



## 7th & 8th Grade Multimedia Lesson: April 7, 2020

**Learning Target:**  
How to use the vector tools in Vectr

**Let's Get Started:**  
Watch Video: [Day 2 Multimedia Vectr: Gradients & Paths](#)

Recall vector graphics use mathematical formulas which can create media that can be resized without losing any qualities or details.

Thanks to  
Pierre Bezier!

### Quadratic Bézier curves

A quadratic Bézier curve is the path traced by the function  $B(t)$ , given  $P_0, P_1$  and  $P_2$ .

$$B(t) = (1-t)^2P_0 + 2(1-t)t(P_1) + t^2P_2$$

preceding equation yields:

$$B(t) = (1-t)^2P_0 + 2(1-t)t(P_1) + t^2P_2$$

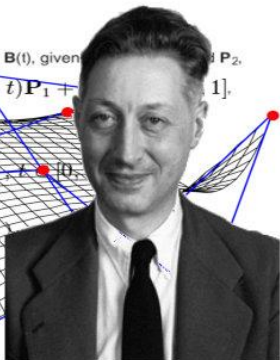
The derivative of the Bézier curve with respect to  $t$  is:

$$B'(t) = 2(1-t)(P_1 - P_0) + 2t(P_2 - P_1)$$

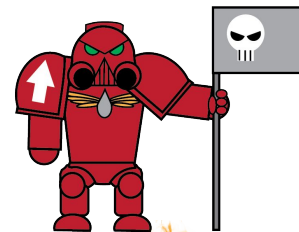
of  $P_1$ , then bends to arrive at  $P_2$  from the direction of  $P_1$ .

The second derivative of the Bézier curve with respect to  $t$  is:

$$B''(t) = 2(P_2 - 2P_1 + P_0)$$



Allows you to  
create stuff  
like this!



XBOX ONE



An Engineer who popularized the use of Vectors in the formation of a curve to represent 3D body forms on computers for Renault Car Company

Find out more [here](#) & [here](#)



extended learning

## Let's Learn more about the Tools in Vectr

Open Your Browser> Go To [vectr.com](https://vectr.com)

As you follow the Tutorial you will be able to Identify more tools on the & check then your answers from yesterday & today on this

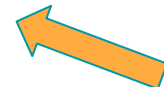
[Glossary & Tools Answer Sheet](#)

Today as you are watching the tutorial, try pausing the video after I show a tool or skill and try it out. This makes a good practice!

Feel free to take any screenshots and share your images with me or your multimedia teacher:

[lisa\\_douthit@idschools.org](mailto:lisa_douthit@idschools.org)

Don't know how to take a screenshot? Learn how [Here](#)



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When done... go to the next slide

## Self-Practice:

1. Continue to explore the tools shown in the video.
2. Practice making different gradients on a shape
3. Practice changing the path of a shape or shapes.

## Self-Assessment:

Take more than one shape and combine them to look like an object or a design.  
See some examples [here](#)

## What did you create?

Feel free to take any screenshots and share your images with me: [lisa\\_douthit@isdschools.org](mailto:lisa_douthit@isdschools.org)

## What Questions do you have?

Write them on your notes & share your notes or email them to me, so I can address them in the next lesson!

**Note: you do not need to save your work. See you for the next Lesson: uploading & working with Images**