The Ultimate Pencil Showdown: Which Brand Wins?

Introduction

- I wanted to learn which pencil is better for drawing because I love to draw and I always draw when I'm bored.
- This is important because my project can help artists and people who enjoy drawing choose the best pencil to use out of this 7 pencils.
- This project can help many people improve their drawings by knowing which pencil works the best.

Question

Which pencil is the best to draw with?

Hypothesis

I think the best pencil to draw with will be the Dixon Ticonderoga, because it is known as one of the best pencils in the world. Many students and artists use this pencil, because it makes smooth and dark lines. I believe this pencil will work better than others and will help people make better drawings.

Variables

- **Independent variable:** I changed the pencil 7 times with 7 different brands. (Azor, Dixon Ticonderoga, Dixon Metrico, Bic Evolution, Maped, Paper Mate 0.7, and Bazic 0.5)

- **Dependent variable:** I measured the darkness of the lines and the smoothness (with little squares to fill them in)

- **Controlled variable:** What stayed the same was the drawing, paper type and size, and amount of pressure applied when drawing.

Materials

- **7 different pencils:** Paper Mate mechanical pencil 0.7, Dixon Ticonderoga, Bic Evolution, Azor, Maped, Bazic mechanical pencil 0.5, Dixon Metrico.

- 7 sheets of the same type of paper

- 1 chosen drawing design

- Computer for the drawing and to put the paper there to copy it.
- Extra sheet of paper, small.

Procedure

Step 1: I gathered and organized all 7 pencils and labeled 7 sheets of paper so each pencil had its own paper.

Step 2: I selected one drawing to use for all the pencils to make sure the test was fair.

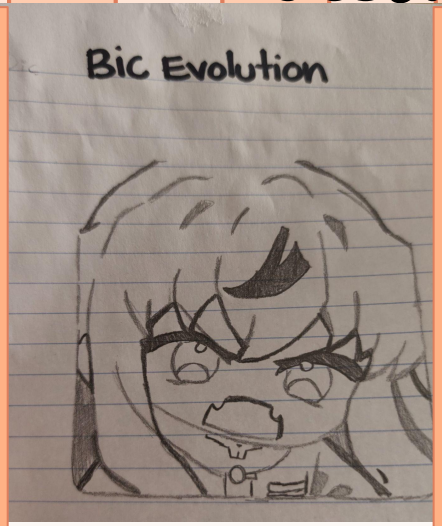
Step 3: I drew the same picture on each sheet of paper using a different pencil each time, applying the same amount of pressure while drawing.

Step 4: After finishing all the drawings, I grabbed a piece of paper and drew little squares and grabbed all the pencils and filled the squares to see which was the darkest.

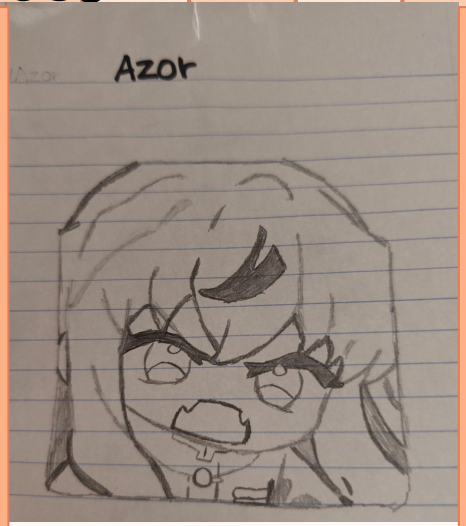
Step 5: Then I recorded my observations to see which was the winner.

Results

The darkness is a number 2, because the color was not very dark, and the smoothness would be a 3, because it felt a little rough and a little smooth.



The darkness is a number 1, because it was extremely light, and its smoothness would be a 5, because it felt very smooth while drawing with it.



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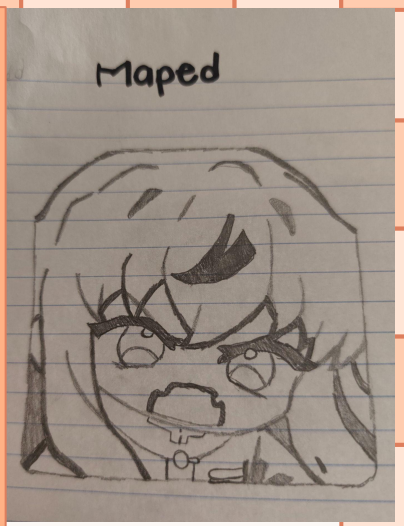
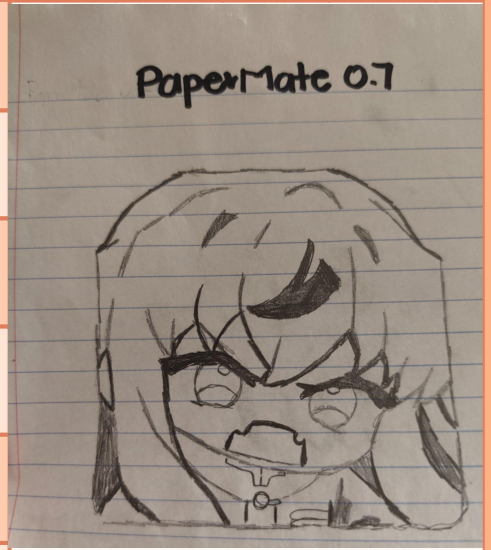
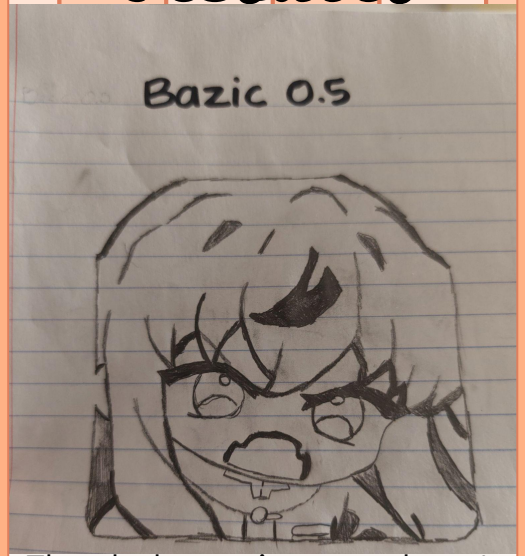


The darkness is a number 4, because it was visible on the paper, and its smoothness would be a 4, because it felt smooth while drawing but not too smooth.

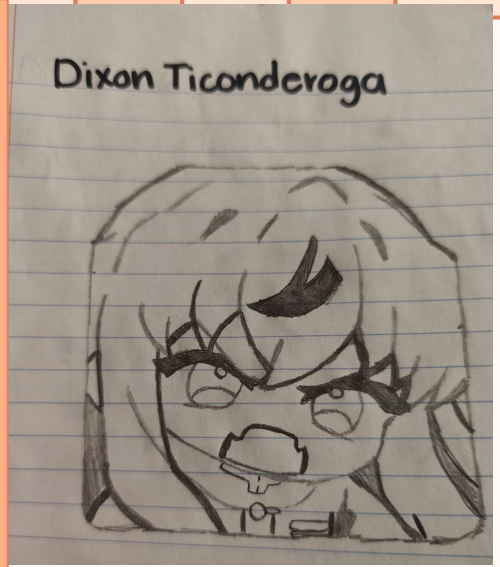
Results



The darkness is a number 5, because it left a very bold and dark line, and the smoothness would be a 4, because it felt smooth and easy to use.

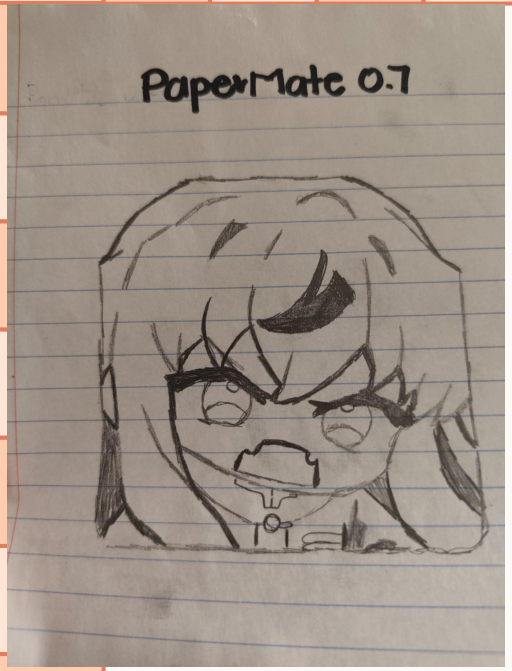


The darkness is a number 4, because the line was dark but a little light, and the smoothness would be a 3, because the lead broke easily and it felt a little rough.

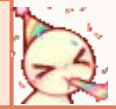


The darkness is a number 3, because it wasn't too light or too dark, and the smoothness would be a 5, because it was easy to use and control.

Data visualization



Darkness				
1	**2**	**3**	**4**	**5**
Very light.	Light.	Medium.	Dark.	Very Dark.
No	**No**	**No**	**No**	**YES!!**
Smoothness				
1- Very rough	**2-** Rough	**3-** Medium smoothness	**4-** smooth	**5-** Very smooth
No	**No**	**No**	**YES!!**	**No**



Discussion

- My results show that I was incorrect, because the best pencil was the Paper Mate 0.7, with a darkness rating of 5 and a smoothness rating of 4.
- I noticed that when I drew the large shape on the drawing head, the darkness and smoothness changed within each pencil.

Conclusion

- One important thing I learned was that the best pencil to use for drawing was the Paper Mate 0.7 mechanical pencil.
- The Paper Mate 0.7 mechanical pencil was the best pencil because it produced the darkest lines and was one of the smoothest pencils.

Real-World Connection

This matters because people use pencils for drawing, and this project helps identify which pencil works best. Knowing the best pencil can make drawing easier and more enjoyable, even for simple sketches like the one I chose, and can help artists, students, or anyone who draws, make better choices in the real world.

Future Research

If I did this project again, I would try more pencils from different brands. I would also use different types of paper and drawings, and I would add another question: “How do different pencils affect the smoothness of different drawings on different types of paper?”

References

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- Wang, T. C. (2002). *Pencil sketching*. John Wiley & Sons.
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