Design out the box

Time 40-50 mins approx

Level of difficulty ★★☆☆☆

- CAD stands for **C**omputer **A**ided **D**esign.

- It is the use of computer technology to aid in the design of something.

- CAD can create 2D and 3D virtual models of goods and products.

Lesson Objectives…

- To understand the basic tools used in 2D Design.
- To understand the advantages of using CAD
- To be able to successfully use CAD independently to complete a range of tutorials in 2D and then in 3D
- To develop advanced skills and problem solving skills when using 2D Design

Skills to be used in this project…

Basic Skills	New and Higher Skills
Zoom tool	Rotate tool
Orbit tool	Move tool
Pan tool	Offset tool
Line tool	Arc tool
Rectangle tool	Text tool
Circle tool	Paint Bucket tool
Eraser tool	Bitmap tool
Delete part tool	Making Components

Basic skills are those required to do very basic drawings and are detailed as part of this presentation.

New and higher skills may be new to the novice and are the focus for learning in this presentation.

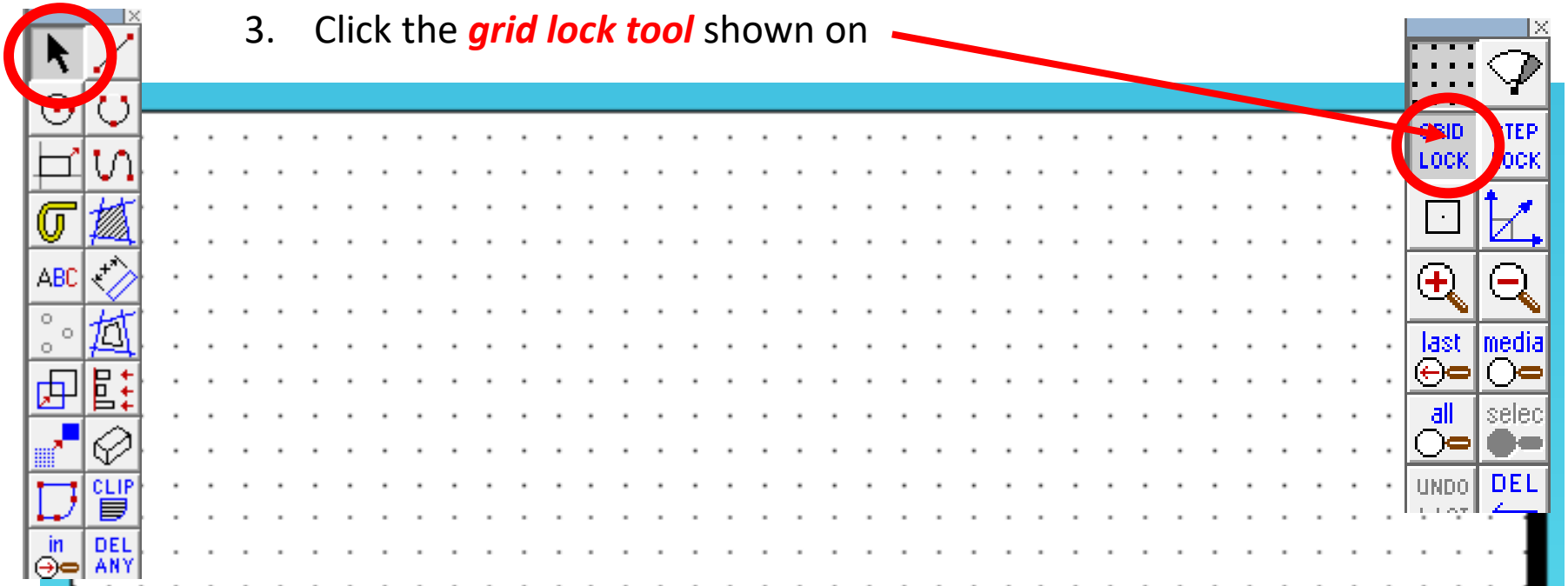
Skills to be used in this project…

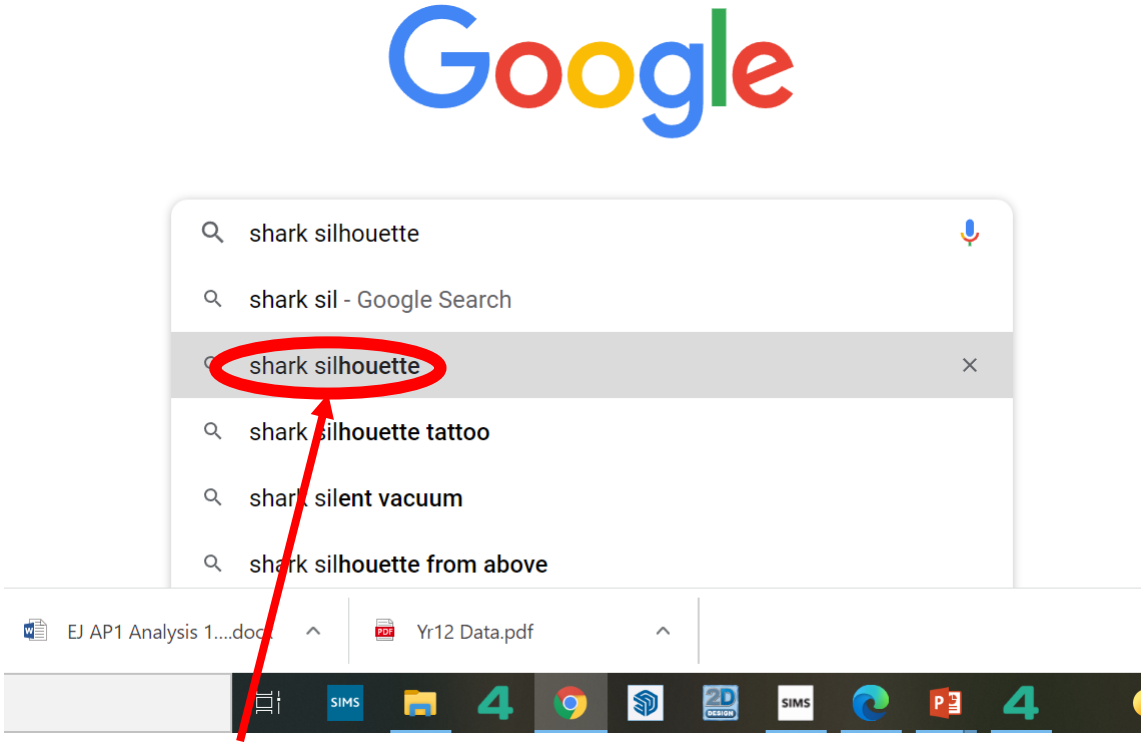
Basic Skills	New and Higher Skills
Zoom tool	Construction lines and points
Orbit tool	Tape Measure tool
Pan tool	Arc tool
Line tool	Contour Tool
Rectangle tool	Bitmap Tool
Circle tool	Paint Bucket tool
Eraser tool	
Delete Part tool	

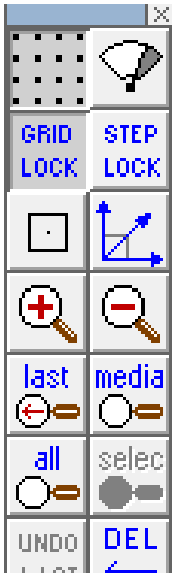
Basic skills are those required to do very basic drawings and are detailed as part of this presentation.

New and higher skills may be new to the novice and are the focus for learning in this presentation.

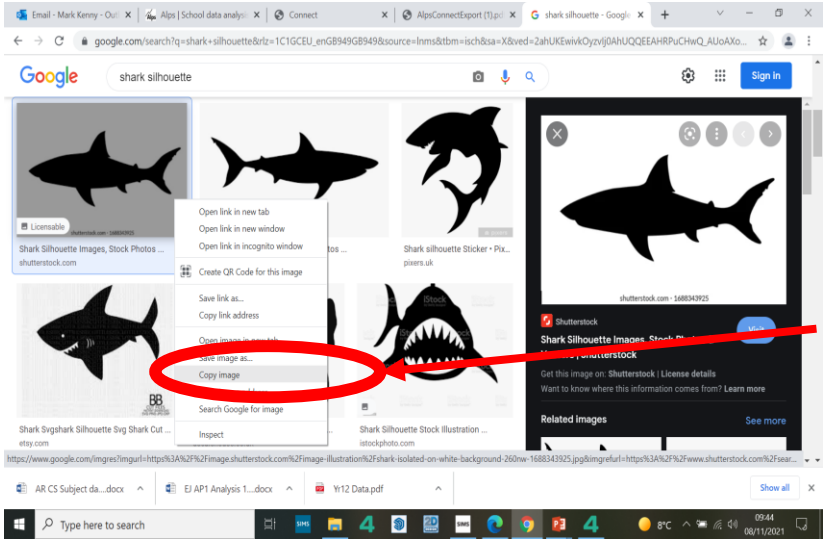
3. Click the ***grid lock tool*** shown on



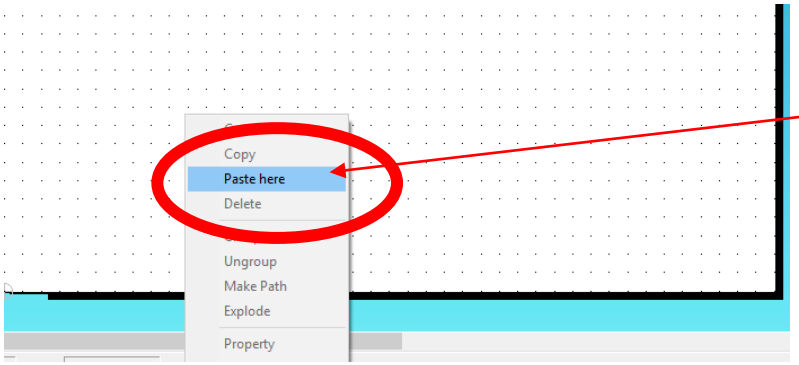




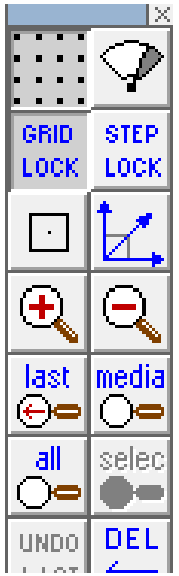
4. Search for a ***shark silhouette*** image on the internet..

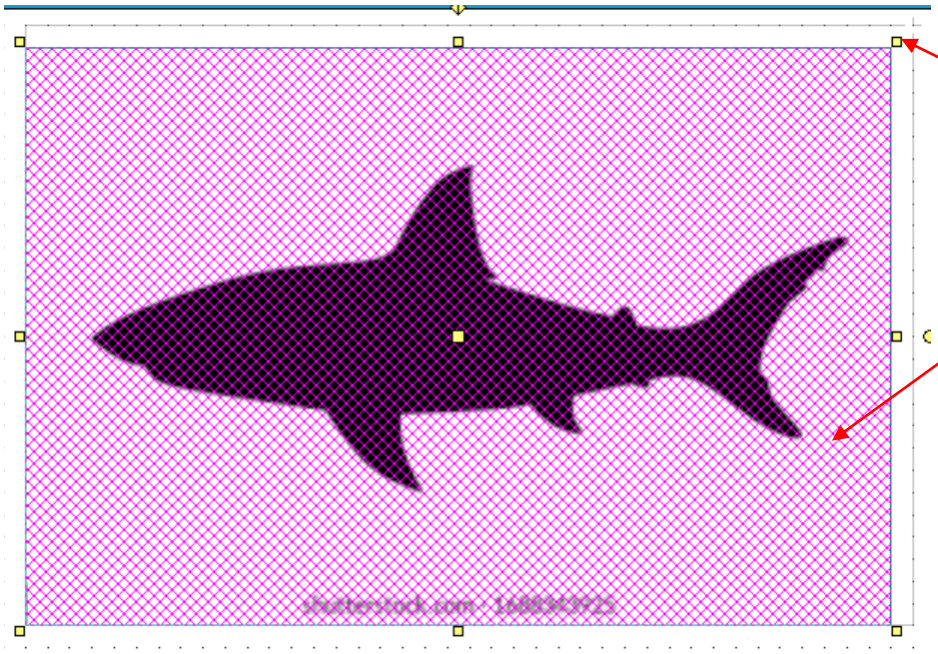


5. Once you have found a ***city silhouette.*** ***Right click*** on the mouse and ***copy*** the image

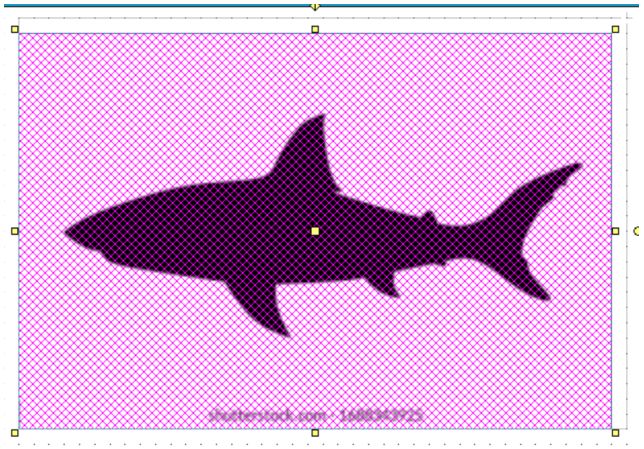


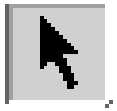
6. Go back to 2D design and ***right click*** on the mouse and click ***paste here.***



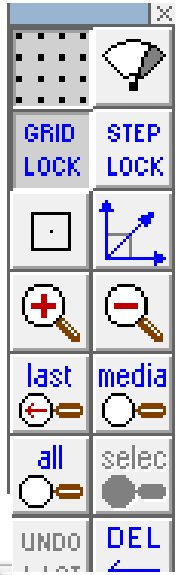


7. ***Position*** the image on the page and using the select tool resize it so it's a suitable size to work on…..

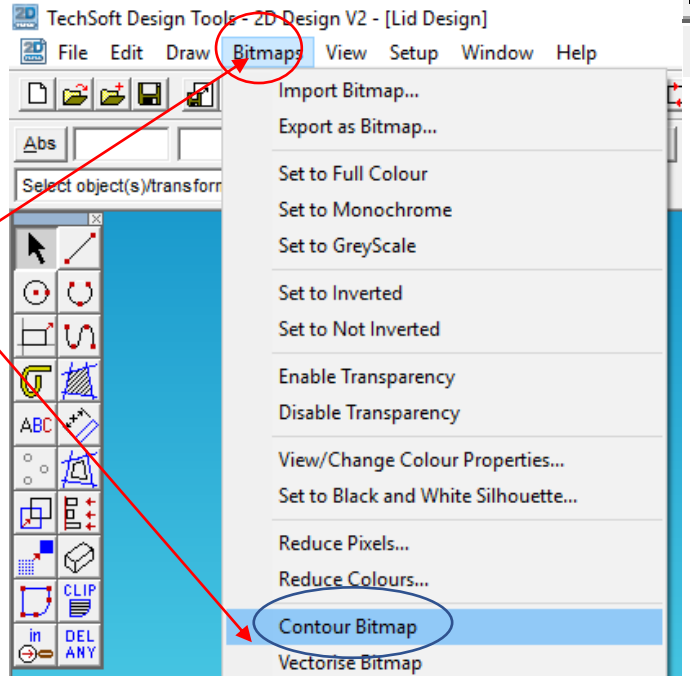


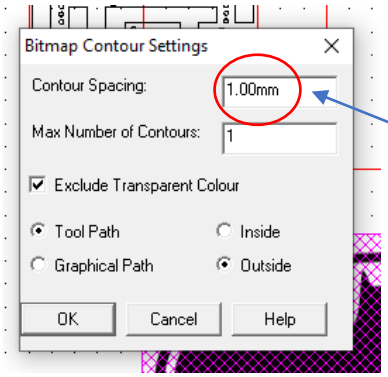


8. Using the ***select tool, highlight*** the ***entire drawing by clicking on it***.

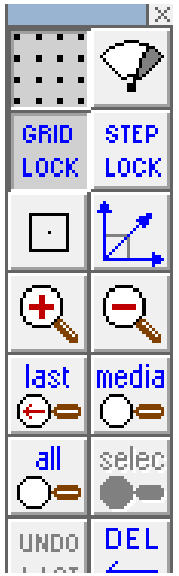


9. Select the ***Bitmaps toolbar, at the top of the screen*** and scroll down until you come to ***Contour Bitmap and click on it***.



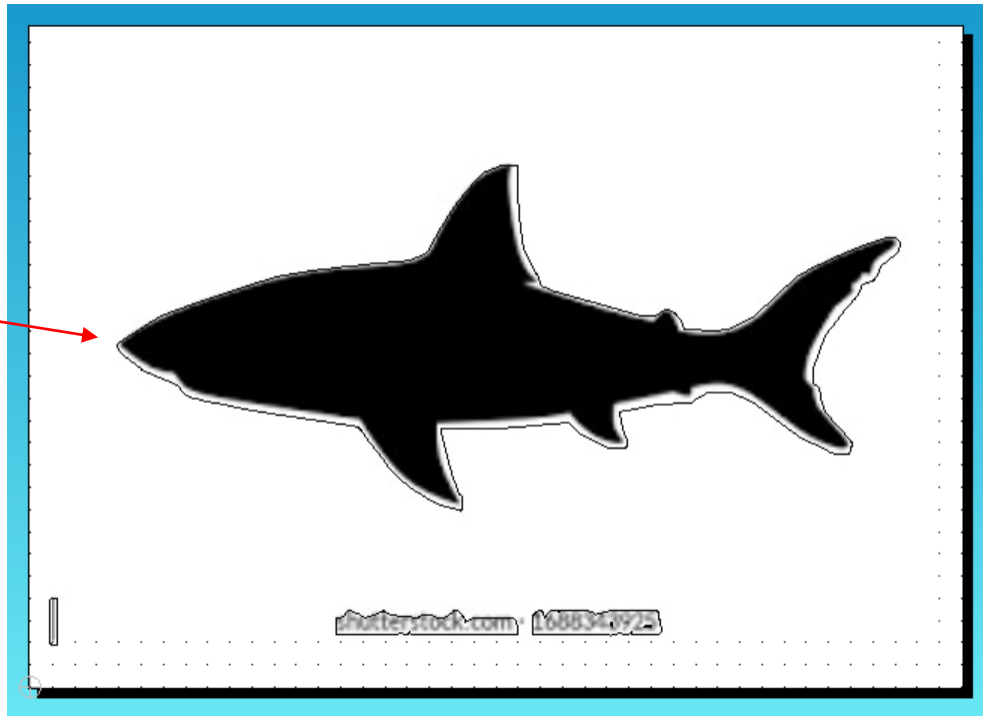


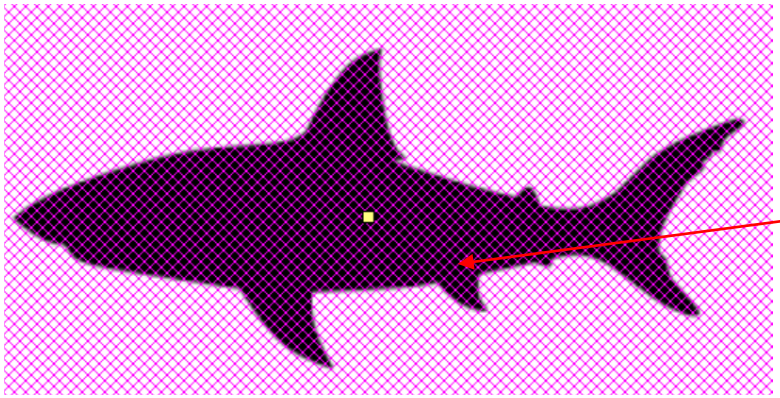
10. A Bitmap contour spacing pop up will appear. This basically traces the image. ***Change the contour*** from 5.00mm to ***1.00 or 0.00mm***.

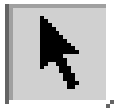


11. A contour or line should appear 1mm around your drawing.

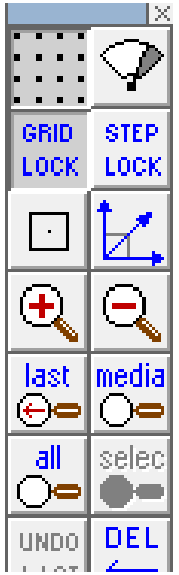
You can set the contour spacing to 0.00mm in the future



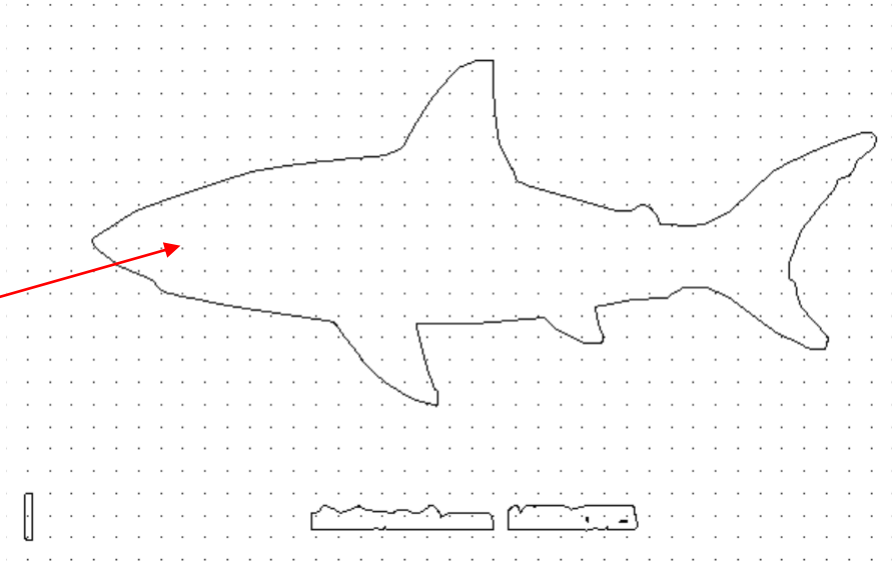


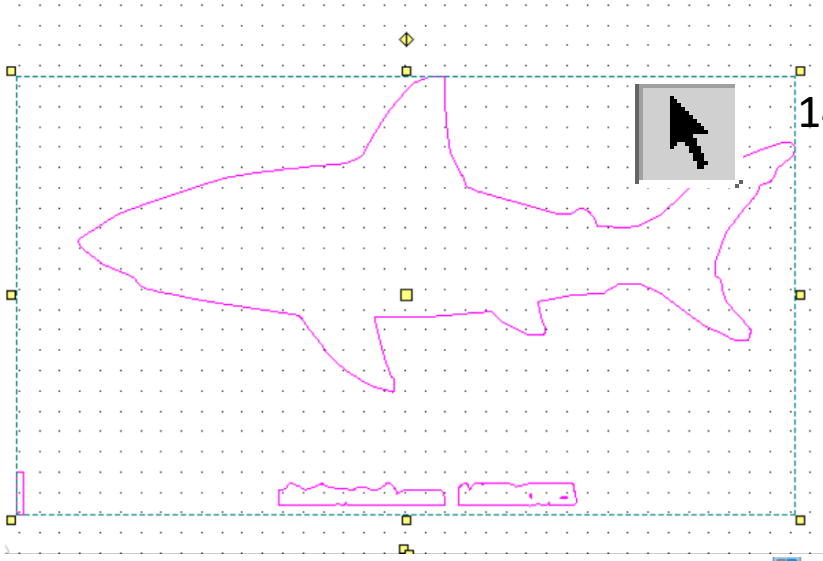


12. Using the ***select tool, highlight*** the ***entire drawing by clicking on it***.

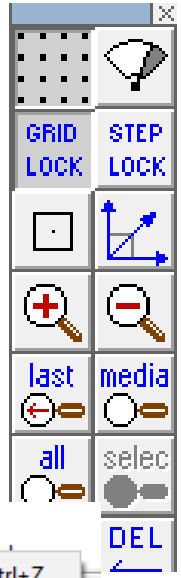


13. Using the ***keyboard,*** and ***delete*** the ***image*** and be left with the ***contour lines shown.***

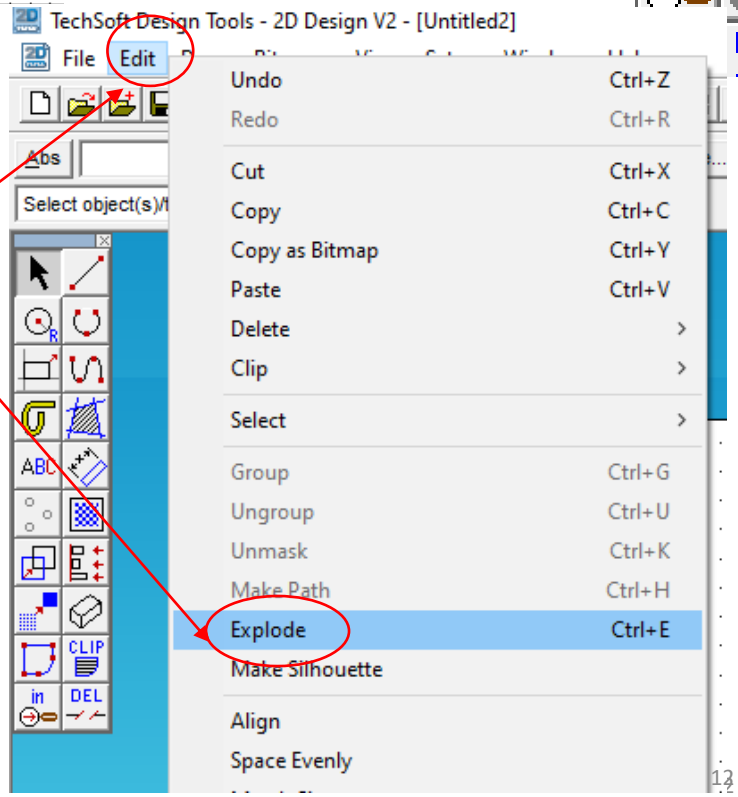


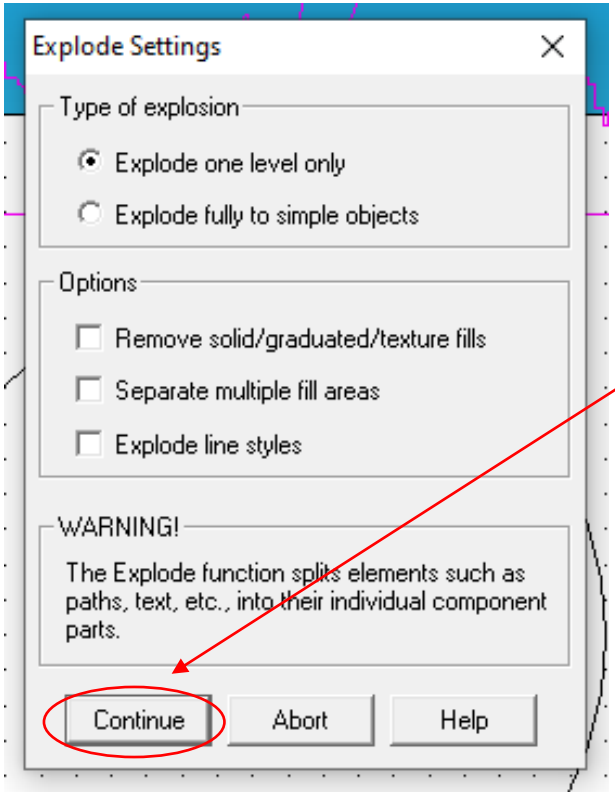


14. Using the ***select tool, highlight*** the ***entire drawing by clicking on it***.

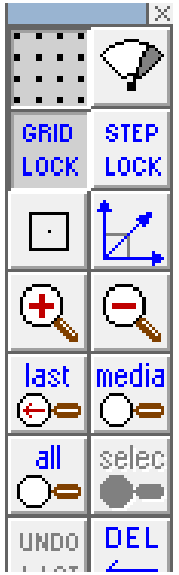


15. Select the ***edit toolbar, at the top of the screen*** and scroll down until you come to ***explode.***

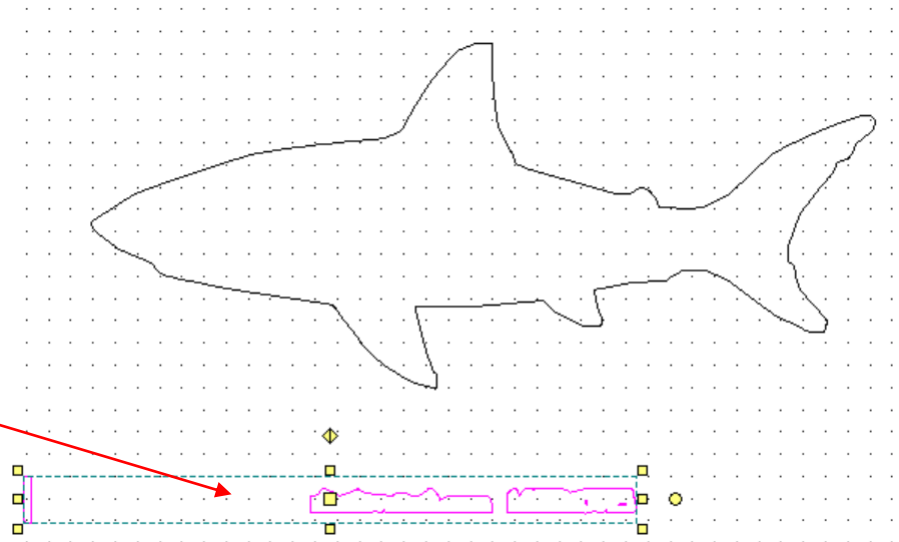


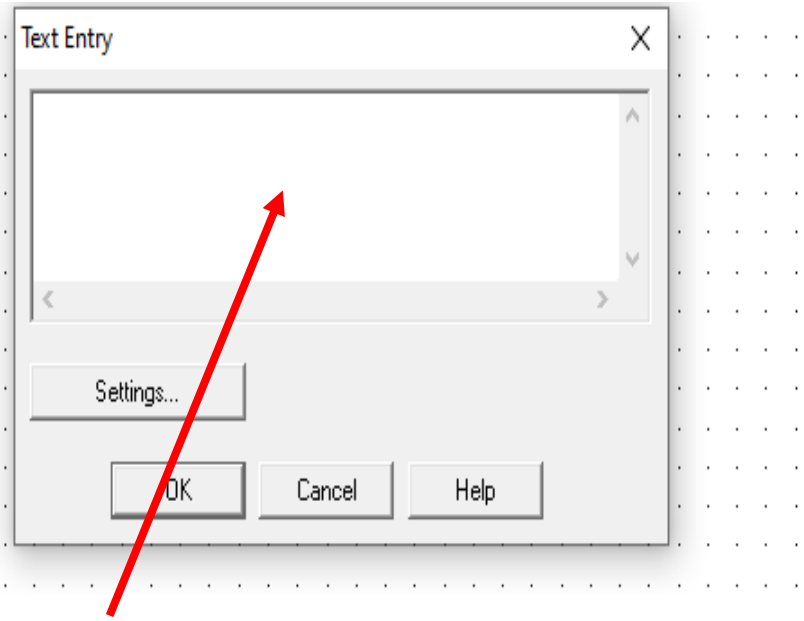


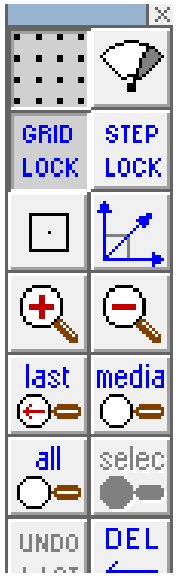
16. Select the ***continue.***



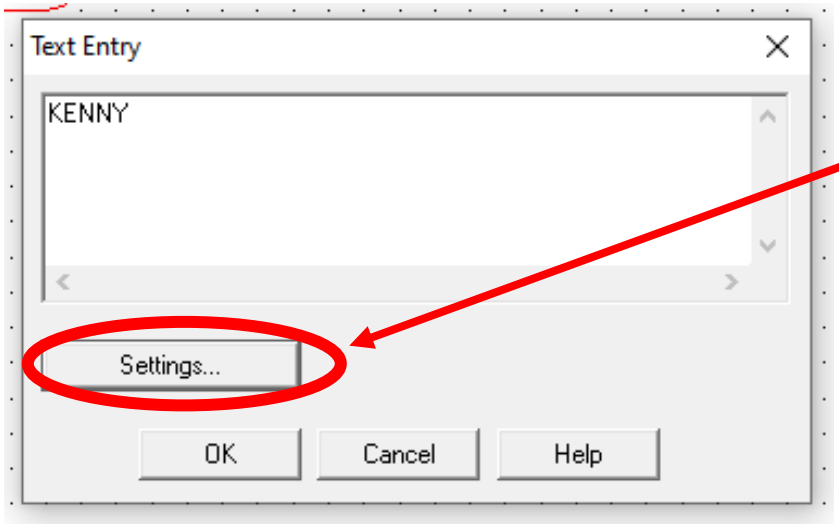
17. Using the ***Select tool*** ***highlight*** any writing that you don't want and **delete** them**.**



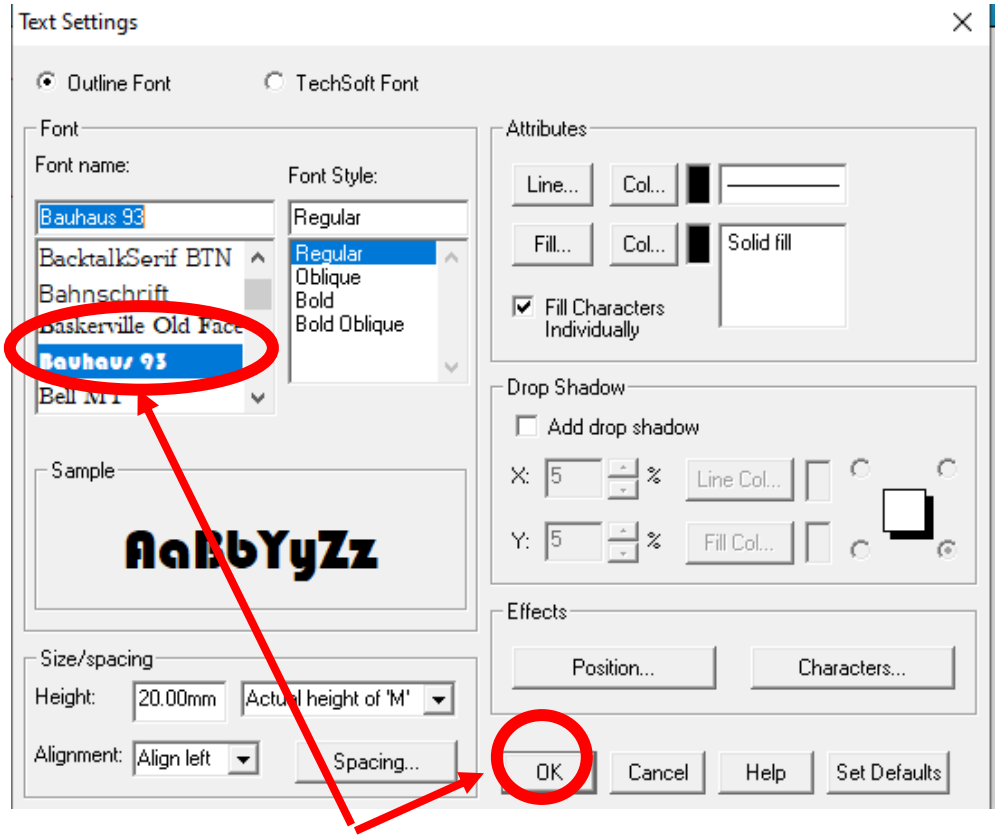


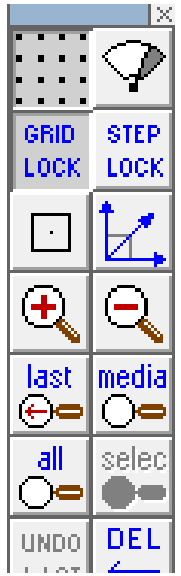


18. Click on the line ***ABC (text) tool*** shown to bring up the ***text entry window*** shown.

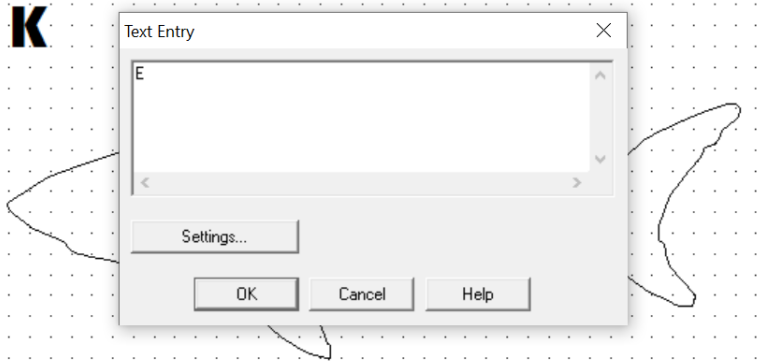


19. Type in the first letter of your ***name***. Then click on settings to choose your favourite font etc……

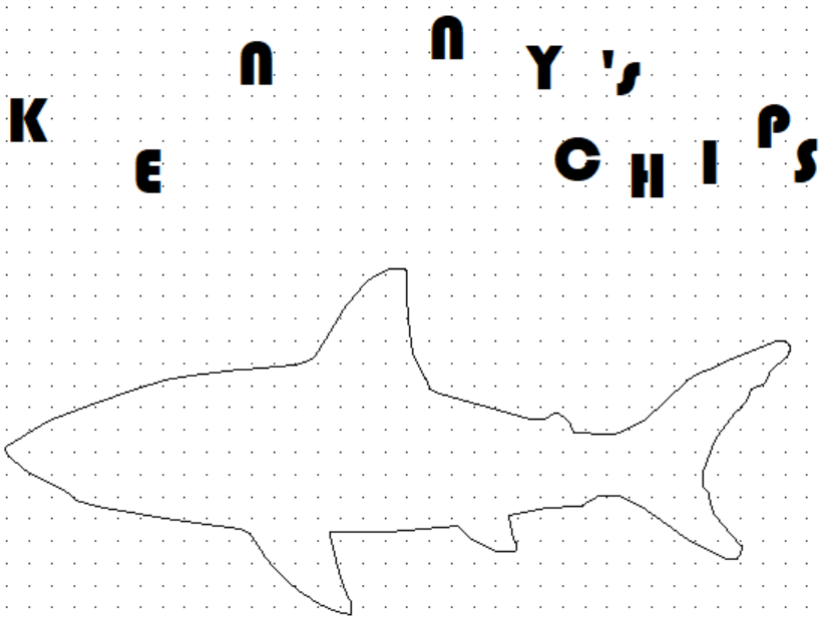




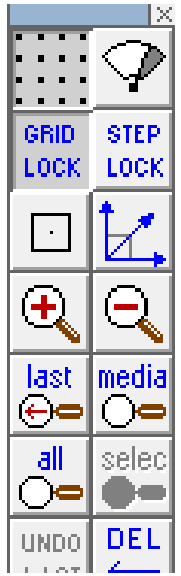
20. Once you have chosen your font click **OK** and then **OK** again..

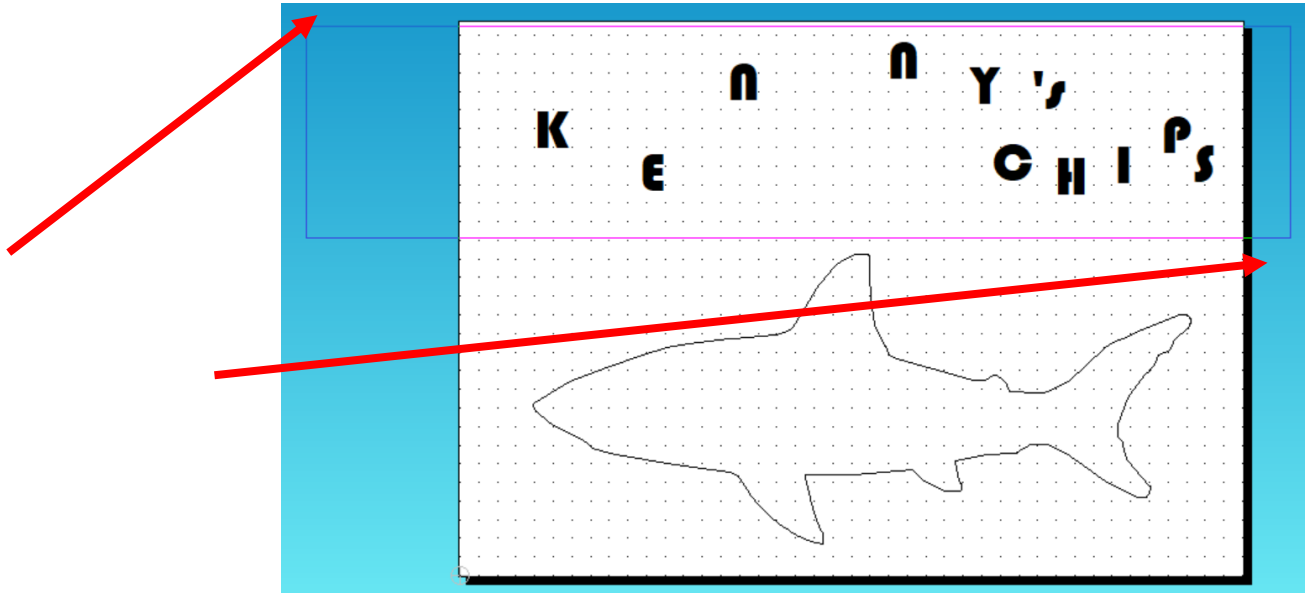


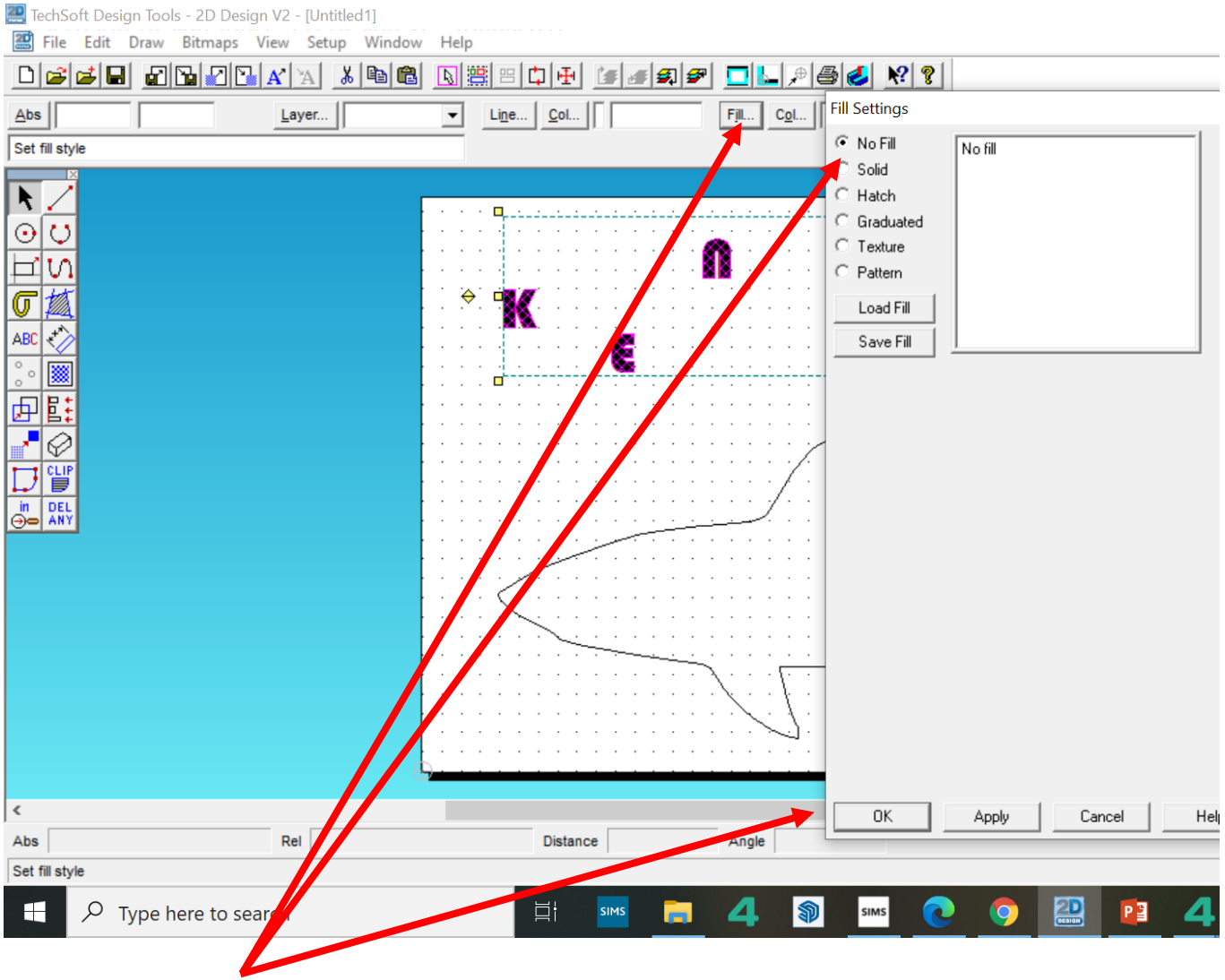
21. Repeat the process to write out your name one letter at a time….

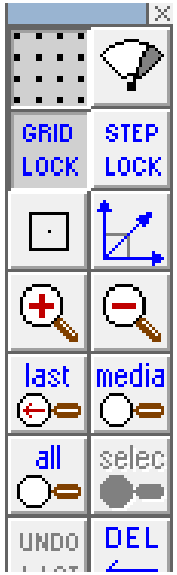


22. I have chosen to add a restaurant style theme to my design by adding chips on the end ….



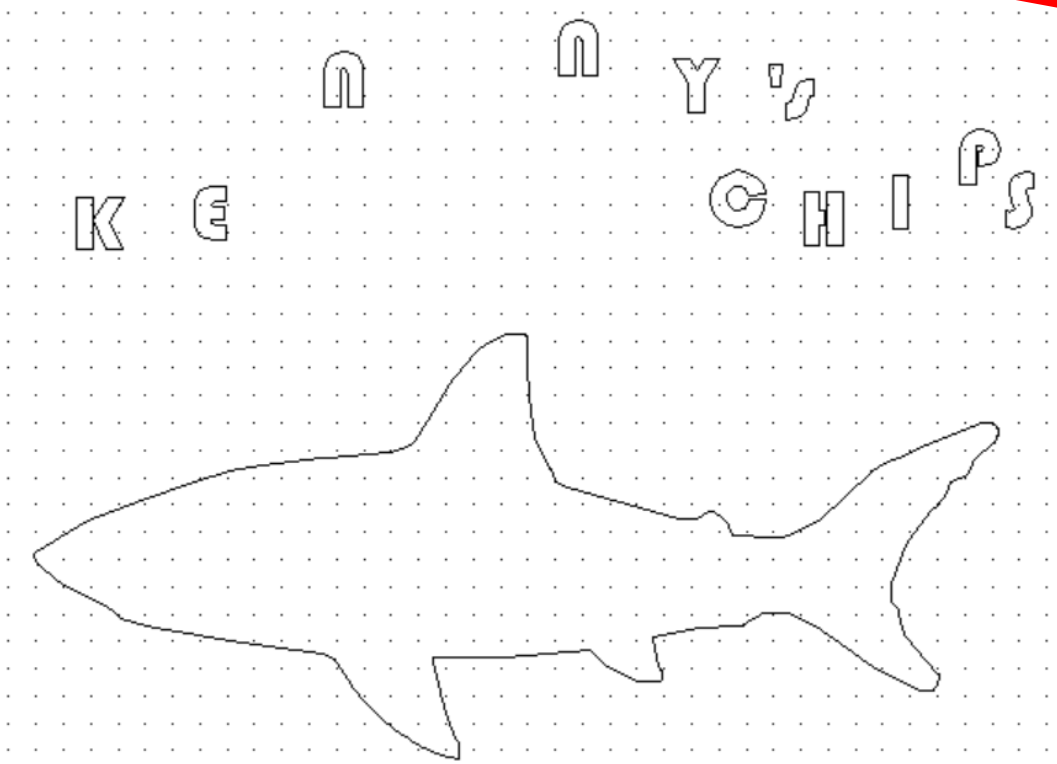


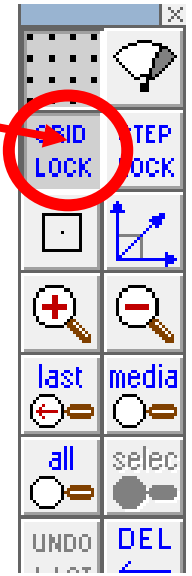


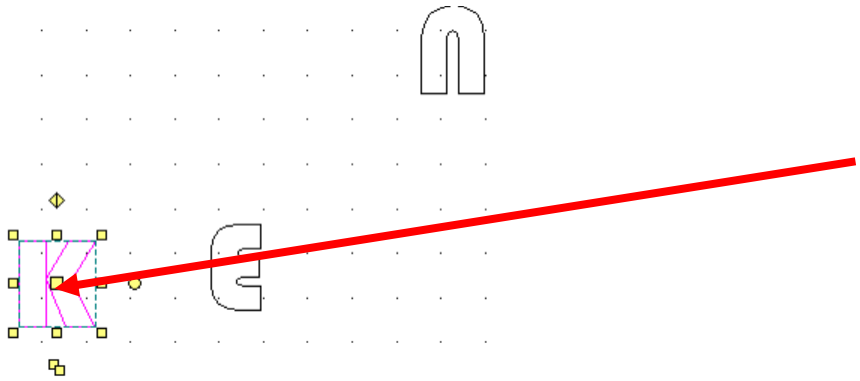


24. Click on the ***sill tool*** and then ***select*** no fill and ***press OK***

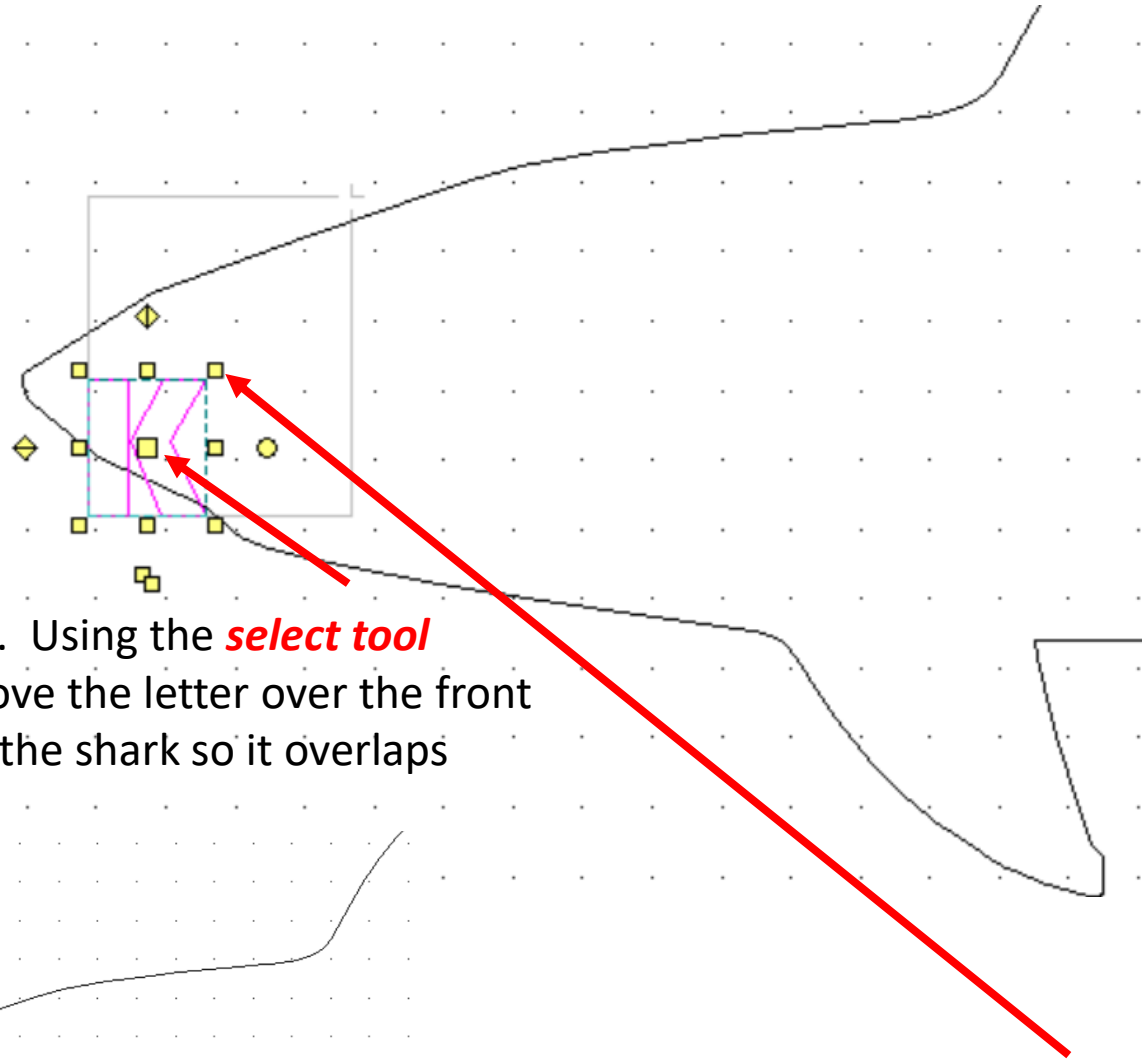
25. Click the ***grid lock tool*** shown off



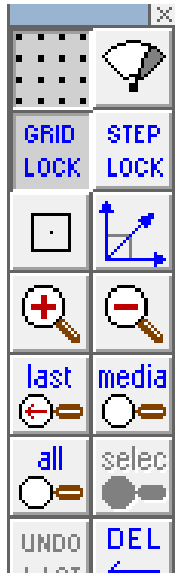


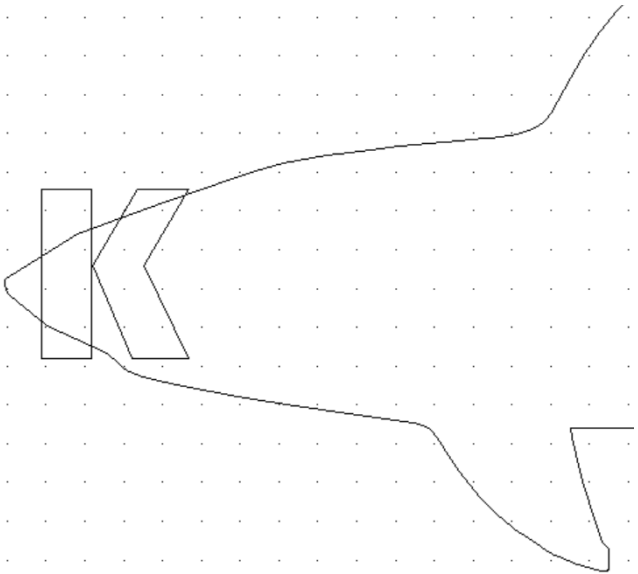


26. Using the ***select tool*** click your first letters so it highlights it all. Move it using the ***centre square***

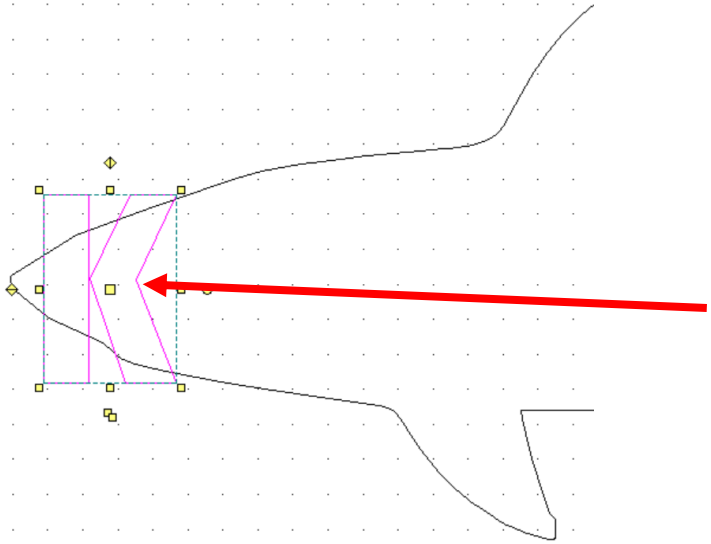


27. Using the ***select tool*** move the letter over the front of the shark so it overlaps

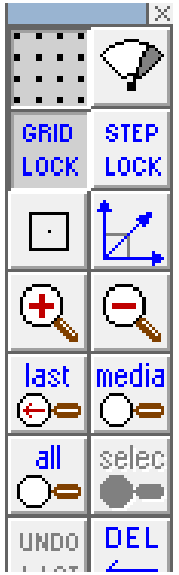


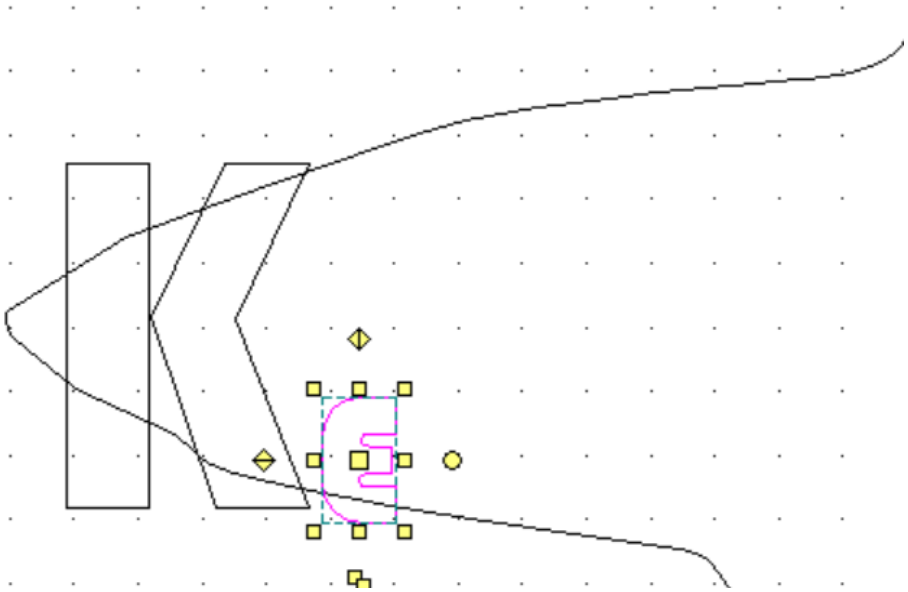


28. Using the ***select tool*** resize the letter so it overlaps the front of the shark

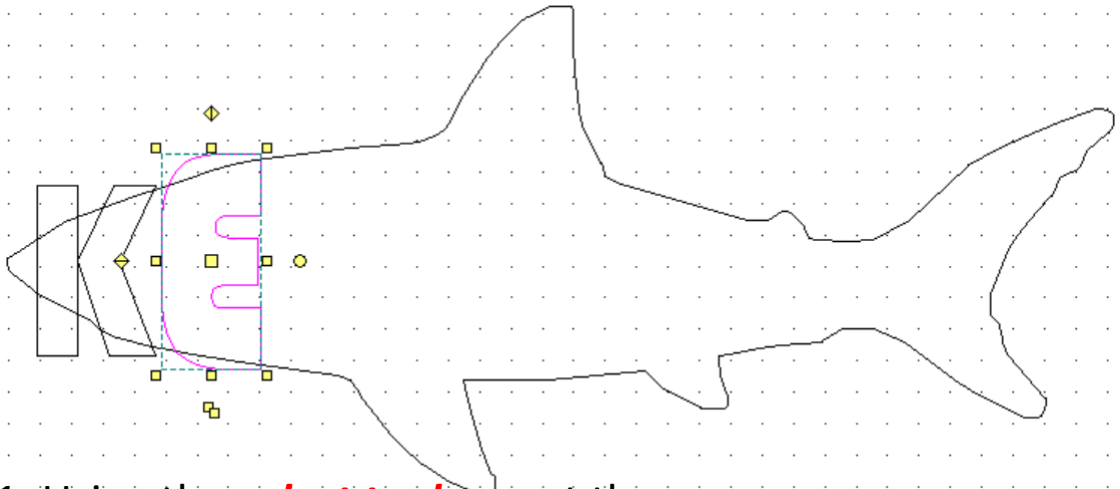


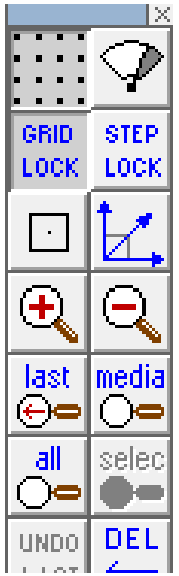
29. Using the ***select tool*** resize the letter so it overlaps the front of the shark



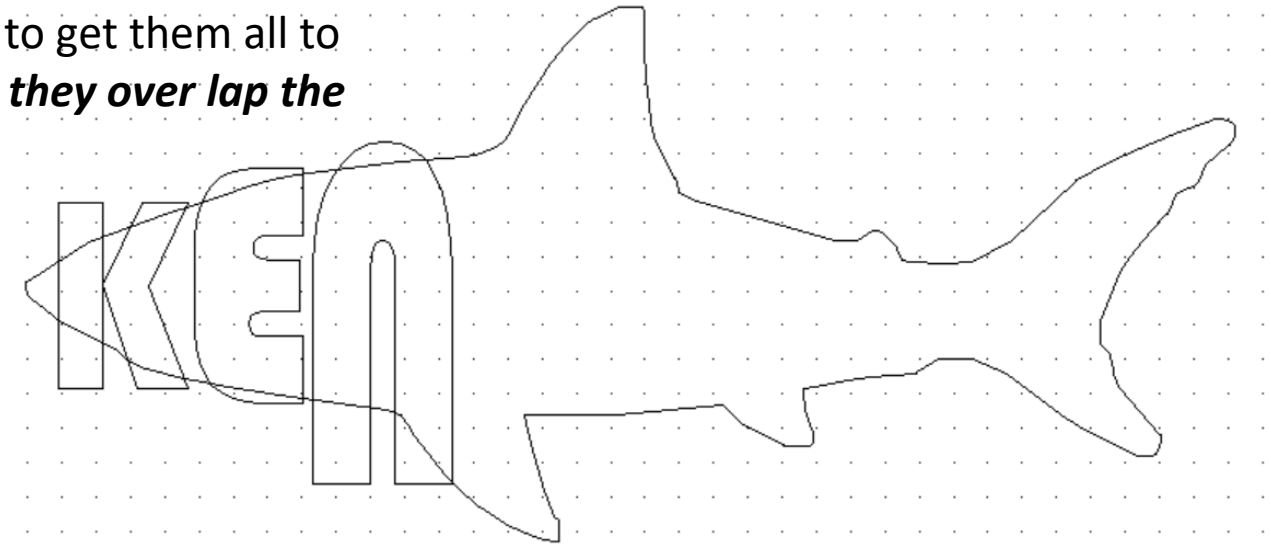


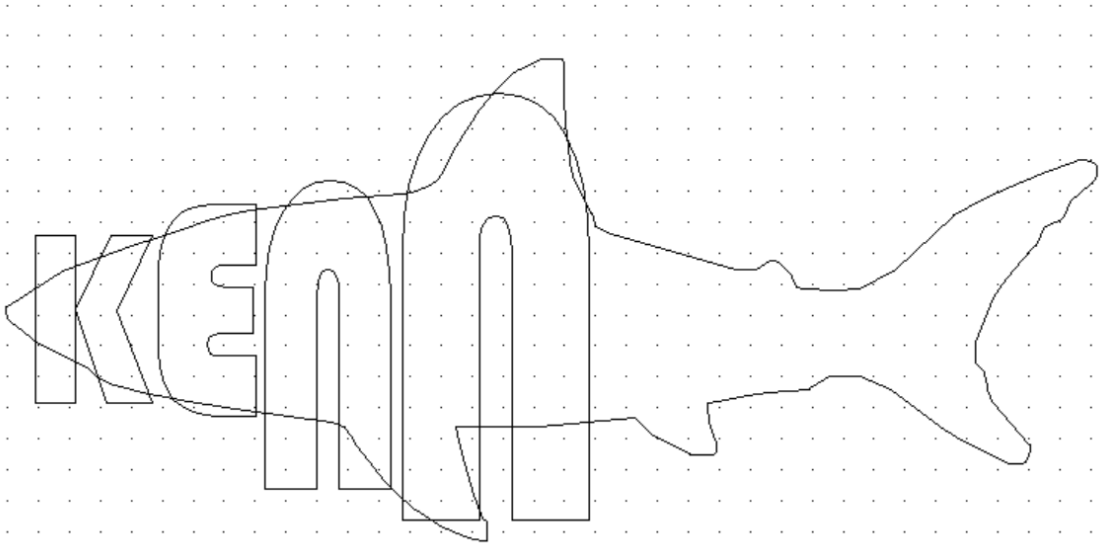
30. Using the ***select tool*** repeat the process for the other letters so they fit in the shark design. You may need to go back and change sizes to get them all to fit in. ***Ensure they over lap the edges.***

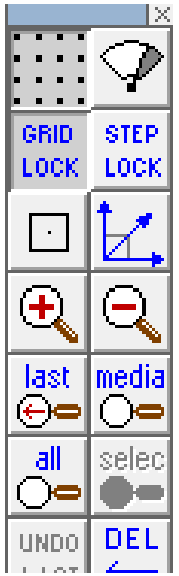




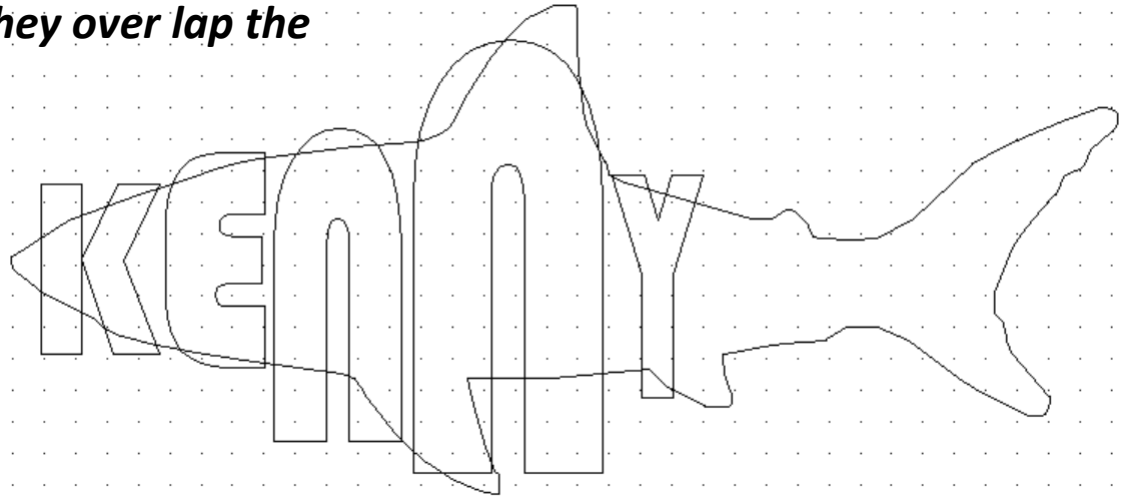
31. Using the ***select tool*** repeat the process for the other letters so they fit in the shark design. You may need to go back and change sizes to get them all to fit in. ***Ensure they over lap the edges.***

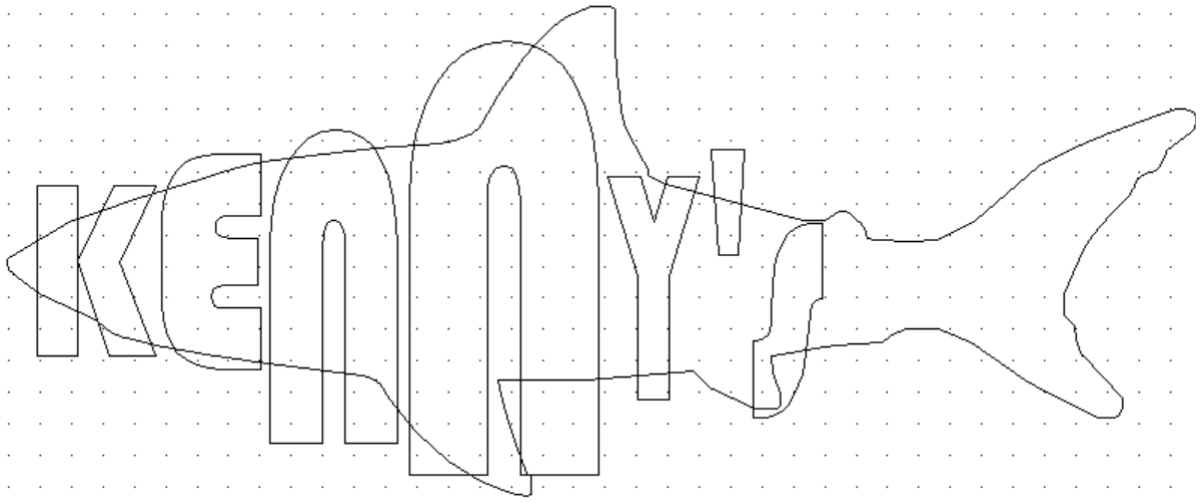


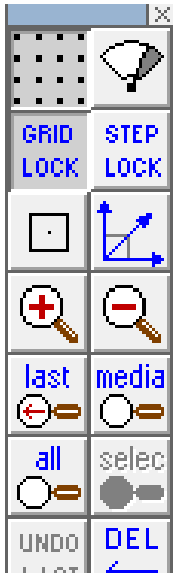




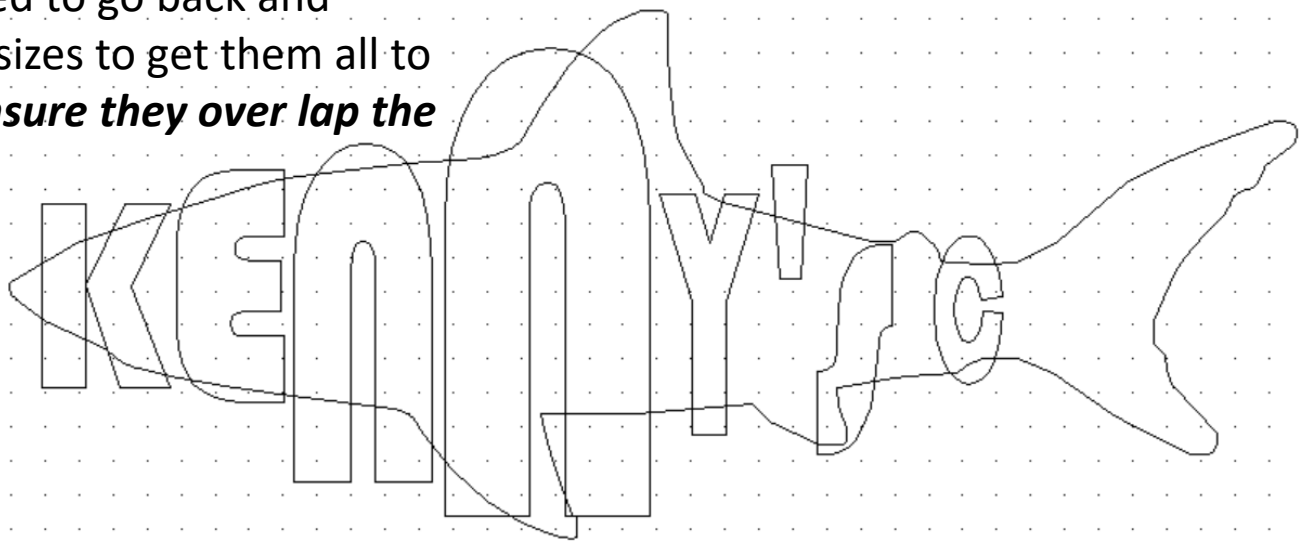
32. Using the ***select tool*** repeat the process for the other letters so they fit in the shark design. You may need to go back and change sizes to get them all to fit in. ***Ensure they over lap the edges.***

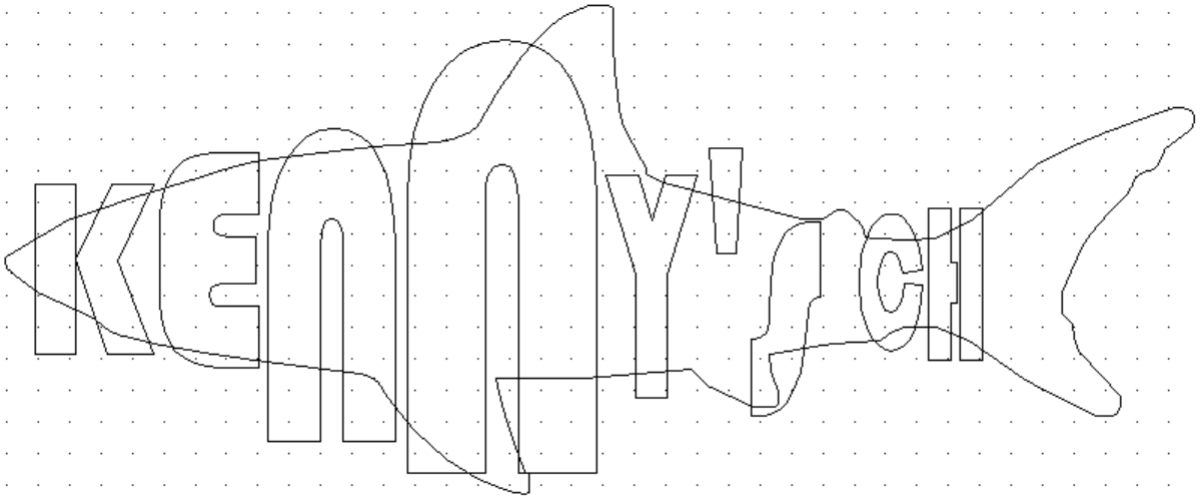


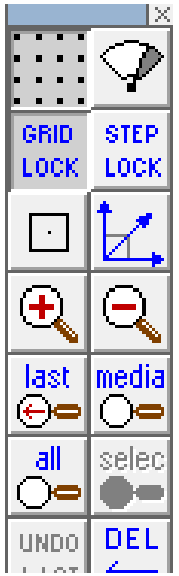




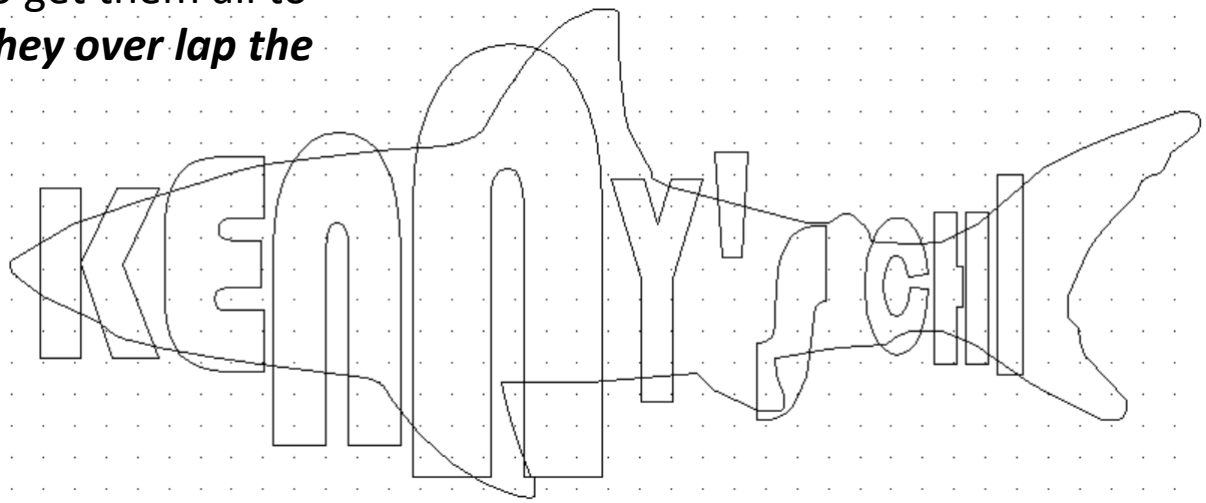
33. Using the ***select tool*** repeat the process for the other letters so they fit in the shark design. You may need to go back and change sizes to get them all to fit in. ***Ensure they over lap the edges.***

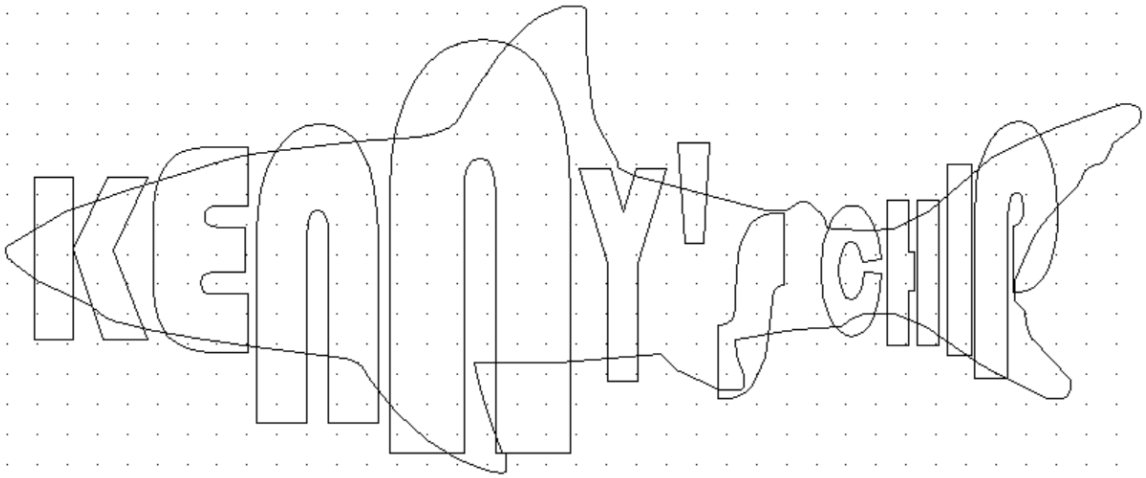


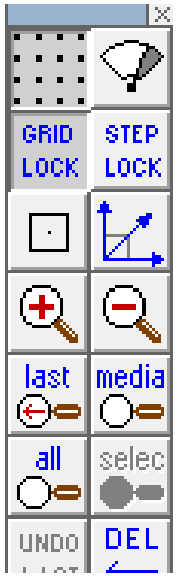




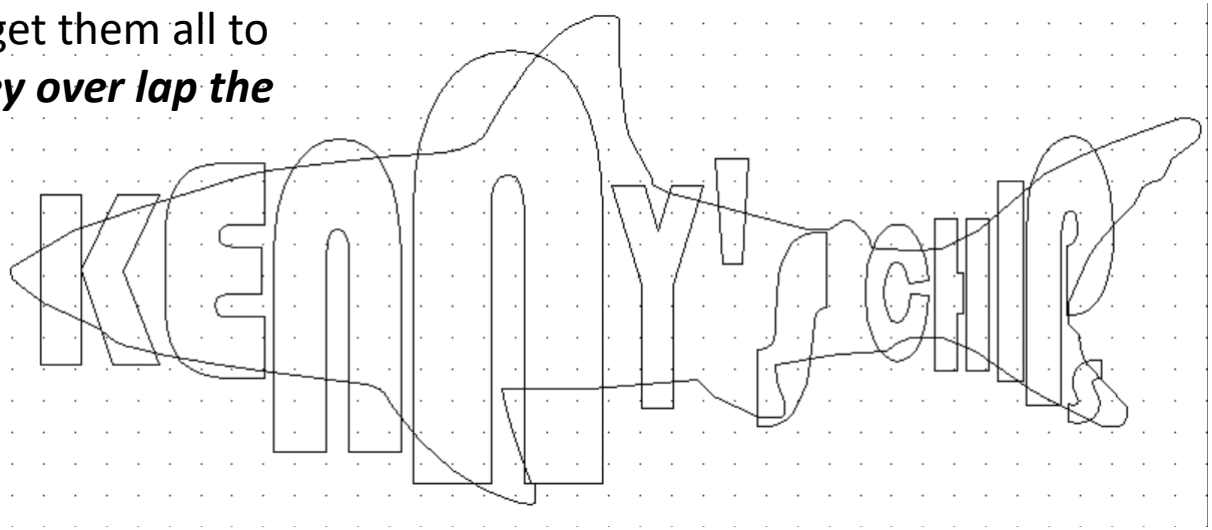
34. Using the ***select tool*** repeat the process for the other letters so they fit in the shark design. You may need to go back and change sizes to get them all to fit in. ***Ensure they over lap the edges.***

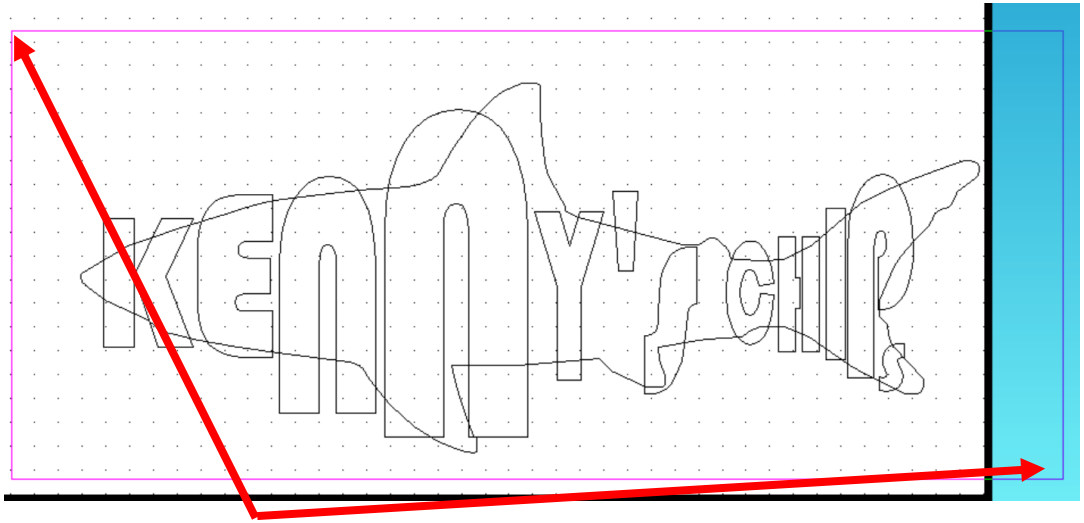


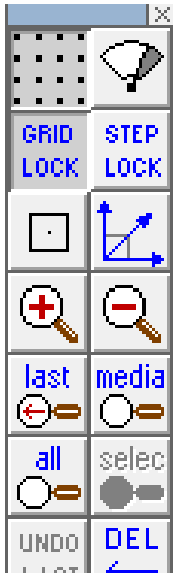




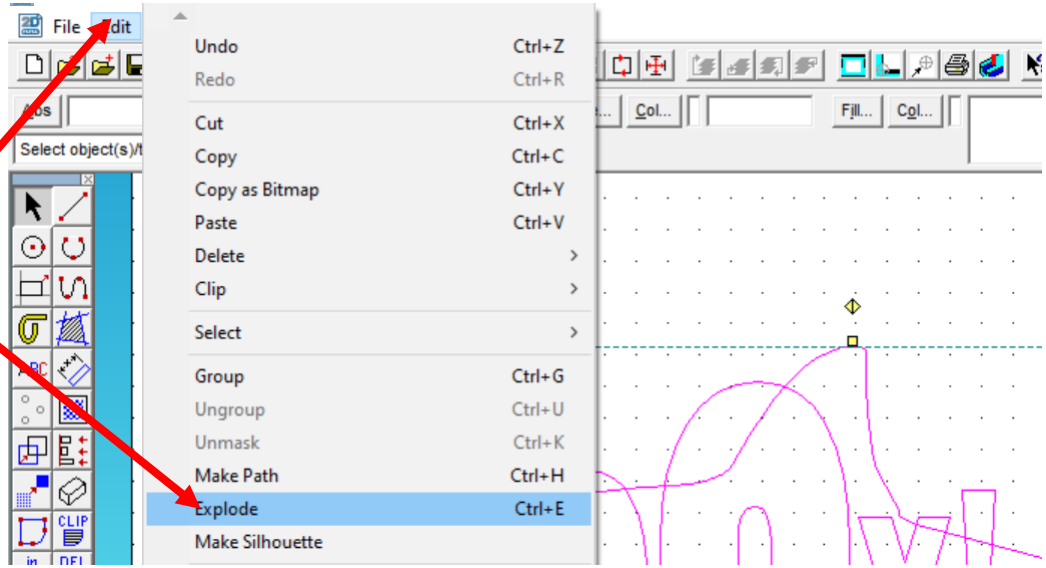
35. Using the ***select tool*** repeat the process for the other letters so they fit in the shark design. You may need to go back and change sizes to get them all to fit in. ***Ensure they over lap the edges.***



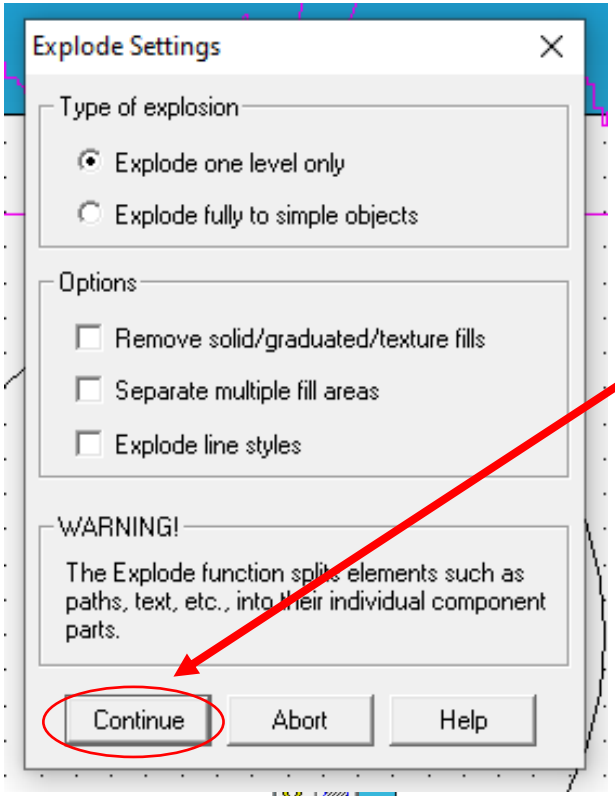




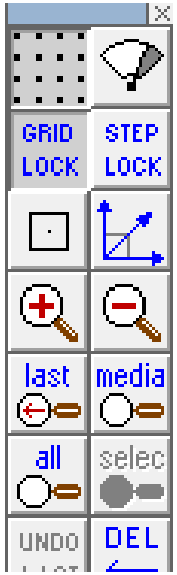
36. Using the ***select tool*** highlight the entire shark and lettering..



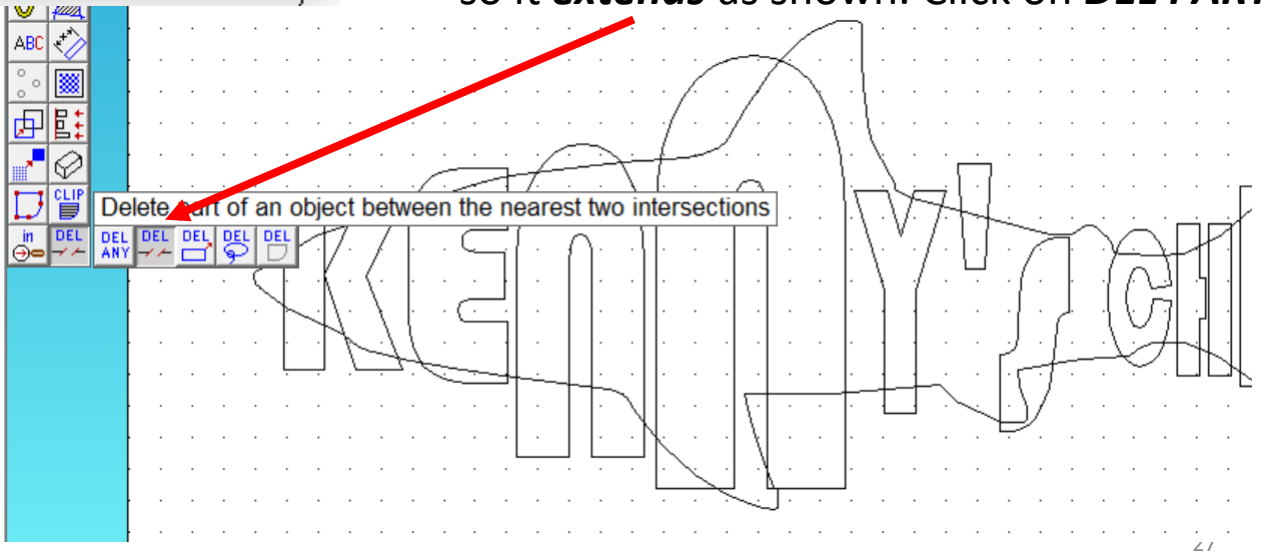
37. Using the ***select tool*** click on edit and scroll down and click on explode. This will join the shark outline and letters together..

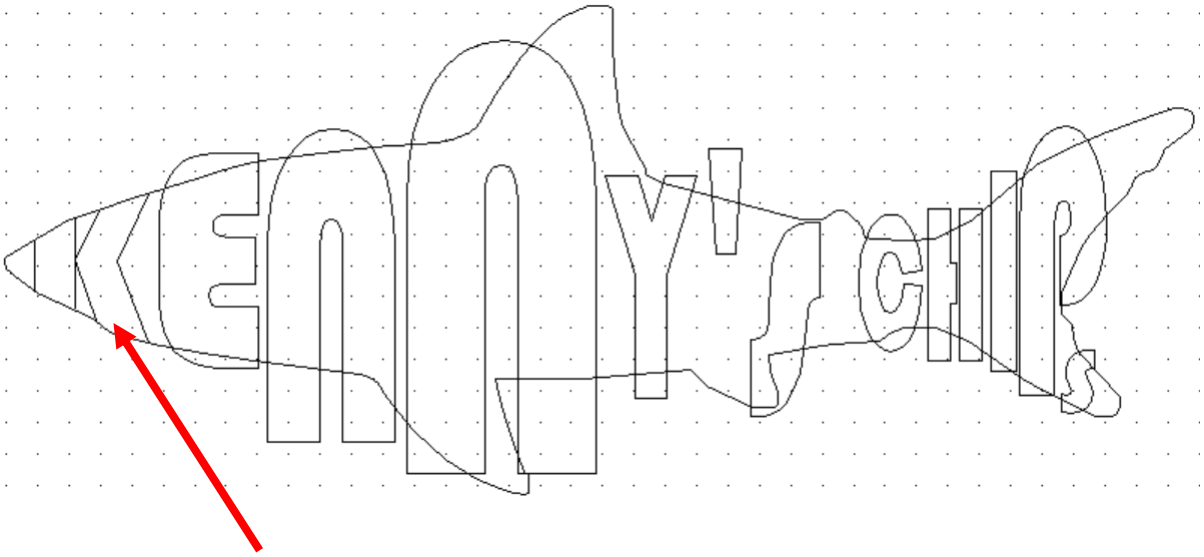


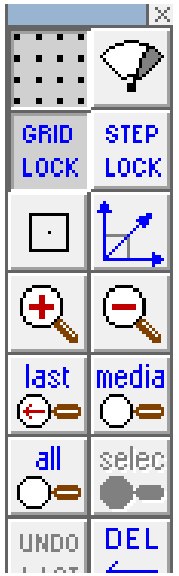
38. Select the ***continue.***



39. Click and ***hold*** the ***DEL ANY*** toolbar down so it ***extends*** as shown. Click on ***DEL PART***.

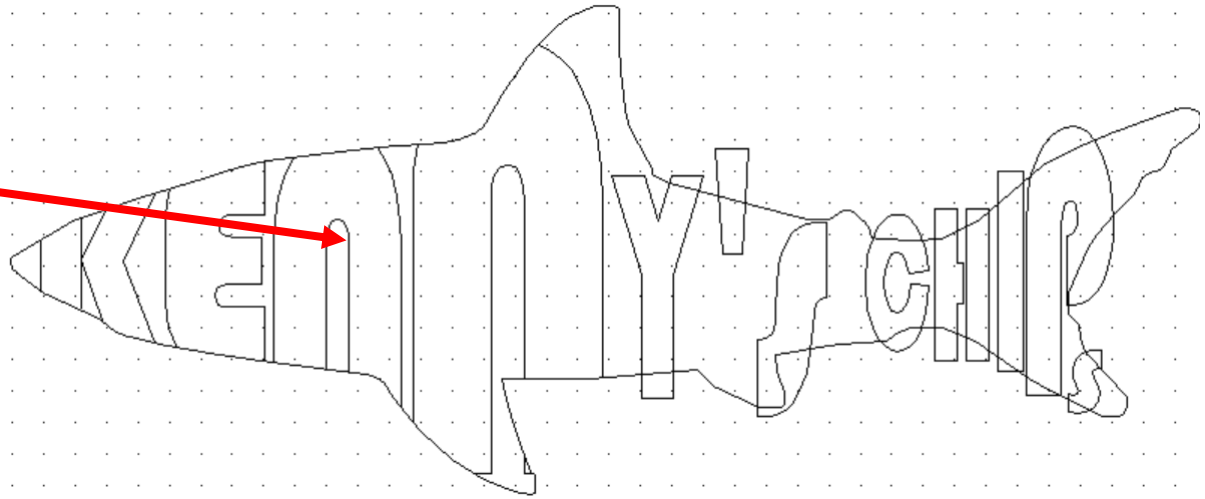


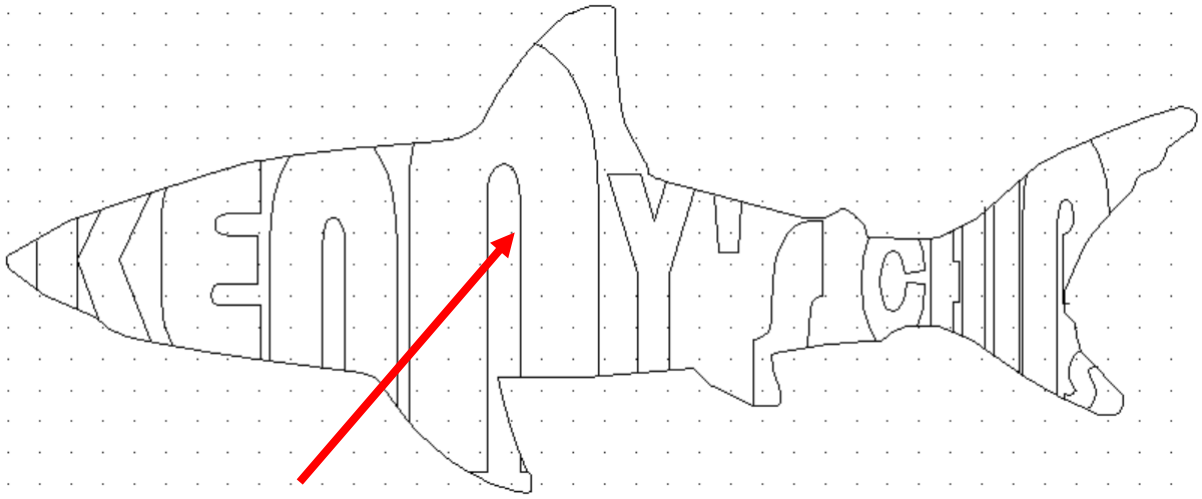




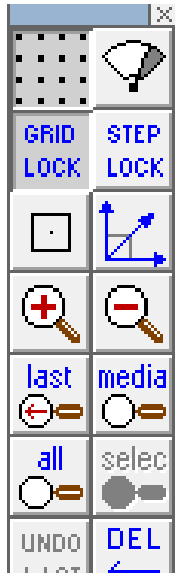
40. ***DELETE*** the letters that stick out over the shark outline as shown.

41. ***DELETE*** the letters that stick out over the shark outline as shown.

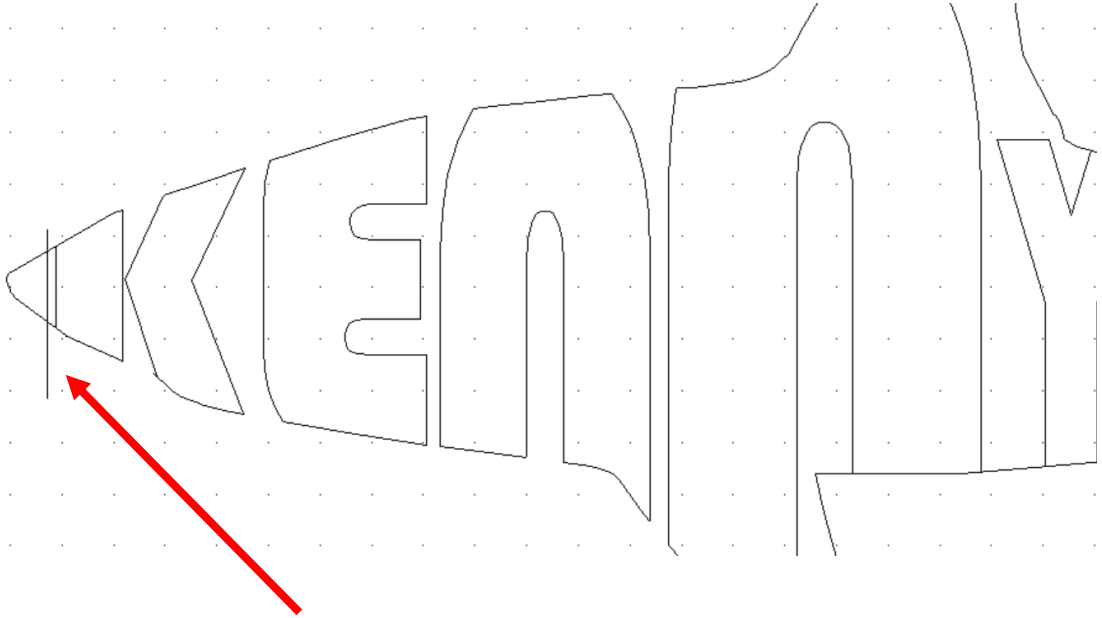


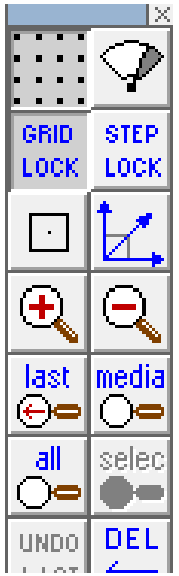


42. ***DELETE*** the letters that stick out over the shark outline as shown.

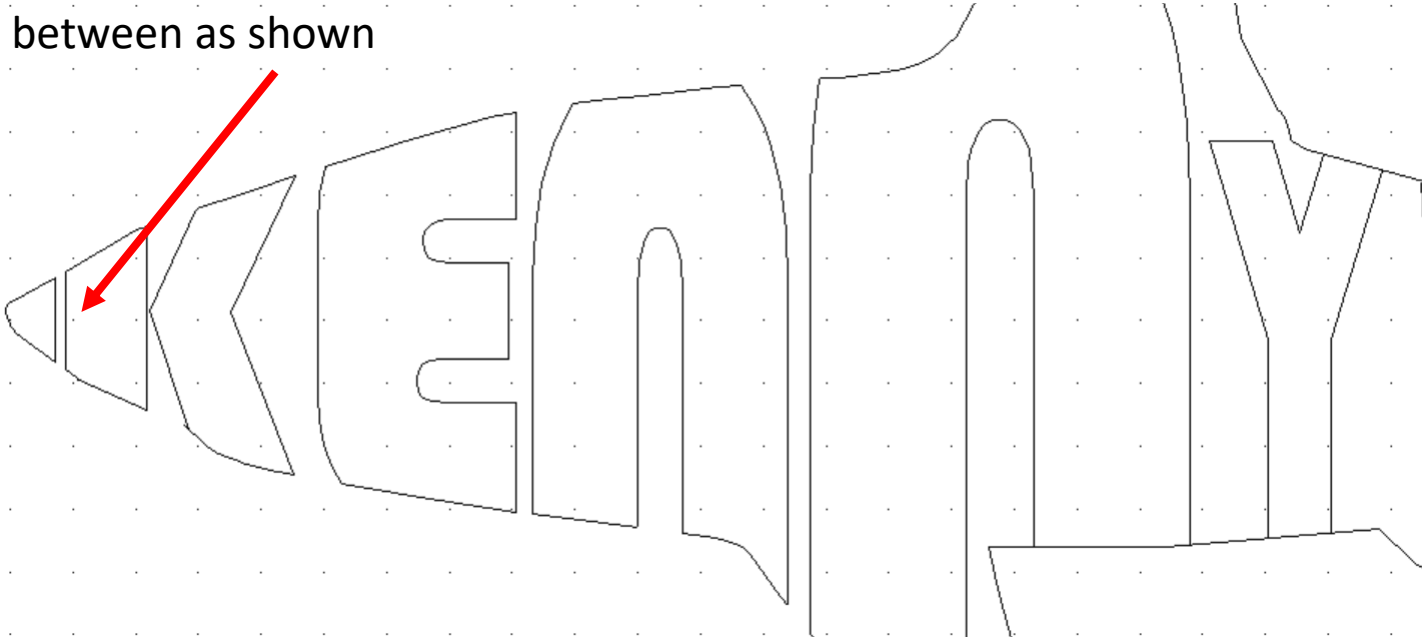


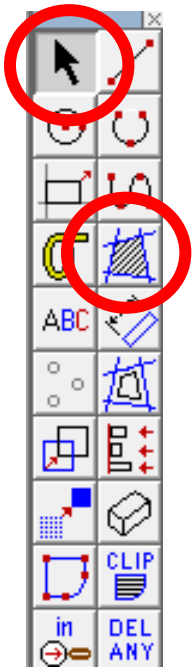
43. ***DELETE*** the outline in between the letters as shown. You need to be careful not to delete important features though such as the nose and fins

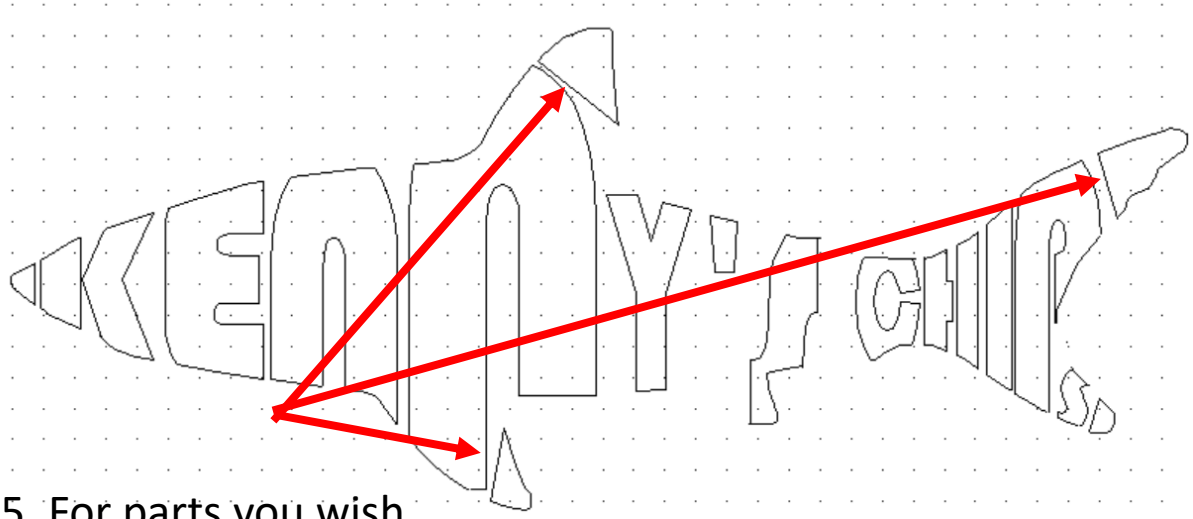


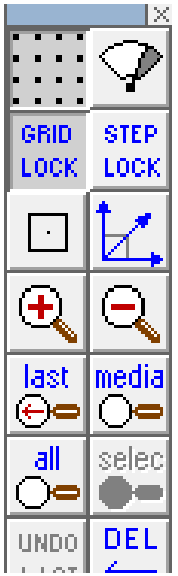


44. For parts you wish to keep draw a line down and delete the lines in between as shown

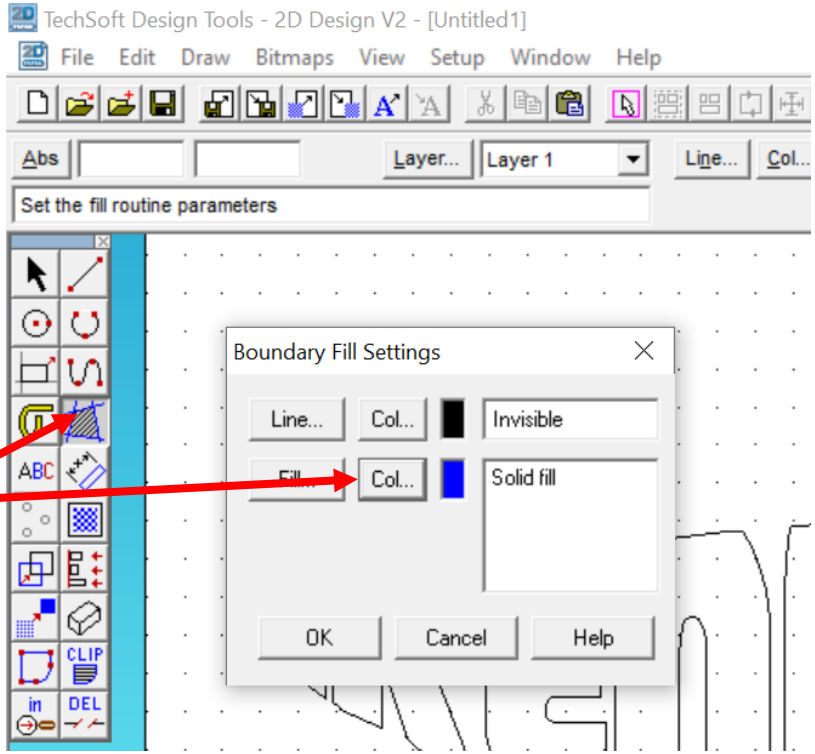




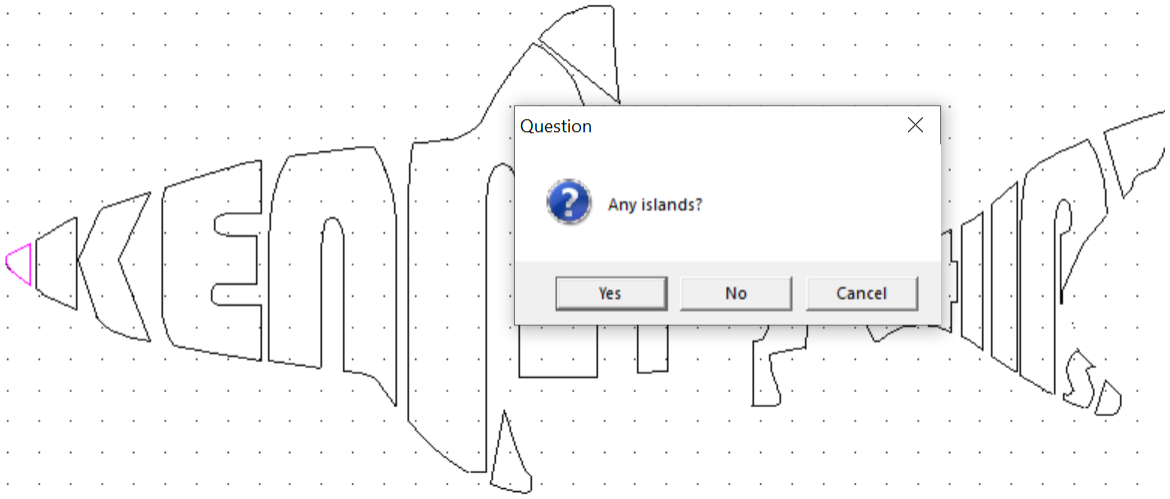


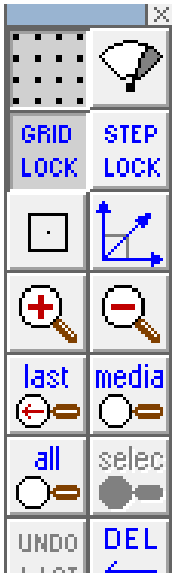


45. For parts you wish to keep draw a line down and delete the lines in between as shown



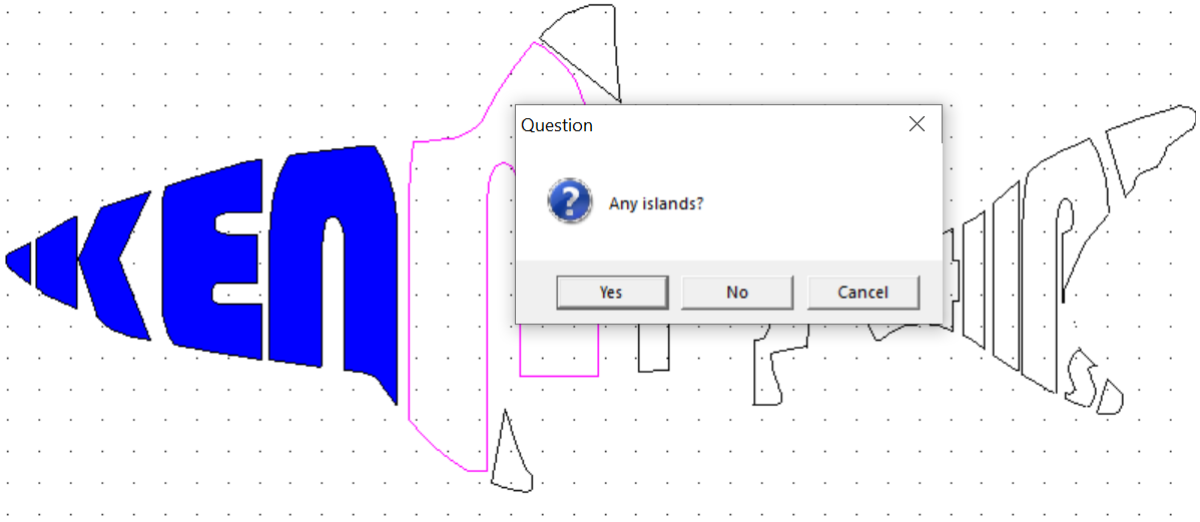
46. Select the bound fill tool bar. Choose a colour using the Fill Col button



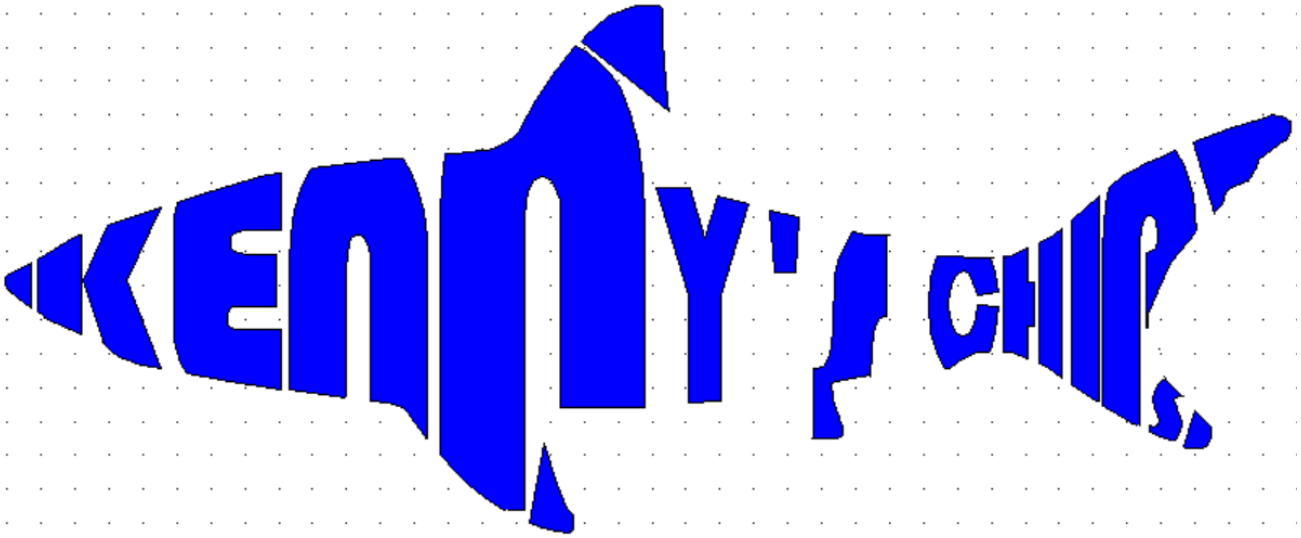


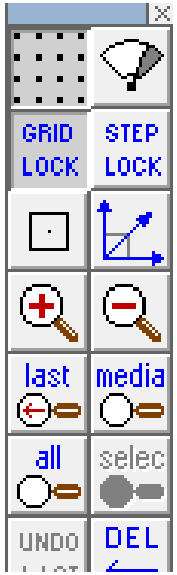
47. Select the nose. It will ask if there are any islands? In this case it's a no. the island is a part in the middle you would not wish coloured in?

48. Repeat for all letters



ABC
CLIP
in
DEL
ANY


KENNY'S CHIPS


GRID
LOCK
STEP
LOCK
last
media
all
selec
UNDO
DEL