PhET Tips for Teachers

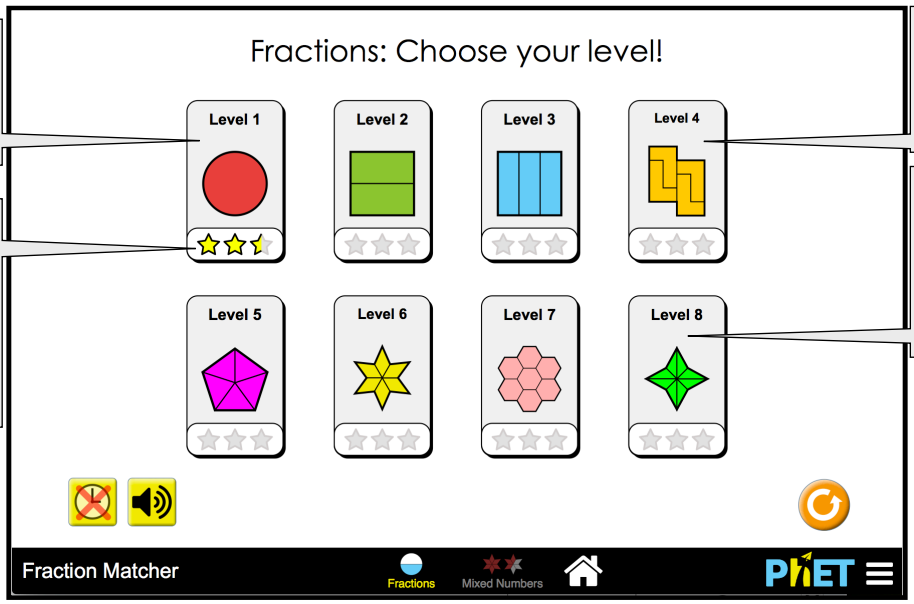
Fraction Matcher

Fractions Screen

This screen contains eight levels of matching fractions using the improper fraction representations for fractions greater than 1.

Levels 1-2 only use fractions that are less than 1

SEE your best score (represented by stars) for any levels

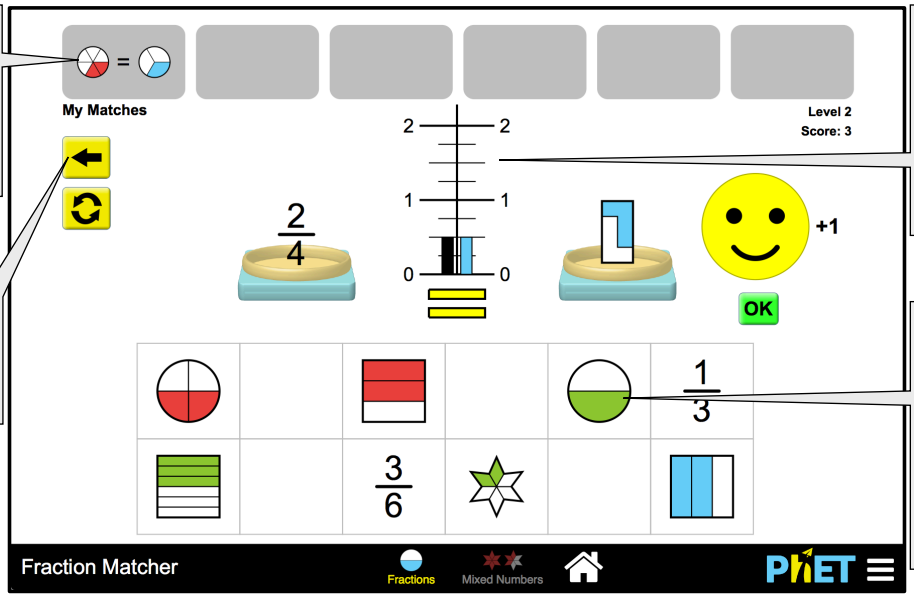


Levels 3-6 use fractions less than 2

Levels 7-8 only use fractions greater than 1 and less than 2

KEEP track of all correctly matched fractions

RETURN to the level selection screen



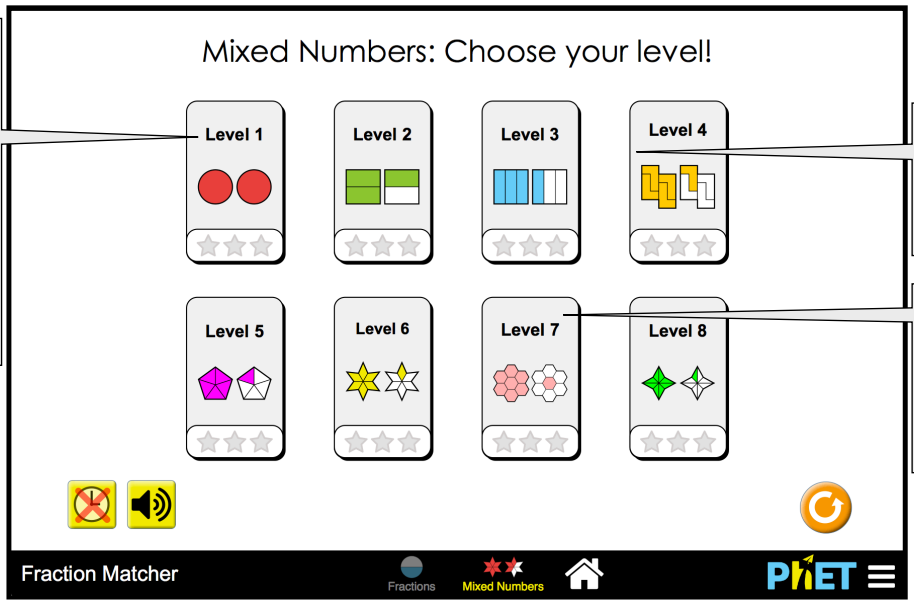
GET feedback about the values of your fractions in a number line representation

DRAG different representations of the fractions up to the scales and check if they are equivalent

Mixed Numbers Screen

This screen contains eight levels of matching fractions using the mixed number representation for fractions greater than 1.

Levels 1-2 use mixed number fractions that are less than 2, and the numerator of the fraction will always be equal to 1.



Levels 3-6 use fractions less than 2.

Levels 7-8 only use fractions greater than 1 and less than 2.

Insights into Student Use

- Students can work at any level on any screen, but it can be helpful to differentiate instruction by assigning certain levels.
- The timer is *off* by default but can be turned on for students to measure their speed on a given level.
- The sound is *on* by default but if you are working with multiple computers in one room you may want to ask students to turn it off.

Suggestions for Use

Group Work

- If two fractions are equivalent, what does the number line representation look like?
- If two fractions are *not* equivalent, what does the number line representation look like?
- What strategies help you match two fractions? How can you use these strategies to determine if 5/8 and 10/13 are equivalent?

Customization Options

Query parameters allow for customization of the simulation, and can be added by appending a '`?`' to the sim URL, and separating each query parameter with a '`&`'. The general URL pattern is:
`…html?queryParameter1&queryParameter2&queryParameter3`

For example, in Fraction Matcher, if you want to change the screen order (`screens=2,1`), with the 2nd screen open by default (`initialScreen=2`) use:
https://phet.colorado.edu/sims/html/fraction-matcher/latest/fraction-matcher_all.html?screens=2,1&initialScreen=2

McGarry, August 2023

To run this in Spanish (`locale=es`), the URL would become:
https://phet.colorado.edu/sims/html/fraction-matcher/latest/fraction-matcher_all.html?locale=es&screens=2,1&initialScreen=2

Query Parameter and Description	Example Links

`screens` - specifies which screens are included in the sim and their order. Each screen should be separated by a comma. For more information, visit the Help Center.	`screens=1`
	
	`screens=2,1`

`initialScreen` - opens the sim directly to the specified screen, bypassing the home screen.	`initialScreen=1` `initialScreen=2`
`locale` - specify the language of the simulation using ISO 639-1 codes. Available locales can be found on the simulation page on the Translations tab. Note: this only works if the simulation URL ends in "_all.html".	`locale=es` (Spanish) `locale=fr` (French)
`allowLinks` - when `false`, disables links that take students to an external URL. Default is `true`.	`allowLinks=false`

See all published activities for Fraction Matcher here.
For more tips on using PhET sims with your students, see Tips for Using PhET.