

## **Khan Academy as a Classroom Tool**

<https://www.khanacademy.org/math/cc-sixth-grade-math>

In this series of lessons I introduced Khan Academy to my students, had them practice several sets of skills, showed them how to use the data and information on the site to inform their learning, and had them use the program for a variety of reasons.

### **Lesson One-**

**Materials-** Chromebook for each student, student account on Khan Academy, Teacher Computer and projector.

**Method of Assessment-** Using Khan Academy's class tools to display skills. Exit ticket.

**Expected Student Outcomes-** Students will be familiar with the formatting of Khan Academy. Students will be able to search for specific concepts on Khan Academy. Students will work through lessons on the assigned 6th grade mission on Khan Academy. Students will be able to describe circumstances in which they would use Khan Academy.

### **Sequence of activities-**

I started by previewing the website. I showed students a video based on a mathematical concept we had just finished in class; dividing fractions. I had them discuss the usefulness of the video in class by talking with their elbow partners and then having class discussion around what they saw. I posted these questions on the projector- What did the video show you how to do? Where did you see a model being displayed to show how to do the math? When would you use this video in your learning process?

Then I showed them the variety of practice available to them on the same concept online. I showed them how to search for a specific topic and what resources came up. We worked through the five questions

<https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-arithmetic-operations#cc-6th-dividing-fractions> I showed them how they could get hints, watch videos, use the scratchpad. We went through a correct and incorrect process on the website. Students gave feedback on what they saw.

Next, each student create an account under my class heading. Once we got through signing up students had a short scavenger hunt to find things on the website-In google classroom they had to answer the following: Link a video about the concept of dividing decimals. Answer two practice questions about rate and paste the answers here. Choose a science topic you are interested and post a link to a resource you found on Khan Academy. Start the 6th grade math mission- what are the first three concepts covered in this mission?

Once we were done finding the items on their scavenger hunt, students spend the rest of the period working through the 6th grade mission assignment. They spent about 18 minutes working on the mission. Next, displayed class data based on the day's work. We looked at the skills they worked on and what their work could show me about their understanding of the mathematical concepts covered. We saw that geometry was low in the time they spent on the website.

Next, fill out exit slips on when and how they would use this website. Many students felt that they would use it at home if they couldn't remember the steps for working their homework. Secondly, they felt it would be good to use in class if they had finished their daily in class assignments, either as the series of missions or the math related games they found on the website. The third most mentioned item was to use the website to review before testing to remember how to work different types of problems.

**Follow-up learning-** Students will spend time working on Khan Academy as a tool to help their understanding at home and in class.

## Lesson Two-

**Materials-** Chromebook for each student, student account on Khan Academy, Teacher Computer and projector.

**Method of Assessment-** Students will complete the lesson on converting Fractions to Decimals on Khan Academy.

**Expected Student Outcomes-** Students will demonstrate proficiency with concepts of converting fractions to decimals.

**Sequence of activities-** Projected on the screen- What are the steps to convert a fraction to a decimal? Students were given 1 minute of private think time. Then table groups generated their best thinking on how the steps for converting a fraction to a decimal.

We watched the first video on Khan Academy about this: [First Video](#)

Then students went to our Google Classroom where they went to the section in Khan Academy on this link:

### [Fractions to Decimals](#)

Each student had to pause after each of the two practice sections and be partner up to show their work on a white board for the class. We placed the whiteboards around the room as a silent gallery walk where students are able to use post-its to comment on what they see. These are timed, so even though every group might not see every other group, each group got several comments from other groups. In this practice, we can do formative check ins to see if there are students who need additional practice on the concept.

After we worked through the two practice sections, students had to watch the video about rewriting tricky fractions to decimals. [Tricky Fractions](#)

Once done, each table had to write three problems to be solved by another table. One of these needed to be a “tricky problem.”

**Follow-up learning-** Students had to complete the three problem homework problems assigned to their table by another table.

### **Lesson Three- Dividing Decimals**

**Materials-** Chromebook for each student, student account on Khan Academy, Teacher Computer and projector.

**Method of Assessment-** Students will complete the lesson on dividing with decimals on Khan Academy, this will be reviewed as class and individual skill assessment in the teacher portion of the class.

**Expected Student Outcomes-** Students will show proficiency in dividing decimals and will be able to create the standard algorithm for dividing decimals.

**Sequence of activities-** Students will have two minutes of private think time to write an answer to the question; how do you divide with decimals?

After discussing this answer at their table groups, we will write out our current steps in how to work on dividing decimals.

Then students will be assigned to work through the dividing decimals work on Khan Academy through Google Classroom with this link:

#### **[Dividing Decimals](#)**

After the third set of practice problems students will lower their screen and we will watch the video on long division with decimals.

Once we are done, watching the video students will work a problem together on paper. We will compare our work with other partners in class- my room has sticker and card sorting set up on tables.

We will look at our place value chart to recall the hundredths, thousandths, and ten-thousandths places before we return to Khan Academy.

Then students will return to their work on Khan Academy to complete their work in this practice.

At the end of class, students will be asked to reflect on where they had success and where they had to work harder- they do this as a reflection piece where they attach items in Google Classroom.

**Follow-up learning-** Based on students responses to questions, and the data that Khan Academy collects our warm up problems will reflect areas where students aren't showing mastery.