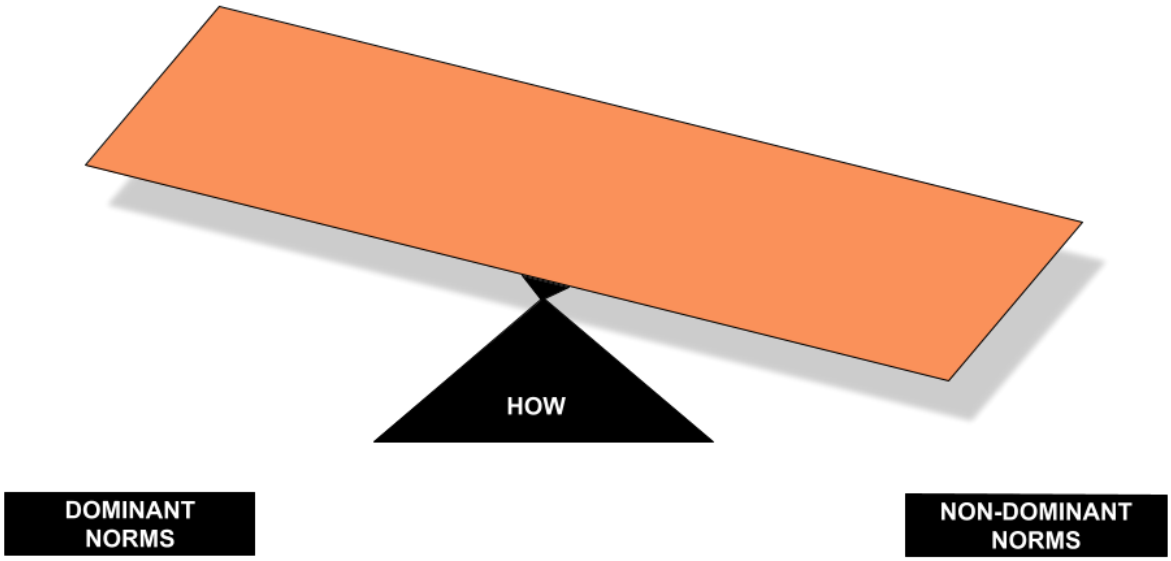
NON-DOMINANT NORMS


HOW
DOMINANT NORMS
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