

# QUICK START GUIDE FOR MATH TEACHERS

## **CONTENTS**

An overview of KA

Steps to start

Additional resources



On a mission to provide a free, world-class education for anyone, anywhere

# WELCOME TO KHAN ACADEMY!

Khan Academy is a non-profit that provides FREE, high-quality online learning resources and real-time data about learners so that educators can more effectively spend their time targeting student needs.

## Students learn best in environments that are:

- **Personalized** to meet the unique needs of each student
- **Focused on mastery** to build strong foundational understanding of concepts
- **Interactive and exploratory environments** to encourage applied learning and projects



## With Khan Academy, get...

- ✧ A complete self-paced learning tool
- ✧ A dynamic system for providing students initial help
- ✧ Individual and class reports for all students
- ✧ Better intelligence for doing targeted interventions
- ✧ A platform that frees up your time so you can focus on activities like peer-tutoring, small groups and time for projects

**Access is completely FREE.**

*No contract, no ads, no fees – we actually are free.*

# HIGHLIGHTS OF KHAN ACADEMY

## A personalized learning dashboard

The dashboard shows the user's name 'jessica' and 'Joined 2 years ago'. It displays a progress bar for 'The World of Math' with a score of 171. The main content area features a 'Quadratic formula' section with a 'START' button and a 'PRACTICE' button. To the right, there is a 'LEVEL UP YOUR SKILLS!' section with a 'START' button. Below these, there are sections for 'UP NEXT' and 'YOU FINISHED!'. The 'UP NEXT' section includes 'Solving quadratics by factoring' and 'Angles of a polygon', each with a 'PRACTICE' button. The 'YOU FINISHED!' section lists '1-digit addition' three times, each with '+115 energy points'.

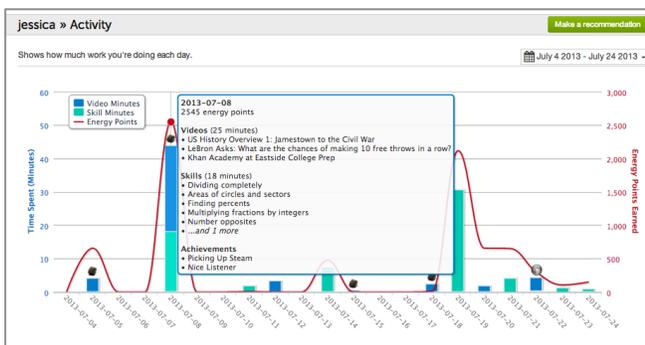
The page is titled 'Factors and multiples' and includes a 'Practice this topic' button. It features a sidebar with a list of topics: Community Questions, Addition and subtraction, Multiplication and division, Factors and multiples (selected), Negative numbers and absolute value, Decimals and percent, Fractions, Ratios, proportions, units and rates, Exponents, radicals, and scientific notation, Interpreting data, and Arithmetic properties. The main content area is divided into 'Divisibility tests' and 'Divisibility and factors'. The 'Divisibility tests' section includes a video player and a list of topics: Divisibility Tests for 2, 3, 4, 5, 6, 9, 10, Recognizing Divisibility, The Why of the 3 Divisibility Rule, The Why of the 9 Divisibility Rule, Divisibility tests, Finding Factors of a Number, Divisibility 0.5, Divisibility intuition, and Divisibility intuition.

Curated tutorials across subjects with lessons, skills practice, and explorations

A galaxy of Infinite practice from basic addition to calculus

The interface shows a math problem:  $4 + 9 = ?$  with an 'Answer' input field and a 'Check Answer' button. Below this, there is a problem asking to 'Find the distance between the points (4, -2) and (-4, 7)' with a coordinate plane showing the points. At the bottom, there is a limit problem:  $\lim_{x \rightarrow -\infty} \frac{2x^2 - 2x}{-1x^2 - 3x} = ?$

## Real-time individual and class data at your fingertips



The table shows class data for 'Multiplying decimals'. It has columns for 'Struggling', 'Needs Practice', 'Practiced', 'Level One', 'Level Two', and 'Mastered'. The rows show individual student performance. For example, 'maureen' is in the 'Struggling' category, while 'jessica' and 'elizabeth' are in the 'Level One' category. The table also shows a '0.345 x 888' calculation and a '0.88 | 303.60' calculation.

# STEPS TO START

**STEP 1:** Try it out

**STEP 2:** Figure out technology access

**STEP 3:** Choose your implementation approach

**STEP 4:** Sign up your students

**STEP 5:** Plan your first day and beyond

**STEP 6:** Personalize learning experiences

# STEP I: Try it out

1. **Sign up for an account** at [www.khanacademy.org](http://www.khanacademy.org) using an email address to try out all the functionality. From the LEARN menu in the upper left, select from a variety of topics – or use the search bar to find a specific topic.

Explore a topic



Manage your student and class lists



Access class reports & detailed student data



Find best practices on using KA with your students

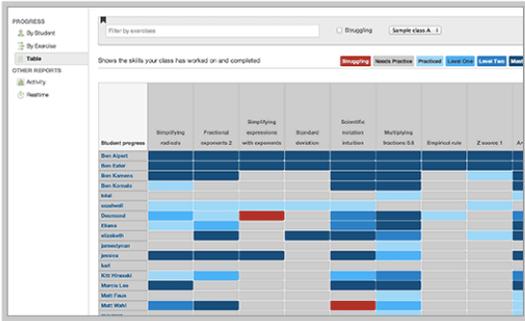


2. **Explore a populated class-level data set using our Coach Demo** at [www.khanacademy.org/coach/demo](http://www.khanacademy.org/coach/demo)

Click “ACCESS DEMO” (if you are already signed in, click LOGOUT AND ACCESS DEMO).

**Coach report demo**

In addition to the tremendous content that Khan Academy provides, there is also a wealth of classroom data that coaches can access.



Try out our coach reports to see what data you'll have access to after adding your students to Khan Academy. In this demo, you'll see real-time data for Khan Academy employees so don't be surprised if the data doesn't look quite like a normal class.

[Access coach report demo](#)



## STEP 2: Figure out technology access

Technology is the foundation for using Khan Academy, so it's important to understand what access your students will have and how often.

Access typically falls into 4 categories. Here are ideas on how to leverage and/or augment the technology available

### 1:1 DEVICES TO STUDENTS

- Lucky you! If you are already using this technology, move on to the next step.

### A FEW DEVICES

- **Station Rotation:** Rotate all students through the computers while the rest of the class works on other activities
- **Targeted intervention:** Assign students at ends of the learning spectrum to the computers. Struggling students can focus on fundamentals; advanced students can continue racing ahead.

### COMPUTER LAB

- Regularly schedule time in the lab, if possible. Here are ideas on how to use lab time:
  - Allow students to explore
  - Assign targeted skills or lessons for them to focus on
  - Use the Energy Points report real-time for motivation or games

### NO TECHNOLOGY ACCESS

- **Augment access to technology** with a BYOD (Bring Your Own Device) policy or programs like DonorsChoose or corporate donations
- **Partner with community programs** (e.g., libraries, schools) to provide tech access. Have routine check-ins with students and/or work with school educators to focus student learning.

# STEP 2: Figure out technology access

## BANDWIDTH AND CONNECTIVITY

- Check that the internet bandwidth can handle all students on Khan Academy at a given time.**  
We recommend ~1.5 Mbps for a single machine viewing standard definition video. It's unlikely all students will watch streaming videos at the same time (skills practice is significantly less bandwidth), but ~1.5Mbps per student is a safe bet.
- Confirm that wifi access points are close enough**  
Ensure that all students can use wifi simultaneously. To be safe, have one router in each room that will be using Khan Academy.

## PRIVACY & FILTERS

- Check if your internet has filters that block YouTube.**  
Since Khan Academy videos are run on YouTube, unblocking or signing up for YouTube for Schools are common approaches to enable full access. Find out more info about YouTube for School at [www.youtube.com/schools](http://www.youtube.com/schools)

## DEVICES & BROWSERS

- Try using Khan Academy on the devices.** Generally laptops or desktops work best. Tablets are okay but some of the data report functionality and a few interactive skills practice may not work as well. E-readers are not recommended.
- Install the latest versions of browsers.** Older versions do not support the latest technologies and encounter more bugs. We recommend faster browsers like Chrome, Firefox, Safari and IE10.

## IT SUPPORT

- Learn basic troubleshooting strategies and know who to reach out to if you need tech support.**

# STEP 3: Choose your implementation approach

## Getting started in the short-term

What is the purpose of KA in your class? (e.g., remediation, enrichment, homework)

When & where will I use KA? (e.g., 2x per week for 45 min in the computer lab)

How will I incorporate KA with my curriculum? (e.g., supplement my unit)

How might your answers change when thinking about the long-term?

# STEP 3: Choose your implementation approach

Check out these 3 common approaches on how to start incorporating Khan Academy into your curriculum

	How does it work?	Benefits?
<p><b>UNIT-DRIVEN APPROACH</b></p> <p>For the teacher who wants to use time more effectively with students who need it most</p>	<ul style="list-style-type: none"> <li>• Create a <b>playlist for your current unit</b></li> <li>• Give students <b>time every week</b> to work on current unit playlist – at least 30 min time blocks are ideal</li> <li>• <b>Use coach reports</b> to identify struggling students and help them (can be 1:1 or small group)</li> </ul>	<p>Teachers get assessment data quickly and can focus on struggling students</p> <p>Students get feedback quickly and are less likely to hold on to misconceptions</p>
<p><b>GAP-DRIVEN APPROACH</b></p> <p>For the teacher who wants to accelerate learning for all students while meeting curricular needs</p>	<ul style="list-style-type: none"> <li>• Do all of the above, AND...</li> <li>• If you have students who have gaps, create a <b>foundational playlist</b> that covers prerequisite skills</li> <li>• If you have students who are ahead, create <b>enrichment playlists</b></li> <li>• <b>Have routine check-ins</b> with students to ensure progress on curriculum and individual goals</li> <li>• Use coach reports to encourage <b>peer tutoring</b></li> </ul>	<p>Students with gaps can build strong math foundations</p> <p>Students who are ahead can be challenged</p> <p>Teachers are more aware of students' strengths and weaknesses, and they are more able to give personalized attention</p>
<p><b>STUDENT-DRIVEN APPROACH</b></p> <p>For the teacher who wants all students to progress at their own pace</p>	<ul style="list-style-type: none"> <li>• Create a playlist for your current unit <b>AND all future units</b></li> <li>• Allow students to master playlists <b>at their own pace</b></li> <li>• <b>Have routine check-ins</b> with students to ensure progress on playlists</li> <li>• <b>Use coach reports</b> to identify struggling students and help them (1:1 or small groups)</li> <li>• Use coach reports to encourage <b>peer tutoring</b></li> </ul>	<p>Students take ownership over their learning by driving their own progress</p> <p>Students can fill in gaps and prevent new ones by moving in a mastery-based progression</p>

A playlist is a list of Khan Academy skill and/or lessons. Creating a worksheet or list to hand to students is the most common approach. See the next page for an example playlist.

# STEP 3: Choose your implementation approach

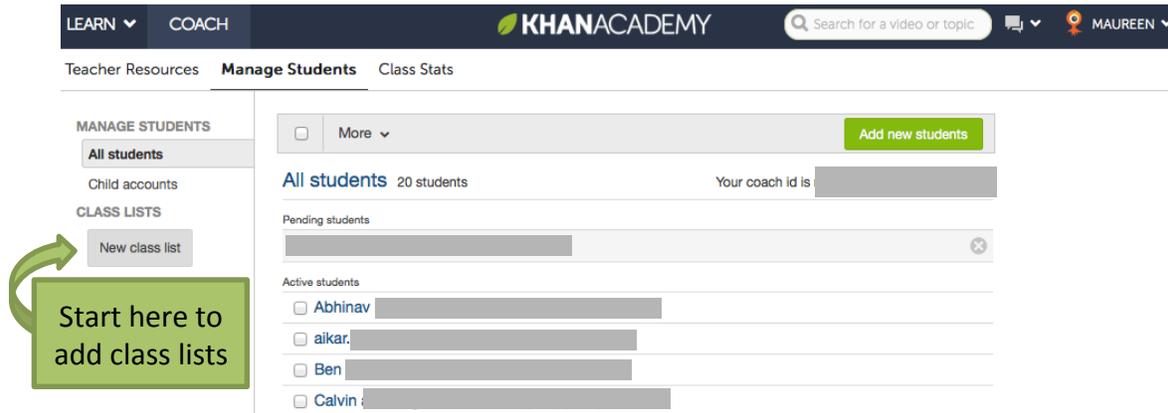
## EXAMPLE PLAYLIST

Below is an example of a playlist from Bryan Harms' 8<sup>th</sup> grade class at High Tech Middle School. He uses Khan Academy to build procedural fluency with his students, and then has hands on projects and applications of learnings to building on that foundation.

Fundamental Goals	Algebra Goals	
<p><b>Goal: Fractions</b>            Adding Fractions            Subtracting Fractions            Multiplying Fractions            Dividing Fractions</p> <p><b>Goal: Ratios and proportions</b>            Writing Proportions            Proportions 1</p> <p><b>Goal: Percents</b>            Converting Fractions to decimals            Converting Decimals to <u>percents</u></p> <p><b>Goal: Order Of Operations and Combining Like Terms</b>            Combining Like Terms            Order of operations            Distributive Property            Combining like terms with the distributive property</p>	<p><b>Goal: Linear Equations 1</b>            Video: Variables and Expressions            Evaluating Expressions in one variable            Video: Simple Equations            Writing expressions            Video: Evaluating Expressions with two variables            Evaluating Expressions in 2 variables</p> <p><b>Goal: Linear Equations 2</b>            One step equation intuition            Writing Expressions 2            Video: One Step Equations            One step equations            One step equations with Multiplication</p> <p><b>Goal: Advanced Proportions</b>            Expressing Ratios as Fractions            Ratio Word Problems            Proportions 1            Units</p> <p><b>Goal: Linear Equations 3</b>            Video: What is a variable?            Video: Why aren't we using the multiplication sign            Writing Expressions 2  <u>Video: Why do we do the same thing to both sides: simple equations</u>  <u>Video: Representing a relationship with a simple equations</u></p>	<p><b>Goal: Linear Equations 4</b>            One Step Equation Intuition            One Step Equations            One-Step Equations with Multiplication            Why do we do the same thing to both sides: multi-step equations            2-step Equations            Linear Equation word problems            Multi-Step Equations</p> <p><b>Goal: Linear Equations 5</b>            Video: Variables on both sides            Exercise: Linear equation word problems            Video: Challenge Example: Sum of integers            Video: Equations with Variables on Both Sides            Video: Solving Equations 2            Exercise: Equations with variables on both sides            Equation Special Cases</p>

# STEP 4: Sign up your students

Having students sign up and add you as a coach means they can log in to save their progress and share their data with you. Login at [www.khanacademy.org/students](http://www.khanacademy.org/students) and click “Add new students”. Your screen should look like this:



## IF YOUR STUDENTS... THEN...

Already have Khan Academy accounts

Create class lists and use the **class code** in the upper right corner of each class list. Give students the appropriate class code and have them enter that when they add you as a coach. To do this, students should login, go to their profiles, and click COACHES in the bottom left corner.

Already have email accounts

To save time, first create class lists, then directly add student emails to each list. When students receive their email and create an account, they will automatically be in the class you designated. Alternatively, copy student email addresses into the “Add Students” box. They will get an email to create their account once they click on the link.

Do not have email accounts

Create accounts for your students by entering key pieces of information, including a username, password, birthday, and parent email(for students under age 13). Record usernames and passwords, and give to students so they can immediately log in to KA. *There is no way to retrieve a password unless the student is under 13, in which case the parent can reset it.*

**Expert tip:** Have consistent, recognizable usernames. Username guidelines make it easier to recognize everyone on your data reports.

**Additional resources at:** [www.khanacademy.org/coach-res/for-teachers](http://www.khanacademy.org/coach-res/for-teachers). Resources include a sample parent permission slip, differences of child vs regular accounts, and step-by-step videos.

\*In the US, students must be over 13 to create an email account, Schools can provide email via their own service or using Google Apps for Education, a free service. Learn more at [www.google.com/enterprise/apps/education](http://www.google.com/enterprise/apps/education).

# STEP 5: Prepare for your first day and beyond

## ON DAY 1:

- Introduce Khan Academy:** Discuss how KA will benefit students. Set a tone of respect when using KA and technology. Explain that everyone learns differently and has different gaps. There is no need to feel embarrassed about filling gaps. Emphasis should be on progress, regardless of what specific content that is.
- Go over tech rules or contracts:** Explain your school's rules and procedures, and get appropriate forms signed. This can also be an opportunity to discuss social responsibility with having e-mail accounts and the difference between a school and personal account.
- Establish systems and procedures:** This may include logistics like getting out/ putting away devices, connecting to the internet, charging devices, documentation (e.g., a notebook to track milestones, progress, & scratch work), and a lesson on active listening to role model / teach students how to watch a KA video (e.g., take notes, replay sections).
- Provide clear log-in instructions** and a way for students to remember their usernames and passwords beyond the first day
- Allow students to explore KA** and share what they discover with you

### TIPS:

- Spend 20+ minutes allowing students to log on (ideally accounts are created prior to Day 1)
- Ask for volunteers to help manage the class on the first day

### SAMPLE FIRST DAY AGENDA (90 minute class)

9:00-9:15	Class starts, discuss with students how technology will be integrated into math class
9:15-9:30	Pass out KA notebooks, go over tech rules & procedures to get laptop from mobile cart
9:30-9:40	Pass out laptops, pass out instructions for students with usernames, passwords, & coach ids
9:40-10:00	Have all students log into KA and add the appropriate coaches (get 2 parent volunteers), when done, make sure they have stored their username and password somewhere safe
10-10:15	Allow students to explore the site on their own
10:15-10:20	Quick debrief: what have we learned about Khan Academy so far?
10:20-10:30	Go over procedures for putting away laptops and charging them, put away laptops, pack up

# STEP 5: Prepare for the first day and beyond

## **BEYOND DAY 1:**

Like student learning, using Khan Academy is self-paced for teachers too! As such, there is no exact timing or lesson plan, and you may find that you'll be evolving your plan as the implementation evolves.

### **A few initial goals might include:**

- Continue to explore and progress through KA on your own
- Set goals for yourself for % of students you hope to have logged in, started on particular skills, etc
- Set classroom norms and monitor student behavior
- Check the data at the end of each day - note which students are focused solely on videos or are not making as much progress and check-in on them
- Start using journals to track milestones, take active listening notes, show scratchwork or other assignments
- Use the data to decide what topics to teach

# STEP 6: Personalize learning experiences

As you and your students become more comfortable using Khan Academy, start using data to cultivate a personalized learning environment. Consider ideas such as:

IDEA	USE TO...	EXAMPLES OF IMPLEMENTATION
PEER TUTORING	<ul style="list-style-type: none"><li>• Enable many levels of differentiation</li><li>• Help a student who is struggling with a topic that another has mastered</li><li>• Help students over small <u>hurdles</u> when working on their own and you are busy</li><li>• Reinforce students' knowledge and build their confidence by empowering them to explain concepts to each other</li></ul>	<ul style="list-style-type: none"><li>• Pair up students based on the Skill Progress report</li><li>• Create a classroom board that has two columns ("I need help with..." and "I can help with...") to enable students to reach out and help each other</li></ul>
ROUTINE CHECK-INS	<ul style="list-style-type: none"><li>• Regularly meet with students to check on progress</li><li>• Focus students on skill gaps</li><li>• Motivate students</li><li>• Gain transparency into student progress</li></ul>	<ul style="list-style-type: none"><li>• Assign content by differentiated groups</li><li>• Meet once per week with each student to set milestones and discuss progress</li><li>• Intervene when students are not making sufficient progress</li></ul>
SMALL GROUPS	<ul style="list-style-type: none"><li>• Tailor a lesson to meet the needs of a specific group of students</li></ul>	<ul style="list-style-type: none"><li>• Use the Skill Progress report to identify who needs reinforcement</li><li>• Group students based on skill-level to collaborate on challenging concepts</li><li>• Create mixed-ability groups, each with an "expert" to guide peers in learning</li></ul>
I-ON-I (TEACHER TO STUDENT)	<ul style="list-style-type: none"><li>• Identify struggling students for targeted intervention based on data</li><li>• Provide extra guidance &amp; motivation</li><li>• Check individual student progress</li><li>• Have routine check-ins with milestones &amp; acknowledge accomplishments</li></ul>	<ul style="list-style-type: none"><li>• Look at a student's answer history on a skill to diagnose misconceptions or errors, and prompt the student to discover the answer</li><li>• Use the student's individual KA data reports to discuss their progress, how their time was spent on KA, or talk about other relevant topics</li></ul>

## EXPERT TIP: *Teach a lesson when you try a new practice with students*

- For example, teach a lesson on how to peer tutor. This can include a brainstorm on characteristics students seek in a good tutor (e.g. they don't just tell me the answer, they ask me questions that guide me to the answer, they are encouraging).
- As another example is to teach students how to read their individual data and set reasonable milestones on their own. This self-motivates students about their progress and provides a valuable skill to them.

# ADDITIONAL RESOURCES



- **Easy ways to start using Khan Academy**
- **Navigating Khan Academy reports:** See a quick snapshot of all our coach and individual data reports
- **More on getting started:** Materials to prep for Day 1
- **Using Projects**

**Explore more Coach Resources at:**  
[www.khanacademy.org/coach/resources](http://www.khanacademy.org/coach/resources)

# Easy ways to start using Khan Academy

## 1. BUILD AWARENESS

Let students and parents know that Khan Academy is a free resource for them. Post the url in your room, on your website, and in a parent newsletter. Bryan Harms (8th gr teacher) tells his students, “If you don’t like the way I explained it, you can find another explanation on Khan Academy.”

## 2. DIFFERENTIATE

Give your low-performing students time to brush up on fundamental skills, give your high-performing students time to explore advanced concepts. Tal Sztainer (12th gr teacher) lets students use Khan Academy when they have completed classwork quickly and correctly.

## 3. USE IT WITH ABSENT STUDENTS

Get your absent students up to speed with the appropriate skills/lessons. Shelby Harris (7th gr teacher) used Khan Academy with a student who was suspended for 3 days. When he came back to class, he didn’t have to spend time re-learning what everyone else had already done.

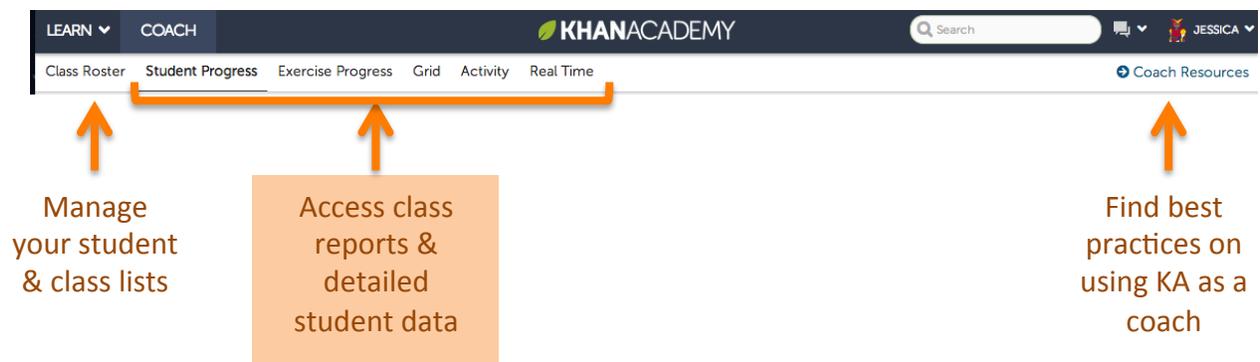
## 4. USE IT AS HOMEWORK

Assign skills/lessons that align with the concepts taught in class. Unlike textbooks or worksheets, Khan Academy skills practice gives direct feedback to students, which prevents them from holding on to misconceptions. Students also encounter a unique set of randomly generated questions, making it nearly impossible to copy answers from another student.

## 5. USE IT BEFORE AND AFTER TESTS

Align skills practice / lessons to a test and use them as review. If students answer problems incorrectly on the test, have them go back and get more practice on Khan Academy in those specific skills KIPP Bayview teachers used Khan Academy alongside their CST benchmarks last year. When students missed specific questions, they worked on the KA content that aligned to those skills. Before taking the real CSTs, each student was given dedicated time to fill in their unique gaps.

# NAVIGATING KHAN ACADEMY REPORTS



On a mission to provide a free, world-class education for anyone, anywhere

# DATA AND ANALYTICS REFERENCE GUIDE

## Class-stats: Student Progress

This report is most useful to get a quick summary of your class, as well as to delve into an individual student's progress. It summarizes stats including how many skills each student is struggling on, total number of skills mastered, and energy points. On the left side, sort information by clicking the top of each column. Download the data a spreadsheet by clicking in the upper right. Click a student's name to see more details about their learning progress.

Click a student's name to see more details about their learning progress.

Filter by class, dates, and specific skills

Click any of the top icons to sort by that column

Click on any of the tabs or blue links for more info

Download this report as a spreadsheet

Bookmark to save filter settings

The screenshot shows the 'Class-stats: Student Progress' interface. At the top, there are filters for 'Class: Period 1', 'Activity from: Last 30 days', and 'Filter: Find topics or skills'. A 'Download' button and a bookmark icon are in the top right. Below the filters is a table of student progress. The table has columns for 'Student Name', 'Points', and three columns with icons (a clock, a red square, and a blue square). The student 'jessica' is highlighted. To the right of the student name is a 'Make a recommendation' button. Below the student name are tabs for 'Exercises', 'Recommendations', 'Videos', 'Badges', and 'Activity'. The 'Exercises' tab is active, showing a list of skills categorized into 'Struggling', 'Needs Practice', 'Practiced', and 'Level One'. Each skill has 'Attempts' and 'Progress' indicators. Annotations with orange arrows point to various parts of the interface: 'Filter by class, dates, and specific skills' points to the filter dropdowns; 'Click any of the top icons to sort by that column' points to the icons above the student table; 'Click on any of the tabs or blue links for more info' points to the 'Exercises' tab; 'Download this report as a spreadsheet' points to the 'Download' button; and 'Bookmark to save filter settings' points to the bookmark icon.

Student Name	Points	Struggling	Needs Practice	Practiced	Level One
jessica	19,101	2	53	144	0
Jason	17,930	3	0	131	0
Marcia Lee	9,891	17	0	70	0
Kitt Hirasaki	8,911	15	0	63	0
maureen	7,445	17	1	59	0
Ben Eater	9,295	10	0	53	0
elizabeth	4,583	4	0	52	0
Dylan Vassallo	11,371	34	0	20	0
Ben Kamens	1,514	6	1	10	0
Ben Alpert	3,112	8	0	10	0
Matt Wahl	1,049	0	0	8	0
Esther Cho	0	0	0	0	0

# DATA AND ANALYTICS REFERENCE GUIDE

## Class-stats: Skill Progress

This report is particularly helpful for checking students' status on individual skills and for grouping students for skill-based activities or identifying which students to provide additional support such as 1-1 time with the teacher, peer tutoring, or small groups. The most used filter is to select specific skills.

Each skill is represented by a color-coded bar. Bars can be expanded to show which state students are in for each skill. The report is arranged by topics.

Filter by class, skills, or struggling students

This center line is a guide. Encourage students to the right (under blue categories) to take mastery challenges. Focus on students to the left.

Bookmark to save filter settings

The screenshot shows a user interface for skill progress. At the top, there are filters for 'Class: Period 1', 'Filter: Multiplying decimals (+ 2 more)', and a 'Struggling' checkbox. Below the filters, there are two skill categories: 'Adding decimals 1' and 'Multiplying decimals'. The 'Multiplying decimals' category is expanded, showing a skill preview on the left with a multiplication problem: 
$$\begin{array}{r} 0.345 \\ \times 888 \\ \hline \end{array}$$
. To the right of the preview is a table of student performance. The table has columns for 'Struggling', 'Needs Practice', 'Practiced', 'Level One', 'Level Two', and 'Mastered'. A callout box points to the 'Struggling' column, stating: 'Possible peer tutoring opportunity by pairing with a "Mastered" student or 1-1 with the teacher'. Below the table is a button that says 'Recommend to students that need practice'. The 'Dividing decimals' category is also visible below, with a callout box stating: 'Possible small group session'. At the bottom, there are two more callouts: 'Skill preview and link' pointing to the skill preview area, and 'Click to recommend skills to appear on each student's learning dashboards' pointing to the 'Recommend to students that need practice' button.

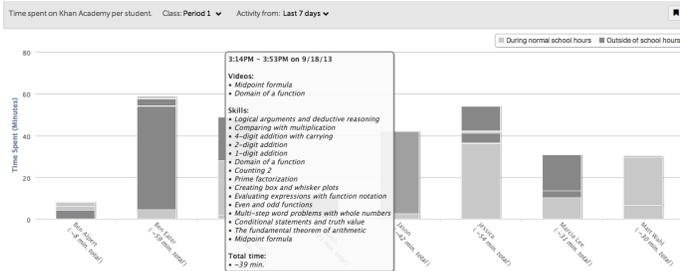
Skill preview and link

Click to recommend skills to appear on each student's learning dashboards

# DATA AND ANALYTICS REFERENCE GUIDE

## Class stats: Other reports

Reports can be filtered (filters may include time period, class list, skill, topic, and keyword).  
 \*\*Bookmark the URL to save filter settings\*\*



### ACTIVITY

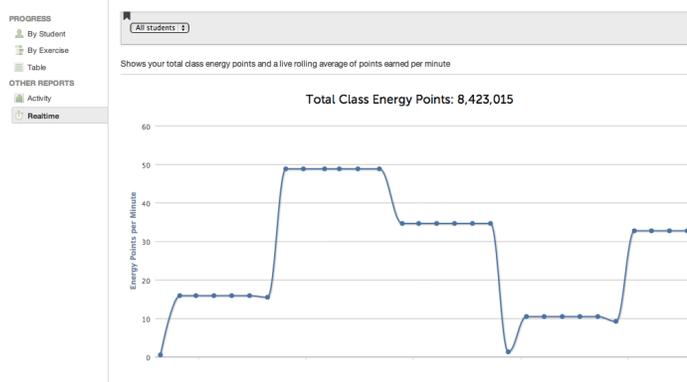
Shows how much time students spent on Khan Academy during and outside of school on a given day. School hours are set as 8am to 4pm for your time zone. Hover over bars to see more details. Can be filtered by class list and time period.



### GRID

Shows each student's status on each skill. Can be filtered by time, class list, skill, topic, keyword and struggling status. Hover over a box to get additional details.

This report is particularly helpful for getting a snapshot of your class's overall performance and identifying who is struggling.



### REALTIME

See your total class energy points and a live rolling average of points earned per minute. Many coaches use this with groups of students to encourage activity or as the basis for groups games in class.

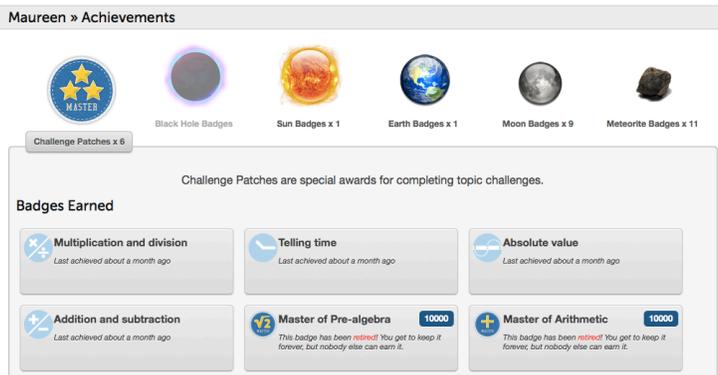
# DATA AND ANALYTICS REFERENCE GUIDE

## Student-level



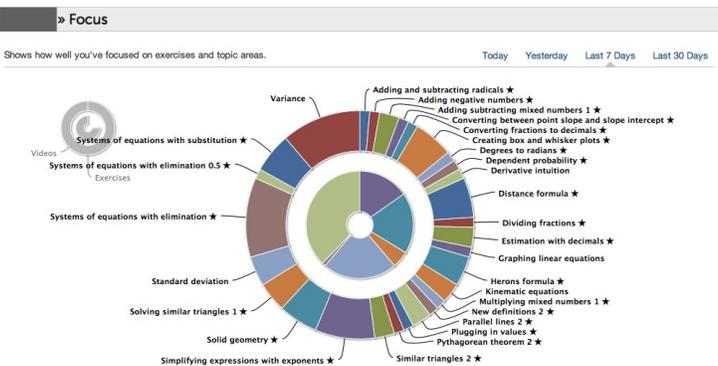
### PROFILES

Quick and easy way to see a student's proudest accomplishments and how many skills, videos, and energy points a student has earned



### ACHIEVEMENTS

See which badges have been earned, especially useful for "challenge badges" or topic-level skills



### FOCUS

See exactly which lessons and skills students are spending their time on over a day, week, or month. This report easily shows how students spend the majority of their time, which enables teachers to see if students are on task, struggling, or ready to move forward



### ACTIVITY REPORT

Use when you want to take a closer look at how much time a student spent on KA over a day, week, or month. This data can help facilitate conversations around work ethic, recognition, accomplishments, and more

# DATA AND ANALYTICS REFERENCE GUIDE

## Student-level

From any account, an individual has access to their personal reports from their homepage view. Click LEARN and select “Home” to see options on the left column to navigate to these reports.

**jessica » Recommendations**

due Thursday at 3:00 PM	Completing the square 2	Mastery Status	Attempts	Goal
<input type="checkbox"/>	Completing the square 2	Struggling	0	Get 5 correct in a row
<b>Now Due</b>				
due Aug 23rd	Multistep equations without variables (+3 more)			
<input checked="" type="checkbox"/>	Late: Multistep equations without variables	Level One	8	Get 5 correct in a row
<input checked="" type="checkbox"/>	Late: Math patterns	Level One	7	Get 5 correct in a row
<input checked="" type="checkbox"/>	Late: Inequalities in one variable 1	Practiced	11	Get 5 correct in a row
<input checked="" type="checkbox"/>	Late: Writing numerical inequalities	Needs Practice	0	Get 5 correct in a row
due Aug 16th	One step equations (+1 more)			
<input checked="" type="checkbox"/>	Late: One step equations	Mastered	4	Get 3 correct in a row
<input checked="" type="checkbox"/>	Late: 2-step equations	Mastered	3	Get 3 correct in a row
<b>No Due Date</b>				
Basic triangle proofs				
<input type="checkbox"/>	Basic triangle proofs	Needs Practice	0	Get 5 correct in a row
Visualizing derivatives				
<input type="checkbox"/>	Visualizing derivatives	Struggling	0	Get 5 correct in a row
Completing the square 2				
<input type="checkbox"/>	Completing the square 2	Struggling	0	Get 5 correct in a row
2 and 3-digit subtraction				
<input type="checkbox"/>	2 and 3-digit subtraction	Mastered	0	Get 5 correct in a row

## RECOMMENDATIONS

Use to see coach suggested content and progress for each recommended skills. Recommendations highlighted in green are ones that have been completed. Red ones have not been completed and are past the due date.

**jessica » Skill Progress**

Shows which skills you've worked on and completed.

Perimeter, area and volume	Attempts	Progress
Radius diameter and circumference	12	Mastered
Area of a circle	15	Mastered
Area of triangles	8	Mastered
Volume with unit cubes	0	Needs Practice
Triangle inequality theorem	0	Needs Practice
Area of parallelograms	6	Mastered
Area of trapezoids, rhombi, and kites	1	Needs Practice
Volume 1	0	Needs Practice
Shaded areas	0	Needs Practice
Volume word problems	0	Needs Practice
Heron's formula	0	Needs Practice
Solid geometry	64	Struggling

## SKILL PROGRESS

A student's view of their progress in each topic area.

# GLOSSARY

## Exercise progress levels



A student struggling with an exercise likely needs help.



After answering five questions in a row, a student becomes "Practiced" in that exercise.

The student must then take Mastery Challenges to continue to advance.



Mastery Challenges mix together questions from different exercises and are spaced out across days.

Taking Mastery Challenges is the only way for a student to achieve the level of "Mastered."

# GETTING STARTED: Sample permission slip

[Date]

[School Name]

Dear parent or guardian,

This year, we'll be using Khan Academy in class to personalize learning for all students! Khan Academy is a free online resource that allows students to learn anytime, anywhere, with material that is uniquely appropriate for them. Students can explore new topics and practice their math skills by using interactive practice and tutorials. As students learn, their activity feeds into reports that show important information such as strengths and weaknesses in a particular concept. By using Khan Academy, I'll be able to provide a more personalized learning experience for your child. **If you approve of your child participating in this program, please provide the information below.**

**Student name:** \_\_\_\_\_

**Does your student already have a Khan Academy account?**     YES     NO

**Student username:** \_\_\_\_\_

*(Letters only, no spaces, ex. JSmith; if your child already has a Khan Academy account, please provide the child's existing username above)*

**Student password:** \_\_\_\_\_

*(Minimum 5 characters, different from username; if your child already has a Khan Academy account, do NOT provide the password as long as your child knows it.)*

**Student birthdate:** \_\_\_\_\_

**Parent/guardian email:** \_\_\_\_\_

*(An email will be sent asking you to verify your child's account, but you will not receive any other emails without your permission.)*

To see how your child is learning on Khan Academy, I encourage you to create your own account as well. You'll be able to see what your child is working on, and there's plenty of material on the site for you to learn anything you want, too. Simply go to [www.khanacademy.org](http://www.khanacademy.org) and click Sign Up to get your own account.

Please sign below to give your child permission to use Khan Academy in my class.

**Parent Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Warmly,  
[Teacher Name]

# GETTING STARTED: Meeting the needs of your class

Complete the table to determine how you will meet the various needs of your classroom. Decide which teacher practices you will set as goals and when you will accomplish them.

How can Khan Academy be used to support...	Goal? (Y/N)	Timeframe? (ex. 3 weeks)
<b>...the individual needs of my students?</b>		
Give students time to work on concepts at their own level even if it doesn't align to the curriculum		
Empower advanced students to teach peers and small groups		
Deepen understanding with activities that require application of skills		
Allow students to engage with any part of the site that excites them		
Set milestones with students to keep them challenged		
Other:		
<b>...my curriculum?</b>		
Align skills practice to lessons, allow students to complete in class/at home		
Align skills practice to a unit, allow students to work at their own pace with in a time frame (ex. 2 wks)		
Use skills practice to determine if students have prerequisite knowledge for upcoming lessons		
Use data to determine who needs more/less support with your curriculum		
Other:		
<b>...an interactive and exploratory classroom?</b>		
Encourage peer tutoring		
Enable students to dive deeper with hands-on, exploratory projects		
Create mixed ability groups for collaborative projects, allow advanced students to guide the experience		
Create groups based on ability and assign collaborative activities that are appropriate for their skill-level		
Use computer science to explore math concepts		
Other:		

# GETTING STARTED: Engaging different learners

## MOTIVATED LEARNERS

These students often use KA at home and progress through KA at impressive speeds! If your motivated learners have already gone through all the material that you've prepared for them, here are some suggestions:

- **Allow your students to continue to move at their own pace** by having them choose which skills / lessons they would like to focus on next
- **Give your students a project** that will deepen their conceptual learning of the skills they have just mastered
- Sharpen your students' social skills and conceptual understanding by having them **peer tutor other students**

## DISENGAGED LEARNERS

These students may be uninterested in KA and use time on the computer to goof off or procrastinate.

- **Diagnose the problem:** Does the student have all prerequisite skills necessary for the skill being worked on? If not, consider giving the student time to complete the prerequisites first. Is there a situation outside of school that is affecting the student's concentration? What is the student's history in math? In school?
- **Find incentives and motivators:** set appropriate milestones and celebrate small successes, share data with other coaches or family members/influencers, encourage and reward improvement in attitude/work ethic

## DEPENDENT LEARNERS

These students may work diligently, but they tend to ask for help frequently, be insecure in their own answers, and need lots of guidance.

- **Emphasize a series of learning habits** such as taking hints, watching a video and asking a peer before directly asking the teacher a question
- If students ask you to check their answers before they submit their final answer, **encourage them to double check their work** and submit their final answer when they feel ready.

Remember: The more time you have to spend checking student work, the less time there is to actually teach new concepts to students who need it most

# USING PROJECTS

If you are thinking about using Projects in your classroom, here are a few tips

## **When to use projects**

Projects can be a great way to introduce a concept to the entire class, or to allow students to prove they have mastered a concept. With Khan Academy, the aim is to free up time that would otherwise be spent on mastery procedural fluency. Projects can complement as much of the traditional curriculum as is appropriate.

**Resources for project ideas:** <https://www.khanacademy.org/a/project-resources>

- Khan Academy
  - Projects: [www.khanacademy.org/science/projects](http://www.khanacademy.org/science/projects)
  - Recreational Math: <https://www.khanacademy.org/math/recreational-math>
  - LeBron Asks: <https://www.khanacademy.org/science/lebron-asks>
- Resource Area for Teaching (RAFT) [www.raft.net](http://www.raft.net) (includes Common Core aligned resources)
- Buck Institute of Education (BIE) [www.bie.org](http://www.bie.org)