

Shayla K Heavner
 Integrating Media into Standards-Based Curriculum
 Media Marvel
 Summer 2018 / JHU

Project Title	Explicit Solutions to Separable Differential Equations
Content Standards	C.A1.2: Solve separable differential equation and use them in modeling real-world problems with and without technology. Retrieved from: Indiana Academic Standards
Technology Standards for Educators	ITSE.5a: Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs. ITSE.5b: Design authentic learning activities that align with content area standards and use digital tools and resources to maximize active, deep learning. Retrieved from: ITSE Educator Standards
Technology Standards for Students	ITSE.5a: Students formulate problem definition suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions. Retrieved from: ITSE Student Standards
Type of Media File	PowerPoint Slide Show
Integration Plan	This product will be disseminated and available to all students taking Differential Equations in the Summer 2018 semester and may be saved for use in subsequent sections as well. After grading homework submissions, the selected solution was chosen as many students struggled with finding the complete solution. In addition, a survey was given, and this question received the most votes for a posted solution path. While I cannot require students to watch the presentation, it will be posted in our course as well as an email sent out encouraging students to view as not only a solution, but also as a review for solving explicitly. As we have already completed the lesson, lecture and homework for this topic, it will be posted after the module on this topic, but before the midterm with the hopes that it will aid in student understanding prior to taking the exam. The intended outcome is for students to have a complete understanding of the steps associated with solving these types of problems. In addition, it will aid in student reflection and growth in order to help them identify the mistakes they made. Finally, it will act as a blueprint so that students have a clear path to solution of explicit problems by identifying the key steps associated in solving.

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Reflection	<p>I greatly enjoyed creating this presentation. Often, I provide solutions in rich text format only, but I believe a video file can be much more informative and helpful for students to deeply understand each step. I struggled a bit with the video and audio portion. I find that I lack a sense of authority and use fillers like “um” too much. This was a great learning experience for me as I attempted to avoid these pitfalls. I also was very much concerned with both UDL and differentiated learning as I approached the project. I used both text and speech to appeal to different types of learners and included a continue arrow so that students may work at their own pace. I believe this helps to personalize the presentation. Also, by informing students of this at the beginning of the presentation, it made them aware that it is not necessary they cling to every word, but rather, as college students, they have the autonomy to drive their own learning and use the resource in a way that is most beneficial to them. This project came at a perfect time as I was already creating solution sets for students. I am happy that they will now have the benefit of a media solution as well because I think it will benefit many students. It did take longer to create than a traditional rich text solution. However, I do believe it was worth it. In mathematics, having an instructor show rather than tell can often be illuminating. In addition, if I continue to make similar products I will be able to reuse them in other sections of the course and thus build up a great trove of these types of media resources which will greatly benefit my students. Overall, it was a fun experience and I believe the fruits of my labors will be immense as it will provide some much-needed guidance in the course.</p>