

WORKSHEET 4

ADVANCED DRAWING - learning new tools by drawing a hot air balloon

Now that you're learned how to use basic shape tools you can begin drawing more complex custom shapes. To do this it is important to understand how shapes are made in illustrator.



ANCHORS - are the points that define a shape, they are often corners



PATHS - are the lines that join anchors to create the shape



HANDLES - are points on anchors that allow you to define its properties

1. Select the Curvature Tool
2. Clicking on the page will create anchors, as you create more anchors the line will start to curve naturally between them.
3. Use this tool to create half of a hot air balloon shape, press ESC key to finish the line without closing the shape
4. Select the second half and go to Object>Transform>Reflect
5. A pop up box will appear, select Vertical on the axis and click Copy to create
6. Reposition this new half, to create a whole balloon
7. Using the direct selection tool click and drag over the top point of the balloon to select the anchors from both halves

1.



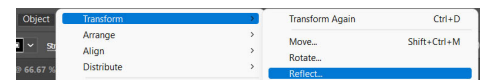
2.



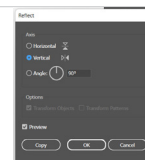
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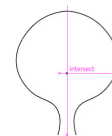
4.



5.



6.



7.



TOOLS



SELECTION TOOL shapes and objects must be selected with the selection tool before adjustments can be made to them



CURVATURE TOOL creates an anchor

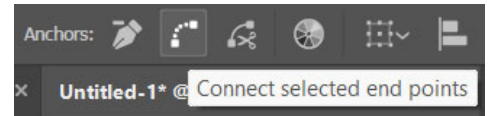
when you click on the page, as you create more the path between them will automatically curve



DIRECT SELECTION TOOL is like the Selection Tool but for anchors, paths and handles. Use the Selection Tool for the overall object and the Direct Selection tool for the components that make up the object

8. In the top tool bar you will now see anchor options, go to Anchors and click Connect Selected End Points. This will join them into a single anchor

8.



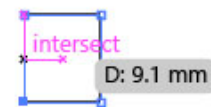
9. Do the same with the bottom anchors of the balloon, because there is space between them this time they will be joined with a path. Your balloon is now a single shape

9.



10. Use the pen tool to draw a square basket beneath your balloon. The pink intersect guidelines can help to show when shapes are aligned

10.



11. Direct Select the bottom two anchors of your basket

11.



12. In The top tool bar find Convert and click Convert Selected Anchor Points to Curves

12.



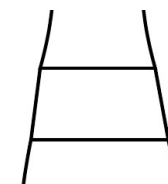
13. Click off the basket and direct select one of the newly curved anchors, you will now see handles extending from the anchor point. You can click and drag the handles to adjust the shape of your curves

13.



14. Use the Line Segment Tool to draw ropes connecting your basket to your balloon. Click and drag from one anchor point to another to join the balloon to the basket

14.



TOOLS AND TIPS



PEN TOOL can be used to create straight lines and shapes with them. When you click the page it creates an anchor and joins these up with a straight line. By clicking on the original anchor point it will join up to create a shape. A small circle will appear next to the pen cursor when it is over the original anchor



LINE SEGMENT TOOL this can be used to draw single paths between two nodes, by clicking and dragging

If you are ever struggling to join things go to menu Edit>Preferences>Selection and Anchor Display... and tick the box next to Snap to Point. The pixel number next to it shows how you will need to be for one point to snap to another

15. If we were to send this to the laser cutter now, the basket and the balloon would be cut out as separate pieces and the ropes would just be lines cut through the remaining wood

16. Direct Select the basket, use the Scissors Tool to cut the top corner anchors at both sides

17. The top line is now a line segment, meaning it can be formatted to engrave, change the stroke to a width **above 0.1mm**

18. Now do the same with the bottom line of the balloon

19. You can now join the ropes, balloon and basket together using the method from steps 7 & 9. Direct selecting the anchors and choosing Connect Selected End Points. You may need to move the line segments out the way so you don't select them too

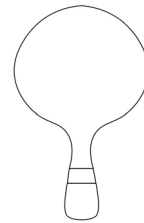
20. Your balloon is now a complete outer. Let's make a cloud to get to grips with editing anchor points

21. Draw a Rounded Rectangle

22. Use the Add Anchor Point tool to add two anchor points to the top of your rectangle

23. Then delete the anchor points on the top curved corners

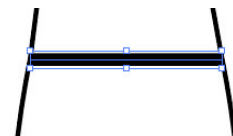
15.



16.



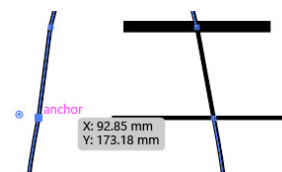
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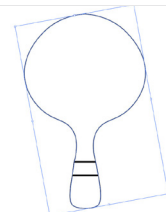
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19.



20.



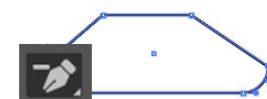
21.



22.



23.



TOOLS



SCISSORS TOOL found under the eraser tool. This can be used to cut anywhere on a path or an anchor



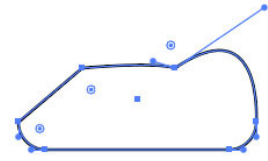
ADD ANCHOR POINT TOOL adds an anchor point to wherever you click on a path



DELETE ANCHOR POINT click on an anchor point to delete it

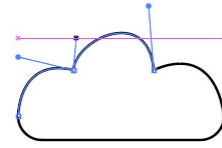
24. Direct select your added anchors and convert them to curves, then while holding option/alt drag one handle to create cloud like curves.

24.



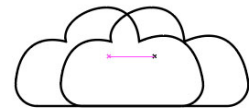
25. Adjust all the handles on your new anchors until you have a nice cloud shape.

25.



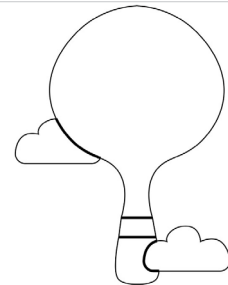
26. An easy way to duplicate objects is to hold option/alt while clicked and dragging the object. This way you can create multiple clouds, you can always edit the anchor handles to give them some variety

26.



27. Position you cloud where you would like, if it overlaps in front of your balloon you will need to cut the path and make sure the overlapping paths are set to engrave as in 16-19

27.



28. Use the pencil tool to draw a freehand shape on your balloon and give it a black fill

28.



29. Now try editing your shape with some of the tools below and that's it! These tools should enable you to create any shape you can imagine

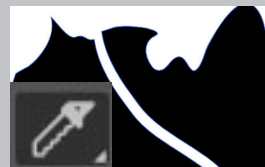
29.



TOOLS



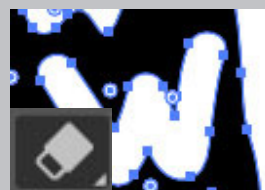
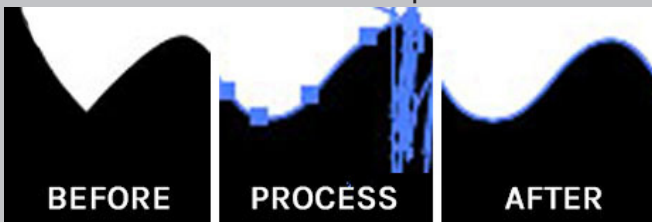
SCISSORS TOOL found under the eraser tool. This can be used to cut anywhere on a path or an anchor



KNIFE TOOL functions like the scissors tool, but instead of cutting paths and anchors can be used to cut sections out of shapes, splitting them into separate objects



SMOOTH TOOL can be used to smooth paths and anchors



ERASER TOOL a freehand erase tool, you can draw across any shape and the anchors and paths will automatically adjust around your erasing. Double click on the eraser tool to change the size of your eraser