

Illustrations: Effective Workflows



The small print

Prerequisites

Time in the workshop is precious – it is an opportunity for you to interact with the workshop leader and other participants through questions and discussions and to share your experiences and concerns. To make the most of this time we sometimes ask you to carry out learning activities ahead of the workshop so that everyone comes into the class with the same basic knowledge. We keep this prior learning to a minimum and often make use of online videos. Online videos provided through LinkedIn Learning can be accessed free of charge by University members anytime, anywhere, through a browser or app.

Your course booking will tell you if any prior learning activity is required. If you don't have an environment where you can do this learning, you can come along to one of our LinkedIn Learning sessions. These are a quiet space where you can work through videos or other workshop resources.

If you arrive for a workshop without having done the prior learning, the workshop leader may suggest that you come back on another session.

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About the workshop designer

Carl Wenczek is a very experienced architectural illustrator and an expert in 3d modelling and 2d imaging. He is a Director of his own small company and over the last 18 years has built long lasting relationships with his clients, creating 100's of illustrations and helping them convey their ideas and designs.

Running parallel to his commercial work, Carl is also a part-time lecturer in multimedia and has been teaching at Oxford University's IT Services for the last 17 years, delivering courses in Photoshop, Illustrator, InDesign, After Effects, Blender, GIMP, Inkscape and digital photography.

Carl also coaches Paddlesport (kayaking, canoeing and stand up paddling) and Indoor Climbing. These sports are often coached in demanding and dynamic environments and require a calm persona!

Revision history

| Version | Date | Author | Comments |
|---------|----------------|--------------|---|
| 1.0 | January 2017 | Carl Wenczek | First version |
| 2.0 | January 2019 | Carl Wenczek | Adapted to workshop format |
| 2.1 | May 2020 | Carl Wenczek | Minor text amendments |
| 3.0 | March 2020 | Carl Wenczek | Amended to include instructions |
| 3.1 | May 2020 | Carl Wenczek | Updated further information |
| 3.2 | May 2021 | Carl Wenczek | One task removal and one change of task |
| 3.3 | September 2022 | Carl Wenczek | Text changes to clarify the instructions for Illustrator and Inkscape |

About this workshop

Does your research paper or departmental web site need eye-catching illustrations?
Do you have data that needs to be clearly presented?

What you will learn

In this course we will use *Adobe Illustrator* or *Inkscape*, to create vector-based “infographics”. Vector-based graphics can be scaled without losing quality making them ideal for printed documents.

What you need to know

You do not need any prior knowledge of *Adobe Illustrator* or *Inkscape*.

This workshop will cover:

- Application settings
- Using Layers
- Creating shapes and lines
- Creating Groups
- Tracing artwork and photographs
- Boolean operations
- Introduction to Text
- Output for print and screen

If you need to review these activities, LinkedIn Learning is a great place to get guidance. There is an activity with relevant videos in the IT Learning Portfolio: visit skills.it.ox.ac.uk/it-learning-portfolio and search for “Illustrator”, “Inkscape” or “Illustrations activity”.

The resources you need

Sample documents that you can use to experiment with will be made available, but you may like to bring along your own.

The resources for most workshops, including any pre-course activity, are in the IT Learning Portfolio: visit skills.it.ox.ac.uk/it-learning-portfolio and search for “Illustrator”, “Inkscape” or “Illustrations”.

Unless you have been told otherwise, in classroom workshops there will be a computer available for you to use with Adobe Illustrator or Inkscape installed.

You can use your own computer with your preferred app installed if you want to – just bear in mind that I am not an expert in every app (although I am sure that between us we will be able to sort out most problems!)

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Introduction - Why Use Illustrator or Inkscape?

“Illustrator is used by artists and graphic designers who create logos, icons, charts, infographics, posters, ads, books, magazines, and brochures. Even comic book illustrators use it. It’s the industry-standard software application for anyone, anywhere, who wants to work with vector graphics. If you look at the Adobe logo, for instance, it needs to look as nice and sharp on a business card as it does on a three-story billboard. To create graphics that can scale in size and still look sharp, without any pixilation, you need to use vector graphics, which use mathematical equations to preserve the shapes of images at any size or scale. Unless you use vector graphics, images are not going to scale well or the files are going to be too big in size.”

By Adobe Corporate Communications POSTED ON 03-23-2015

There are different applications that you can use to (e.g. Adobe Illustrator or Inkscape) and many other supporting tools that you and collaborators might use (e.g. Photoshop, GIMP, InDesign or Scribus). Which you choose comes down to how fit for purpose it is, how convenient it is, and the cost.



Learning Objective 01 - Create a new document and set up software

Set up a new document thinking about document size and orientation, units, bleed and colour mode (CMYK or RGB).

- **Bleed:** a bleed is a guide that sits off the page, against which you align an image that needs to go to the page edge. When the page is trimmed to the correct size, the image bleed gives a safety margin.
- **Colour mode:** if the end destination of your design project is a digital screen, use the RGB color mode. Use CMYK for any project design that will be physically printed, not viewed on a screen.

For this exercise use A4, Landscape, mm, RGB, 5mm bleed.

Configure software preferences and adjust document set up

For Illustrator use:

- **Edit/Illustrator>Preferences**
- A useful Preference setting is **General>Scale Strokes & Effects**
- You can change the document set up later using **File>Document Setup...** and **File>Document Colour Mode**.

For Inkscape use:

- **Edit>Preferences**
- A useful Preference setting is **Behaviour>Transforms>Scale stroke width**
- You can change the document set up later using **File>Document Properties**
- To create a bleed choose **Extensions>Render>Layout>Printing Marks...**



Learning Objective 02 - Create Layers

The Layers panel is one of the most important components of Illustrator or Inkscape. It enables you to edit and organise your artwork and to locate and select items in your document.

You can think of a layer as a folder into which you put your content (text and objects). When you create a new document you automatically have one layer. You can new layers.

Layers allow you to separate your content either for:

- Aesthetic effects: overlapping objects or text
- Management of your content: a layer with comments or tasks to be done, or duplicate text layers, each in a different language
- Helping with the design activity: a layer for your layout guides, or locking or hiding layers when you want to focus on another layer

You can create and delete layers, rename them, turn them on and off, lock and unlock them, change their stacking order, move artwork between them and adjust their opacity.

For this exercise create 8 layers and name them Background, Stars, Sun, Moon, Earth, Graphic, Comet and Rocket.

For Illustrator use:

- **Window>Layers**

For Inkscape use:

- **Layer>Layers and Objects...**



Learning Objective 03 - Shapes, Fill and Stroke

The simplest drawing tools are the basic Shape tools. These include the Rectangle, Ellipse, Polygon and Star tools.

- Shapes can be filled with colour or a gradient (**Fill**)
- Or they can be hollow (have no Fill)
- Shapes can also have an outline, a **Stroke**
- A Stroke can be made thicker or thinner (its **Weight**) and it can also have a solid colour or a gradient
- You can also choose not to apply a stroke.

Once you have created some shapes use the **Selection tool** to reposition and modify the shapes and apply different Fill and Stroke colours and different Stroke thicknesses (**Weight**).

For this exercise we will be creating a rectangle for the black background, circles for the Sun, Earth and graphic and stars for the stars.

For Illustrator:

- Double-click the fill or stroke colour selection box in the Tools panel and use the Stroke panel.

For Inkscape use:

- **Object>Fill and Stroke...**

Remember **you've got to select it to affect it!**



Learning Objective 04 - Create, convert and correct

Use the Create, Convert and Correct card for reference.

For drawing more complex shapes use either the **Pen tool** or the **Pencil tool** (Illustrator) or the **Draw Bezier curves and straight lines tool** and the **Draw freehand lines tool** (Inkscape).

Once you have created your initial paths or shapes you can edit and fine tune their appearance using the **Anchor Point tool** and the **Direct Selection tool** (Illustrator) or the **Edit paths by nodes tool** in conjunction with the **Tool Controls Bar** (Inkscape)

For this exercise we will be using the Line tool and the Pen tool to create the shapes for the rocket, the lines for the graphic and the Pencil tool to create the continents for the Earth.

Remember **less is more!**



Learning Objective 05 - Creating a Group

Illustrator and Inkscape allow you to manage objects by grouping and ungrouping. The Group function is handy when you're creating something from multiple objects, such as a logo. Using the Group function, you can ensure that all objects that make up the logo stay together when you move, rotate, scale, or copy it.

- Use the **Selection tool** to select the objects you wish to group together.
- Use the **Object** menu (**Object>Group** and **Object>Ungroup**).



Learning Objective 06 - Tracing artwork and photographs

Image Trace lets you convert raster images (JPEG, PNG, PSD etc.) to vector artwork. Using this feature, you can easily base a new drawing on an existing piece of artwork by tracing it. For example, you can convert the image of a pencil sketch you've drawn on paper into vector artwork using Image Trace. You can choose from a set of tracing presets to get the desired result quickly.

For Illustrator use:

- **Image Trace** (for this exercise use the 3 colours preset).

For Inkscape use:

- **Path>Trace Bitmap**

This exercise will trace an image of the Moon to create a scaleable vector version.

Remember to click **Expand** (Illustrator) or **Apply** (Inkscape).



Learning Objective 07 - Working with previously created vectors

Creating artwork from scratch in Illustrator or Inkscape can be time consuming. Therefore, working with stock vectors is one of the most effective ways to save time. They can be easy to download and customize. Because Illustrator and Inkscape will import a wide variety of vector file formats including DWG, DXF, EPS, SVG and WMF you have plenty of choice when searching for resources.

For this exercise visit:

<https://www.vecteezy.com/>

or

<https://www.freevector.com/>

Some stock vector graphics may need to be broken down into their constituent parts in order to be able to edit them.

This may mean **Ungrouping** them. Or **Releasing a Compound Path** (Illustrator) or **Path>Break Apart** (Inkscape).

You need to make sure that you have permission to use a vector. Copyright is complicated, so seek advice if you are unsure. Stock vector sites where you pay a fee for use of an image are convenient but can be expensive. Creative commons licenced images are worth considering.



Learning Objective 08 - Boolean operations

Boolean operations can help with merging (adding), subtracting, intersecting and excluding overlapping vectors.

This exercise will utilize the Pathfinder panel to finish the Earth.

For Illustrator use:

- the **Pathfinder** panel

For Inkscape use:

- the **Path** menu for the various boolean operations (Union, Difference, Intersection, Exclusion, Division and Cut Path.)



Learning Objective 09 - Text

Both Illustrator and Inkscape have type or text tools that allow you to create text, fit text into frames and flow text along paths.

For Illustrator:

- Use the **Type tool**. Either click where you want the insertion point (where you want the text to start). Or click-and-drag to create a text frame.
- To flow text onto a path, select the **Type on a Path tool** and click on a path or shape.

For Inkscape:

- Use the **Create and edit text objects tool**.
- To flow text onto a path, select both the text and the path and choose **Text>Put on Path**.

For this exercise we will start with the basic type tools and if we have time we will try to flow the text onto a path.

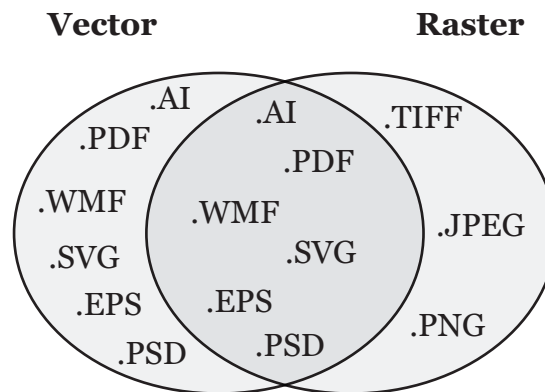


Learning Objective 10 - Output

Illustrator and Inkscape allow you to save your document in many different formats for sharing, printing, screens and archiving.

Various file formats can be accessed using **Save As** or **Export** via the File menu.

If you need to export a small portion of your document use the **Artboard tool** and the **Artboards panel** in Illustrator or the **Export panel** in Inkscape.



Further information

Getting extra help

Course Clinics

The IT Learning Centre offers bookable clinics where you can get pre- or post-course advice. Contact us using courses@it.ox.ac.uk.

Study Videos from LinkedIn Learning

On our website, you will find our collection of self-service courses and resources. This includes providing LinkedIn Learning video-based courses free to all members of the University. Visit skills.it.ox.ac.uk/linkedin-learning and sign in with your Single Sign-On (SSO) credentials.

Some courses recommend pre- and/or post-course activities to support your learning. You can watch the online videos anywhere, anytime, and even download them onto a tablet or smartphone for off line viewing.

About the IT Learning Portfolio online

Many of the resources used in the IT Learning Centre courses and workshops are made available as Open Educational Resources (OER) via our Portfolio website at skills.it.ox.ac.uk/it-learning-portfolio.

Find the pre-course activity for this course in the IT Learning Portfolio: visit skills.it.ox.ac.uk/it-learning-portfolio and search for “Illustrator”, “Inkscape” or “Illustrations activity”.

About the IT Learning Centre

The IT Learning Centre delivers over 100 IT-related teacher-led courses, which are provided in our teaching rooms and online, and we give you access to thousands of on-line self-service courses through LinkedIn Learning.

Our team of teachers have backgrounds in academia, research, business and education and are supported by other experts from around the University and beyond.

Our courses are open to all members of the University at a small charge. Where resources allow, we can deliver private courses to departments and colleges, which can be more cost-effective than signing up individually. We can also customize courses to suit your needs.

Our fully equipped suite of seven teaching and training rooms are usually available for hire for your own events and courses.

For more information, contact us at courses@it.ox.ac.uk.

About IT Customer Services

The IT Learning Centre is part of the Customer Services Group. The group provides the main user support services for the department, assisting all staff and students within the University as well as retired staff and other users of University IT services. It supports all the services offered by IT Services plus general IT support queries from any user, working in collaboration with local IT support units.

The Customer Services Group also offers a data back-up service; an online shop; and a computer maintenance scheme. Customer Services is further responsible for desktop computing services – for staff and in public/shared areas – throughout UAS and the Bodleian Libraries.