

## How to Read CCR Standards

### Given | Asked | Can Structure

*Given*\_\_\_\_, and *Asked* \_\_\_\_, students *Can* \_\_\_\_

Each standard is composed of three separate phrases which need to be considered all together. Unlike traditional standards, CCR standards specify what the student is “Given” and “Asked,” so that the Students’ “Can” statement is more precise.

- Some standards *Give* students *more* than a typical standard might imply, making the standard easier than it may appear judging only by the traditional difficulty of the content.
- Some standards *Ask* students *less* than a typical standard might imply, making the standard more difficult than it may appear judging only by the traditional difficulty of the content.
  - In these cases, the *Students Can* statement specifies what students must be able to do, without being specifically asked to do it. They must figure out independently that that is what’s needed.

### Tagging

Each standard is tagged to several different pieces of information, which can provide necessary context for understanding how the standard fits into the broader vision.

- **To Other Standards**

Standards are tagged in two directions so that from any given standard it is clear what students should already know and what they must be able to do to be prepared for where the progression is headed.

  - *Coming From*

These standards most directly provide background knowledge for the standard they are tagged to. They may be in the same year or a previous year.
  - *Leading Up To*

These standards are most directly set up by the standard they are tagged to.

They may be in the same year or a future year.

- **To Content Threads**

Standards are tagged with content threads that trace a particular piece of content as it is developed across the standards e.g., the following Kindergarten standard is tagged with Place Value, but does not explicitly talk about Place Value to teachers or to students.

Locate a number on a number line up to 100	a partial number line representing 0 -100 with multiples of ten labeled and appropriate markings for each whole number, and a specific number between 0 and 100	to locate the number	locate the number on the given number line by finding the multiple of 10 first, and then adding the "ones"
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- **To Core Concepts**

Standards are tagged to CCR’s Core Concepts (CCs), which are the *deeper* threads that connect the standards and exemplify the habits of mind instilled by mathematics. These are ideas that may be left unsaid in traditional standards because they are difficult to measure directly.

While experts perceive them because they are embedded into how they see the world, others often do not, creating a gap between the intended curriculum and the implemented curriculum. We tag these to make sure the opportunities for developing meaningful mathematical habits of mind are surfaced whenever they are relevant.

CCs exist at the Discipline level and at each Branch level. For example, a discipline level CC is *Estimation*<sup>1</sup> and a CC for the Probability and Statistics Branch is *Data Types*.<sup>2</sup>

- **To Learning Progressions**

<sup>1</sup> The description for Estimation reads: “Often it’s not as important to get one specific answer as it is to properly estimate the answer. This can make calculation much simpler and can help us set and check our expectations.”

<sup>2</sup> The description for Data Types reads: “Data comes in many forms, and depending on its form, needs to be treated differently. It can take various forms, from categorical (e.g., favorite artist, hair color, school district) to continuous (e.g., height, speed, temperature), and more. Different summaries are appropriate for different types of data (e.g., it doesn’t make any sense to take the median favorite artist of a group)”

Finally, CCR standards are tagged with Learning Progressions (LPs) to highlight research-based structure between content and concepts across disciplines. For example, *Unitizing*<sup>3</sup> links together many standards from across the branches and across different years, slowly building up the bigger idea of using units to turn the world into mathematics based on learning progressions that have been developed through research.

## FAQs

### **This wording is too complicated for kids!**

The intended audience of these standards are Curriculum Designers, including teachers who design curricula. *They are not intended to be shown to students*, especially because in many cases that would give away the mental leap they are supposed to learn to make themselves.

### **I'm looking for a particular concept (e.g., Place Value) but it's not where I expect it to be.**

It will help if you look for key words not just in the standards but in Content Threads, Core Concepts, and Learning Progressions as well. If you can't find what you're looking for using the Search function, ask us at [info@curriculumredesign.org](mailto:info@curriculumredesign.org).

### **Some standards are not in the grade I expect them to be.**

Look at the progression. If it makes sense, it's probably better aligned to other standards sets than you think. Take a look at the standards that the given standard is *Coming From* and *Leading Up To* to get a sense of the broader context.

- a. You may find a standard that sounds really challenging but reading carefully, you may realize the CCR standard is expecting something simpler (e.g., “using informal language”).
- b. You may find a standard that sounds really easy but reading carefully, you may

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<sup>3</sup> The description for Unitizing reads: “Mathematizing requires consistency. To express a number, we define a unit that allows us to keep track of any value in terms of this consistent unit.”

realize the CCR standard is expecting something more challenging (e.g., when the *Asked* does not reveal how students should approach the problem).

**Students should/shouldn't be told which approach they should use to solve this problem.**

Sometimes, it's important for students to be given the freedom to discover their own approaches to certain problems. This is important not only because it can be more engaging, but also because when different students share their different perspectives it enriches the understanding of *all* students. Other times, it's important that students learn a particular method, because that method is not just an algorithm but foundational for further conceptual development.

The CCR standards are intentional about when they encourage students to explore many approaches and when they prescribe a particular approach. This may not always be intuitive. For example, the standards do not mandate that students learn the standard algorithm for adding two-digit numbers; if they are able to add them fluently with their own methods, that's better than if they are semi-fluent in the standard algorithm. In other words, there is nothing important about the standard algorithm itself, other than the fact that it will work in all cases (as will a calculator or googling the answer). However, if students are able to *flexibly* use whichever strategy works best for them for each scenario, that shows a deeper and more useful understanding of the ideas.

On the other hand, the standard discussed above, *Locate a Number on the Number Line*, specifies that students should first find the 10s and then count the 1s, because it is important to setting up the idea of place value, and finding idiosyncratic approaches muddies the conceptual waters.