Video Transcript

Time	Speaker	Script
0:05	Cathy	My name is Cathy Bruce and this is Shelley Yearley and today we would like to talk to you about our fractions research and resource development.
0:14	Shelley	This video is intended to provide you with an overview of the Fractions Learning Pathways.
0:30	Cathy	As you know, fractions are difficult to teach and difficult to learn. Our research team has been focusing on fractions over the past four years. We would like to share the process of developing the pathway with you now.
0:45	Cathy	The first step was that small teams of teachers and researchers worked together to try out different tasks, implement novel tasks that we thought might be engaging for students when learning fractions.
1:00	Cathy	The second step was for researchers to develop two comprehensive literature reviews, one on the foundations of fractions and the second one on operations with fractions.
1:10	Cathy	For step three, at this point, the researchers developed a first iteration of the pathway
1:16	Cathy	The fourth step was to develop a pathway that included a series of novel fractions tasks and questions that could assess the degree of understanding of concepts and procedures in fractions.
1:30	Cathy	The fifth step was to field test some of the tasks along the pathway with teachers in classrooms and throughout this process the researchers and teachers gathered student information through video, photos, work samples, that kind of thing.
1:43	Cathy	The pathway has gone through 24 revisions over time based on field testing. We are currently working on a version that includes multiplication and division with fractions.
1:55	Cathy	Our seventh step was to involve eight district school boards with the pathway in order to field test that pathway, combined with some pre and post-assessment tasks and all of the tasks that had been developed and field tested by teachers over the years.
2:10	Cathy	Our last step has been to pre and post-test students as part of the learning of fractions using the pathway and we have been assessing those data to look at change over time, to assess for gender differences, to look at grade differences, struggling learners versus learners who are succeeding quickly and readily accessing materials, even the quality of the tasks and the timing of the tasks has been assessed.
2:40	Cathy	Through the project, we have worked with eight different school boards, seventy-five teachers, and well over 1000 students. Our longest intervention was approximately eight months and our shortest period of instruction was four months. Remember with this that it was punctuated instruction, so not every day but throughout that time period.
3:06	Shelley	We would like to give you a brief overview of the Fractions Learning Pathways. If you go to the Fractions: Learning and

		Teaching page on EduGAINS, you will see the link to the Fractions Learning Pathways webpage. Once you click on that, the Pathway will be more easily viewed.
3:22	Shelley	You will notice that there are three clusters on the pathway - unit fractions, comparing fractions and adding and subtracting fractions. Each cell within each cluster in live - so if you click on the cell you are interested in, let's say Unit B, you will go to a landing page.
3:40	Shelley	The left side of the landing page provides you with a brief background on the cell's contents. The right side of the page contains tasks that have been developed for that cell. For this cell there are two tasks currently available. Let's look at Desktop Fractions.
3:57	Shelley	Once you select the task, you will see that the template includes a brief description and photo of the task. A discussion of the mathematics as well as specific curriculum connections follow. The educators who used these tasks developed a concise instructional sequence for others to follow. As well, they included Highlights of Student Thinking and Key Questions which can be used in the classroom to expose, evoke and extend student thinking.
4:23	Shelley	A list of Materials completes the information for the task.
4:29	Shelley	There are four tabs along the bottom which contain additional resources relevant to this task. The Task Templates tab contains all materials developed to support educators in using this task in their classroom. Click on the image to open it and download it.
4:46	Shelley	The Implementation tab provides a brief glimpse into the task in an Ontario classroom, either through a photograph or, as in this case, a video.
4:59	Shelley	The Student Thinking tab includes summaries of student thinking as collected through the research project. Sometimes the summaries are annotated samples of student work while other times they are charts with anticipated student responses and suggested teacher prompts. In this task, the student thinking sample includes annotated pictures of students as they complete the task.
5:19	Shelley	Finally, there is an additional resources tab which provides easy links to relevant research summaries as well as other resources, where appropriate.
5:30	Shelley	You can return to the Pathway by clicking on the image at the top of the task.

5:36	Shelley	And just one final comment about the Pathway. It is intended to serve as a support for educators in their planning and implementation of their fractions instruction. Although the cells are labeled with A, B, C etcetera, educators are encouraged to consider the cells in clusters rather than in a linear sequence. You will note however that the unit cells form the foundation for the subsequent cluster focused on comparing fractions which in turn supports students in learning about the operations of addition and subtraction with fractions. Not all cells have tasks developed currently but this is a work in progress so more tasks will be added as they are completed.
6:15	Shelley	For more information see the resources available on the EduGAINS website.
6:20	Cathy	As we continue with the research more resources will be available.