

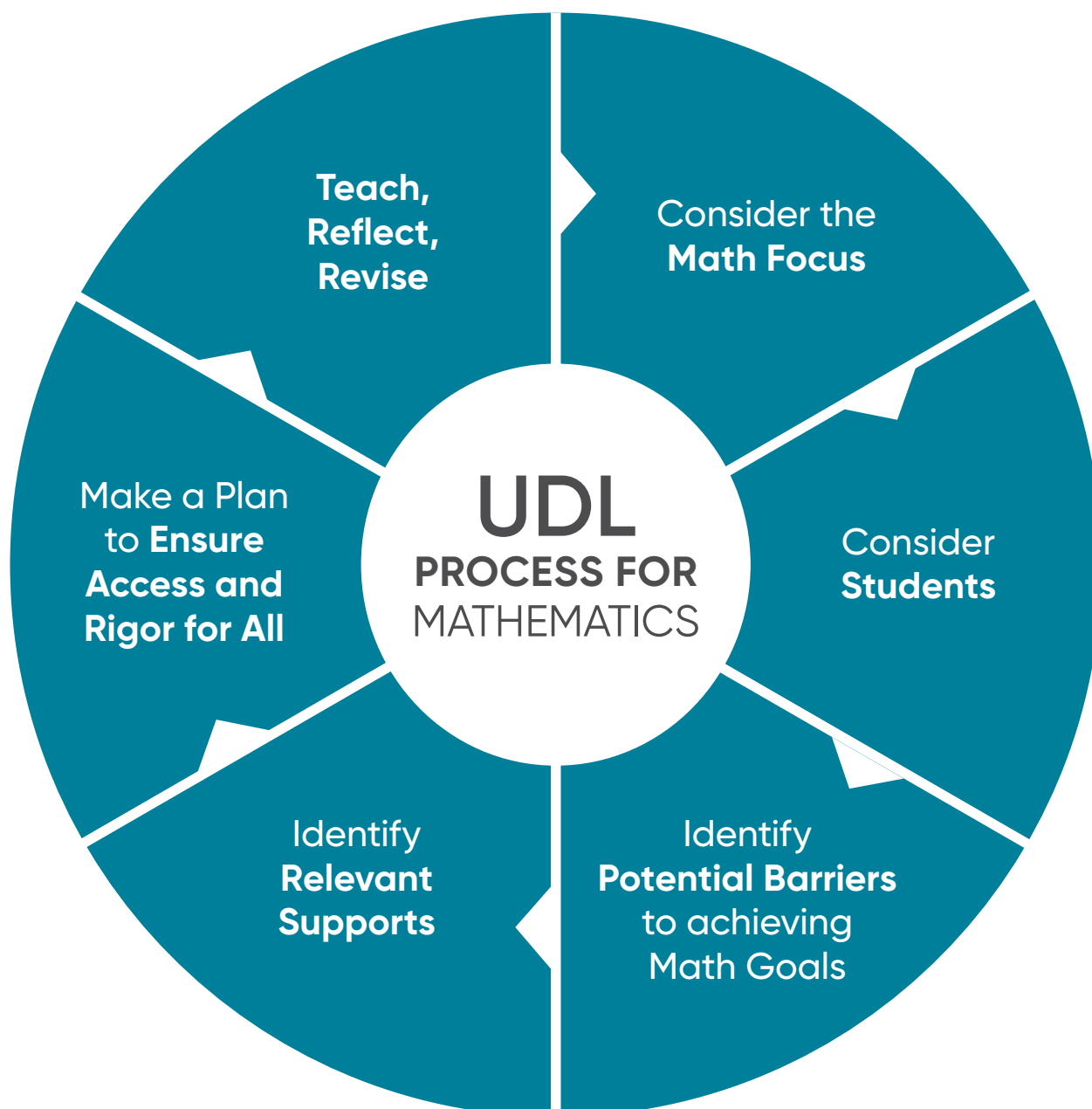
UNIVERSAL DESIGN FOR LEARNING (UDL)

Our **Commitment** to Equity and Engagement

All students bring assets, funds of knowledge, and variability to their learning. *Classroom Mathematics California* embraces the UDL Process and Principles to remove barriers to learning so that all children have opportunities to succeed and see themselves as mathematicians.

UDL Process TOOLKIT

Helps teachers further integrate UDL's dynamic framework to design inclusive learning experiences, leverage student assets, and foster a sense of belonging.



PRINCIPLE 1 Design Multiple Means of Engagement

- **Options for recruiting interest**, such as STEM Stories, Real-World Connections, and Connect to Culture provide high-interest, culturally sustaining opportunities for students to connect with learning.
- **Options for sustaining effort and persistence** like Hands-On Activities, Visual Models, and cooperative learning routines provide flexible ways for students to interact with rigorous mathematics concepts.
- **Options for self-regulation and practicing a growth mindset** include end-of-unit Self-Reflections so that students think metacognitively about their role as a learner and their progress toward achieving unit goals.

DIFFERENTIATION | RETEACH or REINFORCE

Hands-On Activity
Use fraction circles to model equivalent fractions.

If students are unsure about how to generate equivalent fractions, then use this activity to provide a more concrete experience with equivalent fractions.

Materials For each pair: 1 set of fraction circles

- Distribute fraction circles and have partners show one half and write the fraction.
- Then have students use the fraction circles to find fractions that are equivalent to $\frac{1}{2}$.
- Have students write all the equivalent fractions they find. $\left[\frac{2}{4}, \frac{3}{6}, \frac{4}{8}, \frac{5}{10}, \frac{6}{12}\right]$
- Repeat the activity for $\frac{1}{4}$. $\left[\frac{2}{8}, \frac{3}{12}\right]$

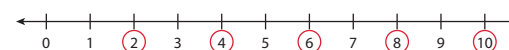
PRINCIPLE 2 Design Multiple Means of Representation

- **Options for language and symbols** like interactive vocabulary tasks, multilingual glossaries, and daily Picture It and Model It examples support comprehension.
- **Options for building knowledge** include constructing meaning through unit-wide Big Ideas, connecting prior knowledge to new learning, and embedding language routines that support making sense of problems.
- **Options for perception** like visual models, manipulatives, and the accessibility features in the Student Bookshelf and Interactive Practice provide students access to learning.

MODEL IT

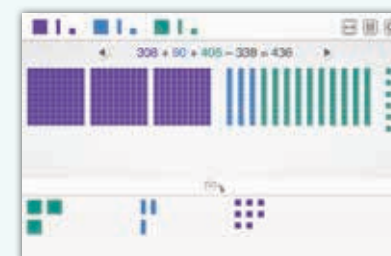
You can also use a number line to help understand the problem.

The number line shows multiples of 2 circled. To find the multiples of 2, you can start at 0 and skip count by 2s. You can see that the **multiples of 2** are even numbers.



PRINCIPLE 3 Design Multiple Means of Action & Expression

- **Options for expression and communication** like manipulatives and virtual math tools enable students to demonstrate their knowledge and skills.
- **Options for strategy development** like the Try It routine promote student agency by embracing multiple ways of executing strategies and tool use.
- **Options for interaction** like keyboard navigation and alternatives for physical response in *Classroom Mathematics California* digital components enable all students to fully participate.



Digital Math Tools

