

Dynamically changing objects using Conditional Attributes (Tutorial B12)

http://www.atomiclearning.com/k12/en/movie/XXXXXX/play_window?type=Tutorial&sid=2421

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Conditional Attributes allow you to create interactive objects. For example, you can make text appear and disappear.

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Conditional Attributes can also allow you to dynamically hide, show, or change the color of graph or geometry objects

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based on user input, variable values, or calculated expressions. Common uses include clicking a slider to reveal steps in

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sequence or dynamically changing the color of a point based on its position on the screen. In this example, I'll change

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the line color around a circle I've created and the fill color inside it based on the value of the variable, a , which

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is controlled by a slider. I'll roll over the circle, right-click to pull up the options for the it, and choose Conditions.

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Before I start entering anything in here, I'll click the Colors button. This chart shows which colors correspond

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with each number, so if I want the line around my circle to be a medium blue color, I want the value of the expression

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I enter to be 2. In this case, I want the fill to be green and the stroke around it to be medium blue, and then I

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want to move the slider and have it change to a light blue stroke and a maroon fill. That means I want the line values

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to be 2 then 3, and the fill values to be 4 then 5. I'll click OK and move back to my Conditional Attributes dialog

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box. Click in the top field called Show When. Here, I'll enter my variable, a. Now I'll press Tab and move down

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to the Line Color field. Remember that I want the value that comes out of this expression to be 2 on the first

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setting, and 3 on the second. The low setting is when $a=1$, so I have to add 1 to it to get to 2, and the high setting

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is when $a=2$, which means I also want to add 1, so I'll type $a+1$ here. Now when $a=1$, the value will be 2 for the

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line color, which was that medium blue. When $a=2$, the value for the line color will be 3, which was that light blue.

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I'll press Tab to get down to Fill Color, and enter my second expression here. I want the low value fill color

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to be green, which was the value of 4, so when $a=1$, I need to add 3 to it. I'll type $a+3$ here. Now when $a=1$, my fill

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color value will be 4, that green color. When $a=2$, my fill color value will be 5, which will be that maroon color.

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Finally, I'll click OK. Now I can roll over the slider, and click and drag it to move between my values. When I

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set the slider so that $a=1$, my circle has a medium blue stroke and green fill; when I move it so that $a=2$, it has



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a light blue stroke and maroon fill.

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