

LESSON IDEA

Building blocks of the world

SCIENCE

ART & DESIGN



Learn with
Procreate[®]



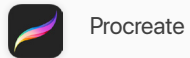
Lesson ideas

Use these Lesson Ideas to spark your imagination for using Procreate in the classroom. Feel free to take them further and make them your own.

Building blocks of the world

Collaborate with classmates to create your own Periodic Table of Elements using illustrated typography.

All you need is an iPad and the following apps:



Educational Value

- ✓ Students recognise the connections between chemical elements and real world compounds.
- ✓ Students use illustrated typography to communicate an idea.
- ✓ Students demonstrate understanding of their chosen element by delivering a presentation to their peers.



In this guide

- 1 Choose an element

- 2 Research your element

- 3 Create your tile

- 6 Bring your letters to life

- 9 Paint

- 10 Take it further

Choose an element

1.

Lucky dip

You might like to cut up a print-out of the periodic table and take turns with your classmates to pick an element out of a hat.

11:07 am Tue 11 Aug
en.m.wikipedia.org

^ Overview

Periodic table

Group	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
	Alkali metals	Alkaline earth metals													Pnictogens	Chalcogens	Halogens	
Period 1	Hydrogen 1 H 1.008																	
2	Lithium 3 Li 6.94	Beryllium 4 Be 9.0122												Boron 5 B 10.81	Carbon 6 C 12.011	Nitrogen 7 N 14.007	Oxygen 8 O 15.999	Fluorine 9 F 18.998
3	Sodium 11 Na 22.990	Magnesium 12 Mg 24.305												Aluminum 13 Al 26.982	Silicon 14 Si 28.085	Phosphorus 15 P 30.974	Sulfur 16 S 32.06	Chlorine 17 Cl 35.45
4	Potassium 19 K 39.098	Calcium 20 Ca 40.078	Scandium 21 Sc 44.956	Titanium 22 Ti 47.867	Vanadium 23 V 50.942	Chromium 24 Cr 51.996	Manganese 25 Mn 54.938	Iron 26 Fe 55.845	Cobalt 27 Co 58.933	Nickel 28 Ni 58.693	Copper 29 Cu 63.546	Zinc 30 Zn 65.38	Gallium 31 Ga 69.723	Germanium 32 Ge 72.630	Arsenic 33 As 74.922	Selenium 34 Se 78.971	Bromine 35 Br 79.904	
5	Rubidium 37 Rb 85.468	Strontium 38 Sr 87.62	Yttrium 39 Y 88.906	Zirconium 40 Zr 91.224	Niobium 41 Nb 92.906	Molybdenum 42 Mo 95.95	Technetium 43 Tc [97]	Ruthenium 44 Ru 101.07	Rhodium 45 Rh 102.91	Palladium 46 Pd 106.42	Silver 47 Ag 107.87	Cadmium 48 Cd 112.41	Indium 49 In 114.82	Tin 50 Sn 118.71	Antimony 51 Sb 121.76	Tellurium 52 Te 127.60	Iodine 53 I 126.90	
6	Cesium 55 Cs 132.91	Barium 56 Ba 137.33	Lanthanum 57 La 138.91	Hafnium 72 Hf 178.49	Tantalum 73 Ta 183.84	Tungsten 74 W 183.84	Rhenium 75 Re 186.21	Osmium 76 Os 190.23	Iridium 77 Ir 192.22	Platinum 78 Pt 195.08	Gold 79 Au 196.97	Mercury 80 Hg 200.59	Thallium 81 Tl 204.38	Lead 82 Pb 207.2	Bismuth 83 Bi 208.98	Polonium 84 Po [209]	Astatine 85 At [210]	
7	Francium 87 Fr [223]	Radium 88 Ra [226]	Actinium 89 Ac [227]	Rutherfordium 104 Rf [261]	Dubnium 105 Db [268]	Seaborgium 106 Sg [269]	Bohrium 107 Bh [270]	Hassium 108 Hs [278]	Mtnerium 109 Mt [281]	Darmstadtium 110 Ds [285]	Roentgenium 111 Rg [288]	Copernicium 112 Cn [285]	Nihonium 113 Nh [286]	Flerovium 114 Fl [289]	Moscovium 115 Mc [290]	Livermorium 116 Lv [293]	Tennessine 117 Ts [294]	
				Cerium 58 Ce 140.12	Praseodymium 59 Pr 140.91	Neodymium 60 Nd 144.24	Promethium 61 Pm [145]	Samarium 62 Sm 150.36	Europium 63 Eu 151.96	Gadolinium 64 Gd 157.25	Terbium 65 Tb 158.93	Dysprosium 66 Dy 162.50	Holmium 67 Ho 164.93	Erbium 68 Er 167.26	Thulium 69 Tm 168.93	Ytterbium 70 Yb 173.05	Lutetium 71 Lu 174.97	
				Thorium 90 Th 232.04	Protactinium 91 Pa 231.04	Uranium 92 U 238.03	Neptunium 93 Np [237]	Plutonium 94 Pu [244]	Americium 95 Am [243]	Curium 96 Cm [247]	Berkelium 97 Bk [247]	Californium 98 Cf [251]	Einsteinium 99 Es [252]	Fermium 100 Fm [257]	Mendelevium 101 Md [258]	Nobelium 102 No [259]	Lawrencium 103 Lr [260]	



Research your element

2.

Think about...

YOUR RESEARCH METHOD

Research in a way that fits how you would like to learn. You might like to use Safari to read about your element, look for images or watch a video.

COMPONENTS

Notice that there are usually three or four pieces of information in each tile of the Periodic Table. What do each of these tell you?

THE REAL WORLD

Most elements on the periodic table occur naturally and can be observed in the world around us. What does your element do? Where might you find it?

The screenshot shows the Wikipedia article for Helium on a tablet. The article title is "Helium" and it includes a disambiguation note: "This article is about the chemical element. For other uses, see Helium (disambiguation)." The main text describes Helium as a colorless, odorless, tasteless, non-toxic, inert, monatomic gas, the first in the noble gas group in the periodic table. It is the second lightest and second most abundant element in the observable universe. The article also mentions its discovery by Georges Rayet, Jules Janssen, and Norman Lockyer, and its use in various applications like MRI scanners and balloons. On the right side, there is a section titled "Helium, He" with a small image of a glowing tube. Below this, there are several data boxes: "Pronunciation" (/ˈhɛliəm/), "Appearance" (colorless gas), "Standard atomic weight" (4.002 602(2)), "Helium in the periodic table" (a small periodic table highlighting Helium), "Atomic number" (2), "Group" (group 18), "Period" (period 1), "Block" (s-block), "Element category" (Noble gas), "Electron configuration" (1s²), "Electrons per shell" (2), and "Physical properties" (Phase at STP: gas).

Safari

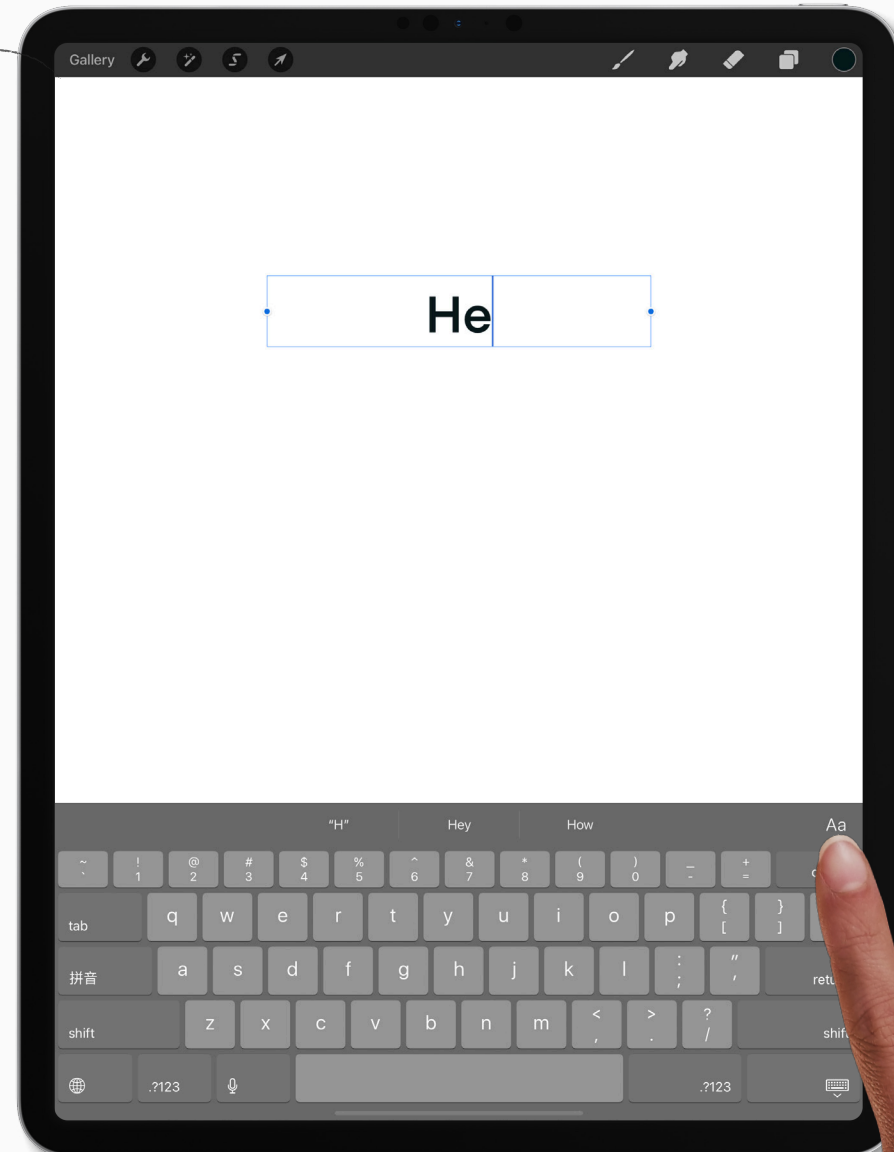
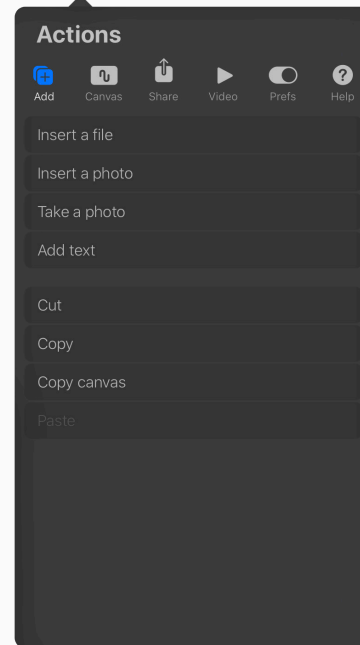


Create your tile

3.

Insert your information

- 1 Open Procreate and tap the + in the top right to create a new A4 canvas.
- 2 Tap the wrench icon in the top left to open the *Actions menu*, tap *Add* and then *Add text*. You can use these textboxes to add the four components of your tile. This will include the:
 - Atomic number
 - Symbol
 - Element name
 - Atomic Mass
- 3 Tap the *Aa* button on the keyboard to edit the text.



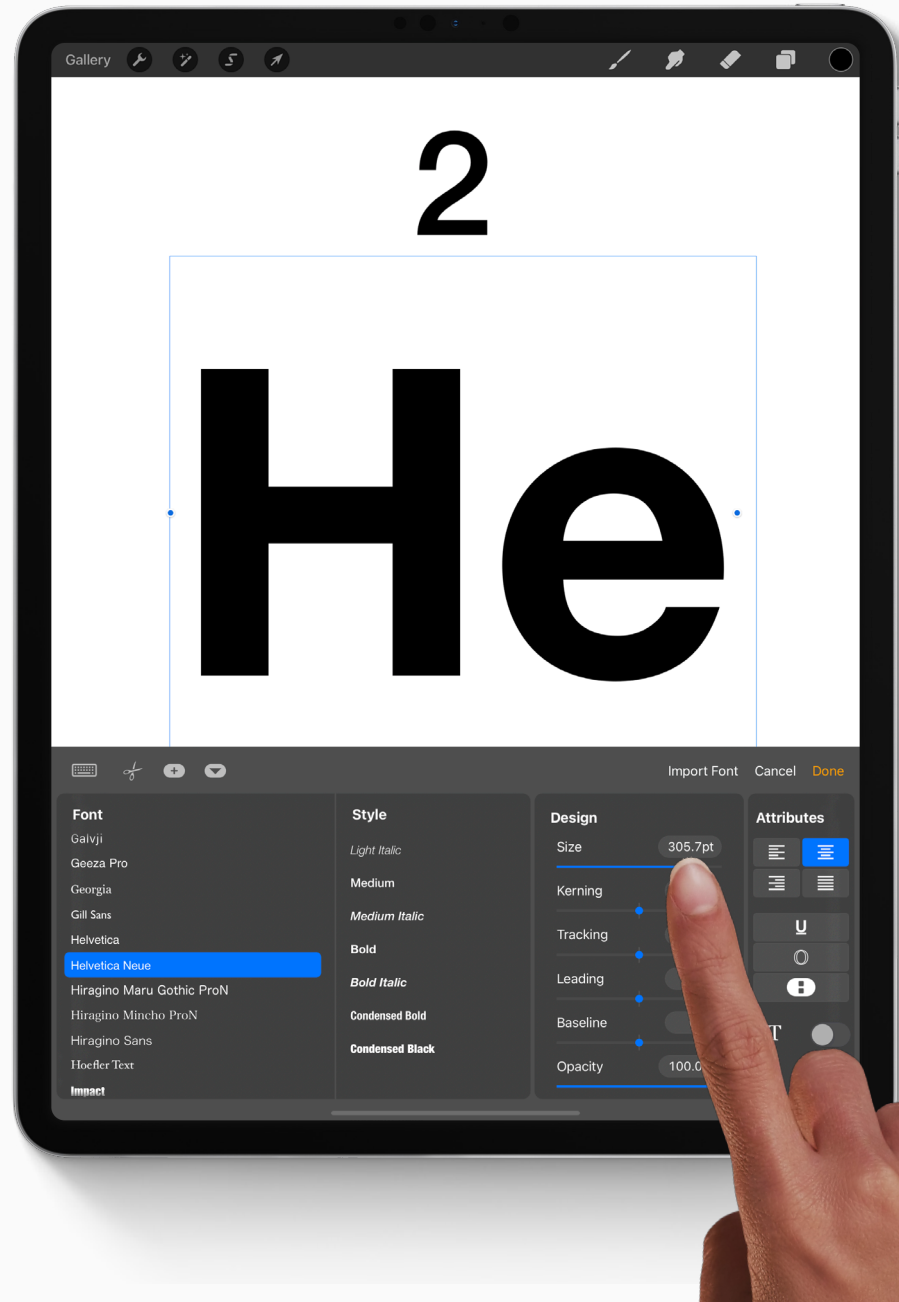
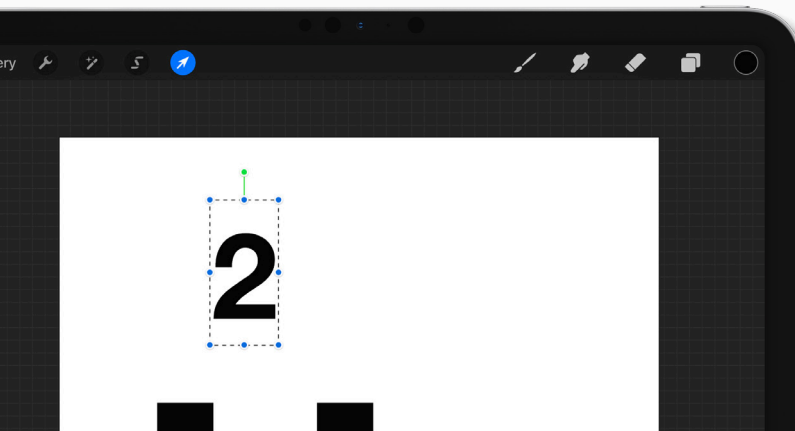
Edit text

Experiment with the different fonts on your iPad. Change the size of the text so that the Symbol for your element is the focal point.

Transform text

Once you're happy with your style, use the arrow icon to move your parts around. You can also change the size of your text here.

TRANSFORM



Preparing for illustration

Decrease the *Opacity* of the symbol text using the slider. This will act as a guide as you create an illustration over the top on a new layer.

Organize your layers

You can group your text layers to make the next stage easier. To select multiple layers at once, swipe each layer to the right. Then tap *Group*.



Bring your letters to life

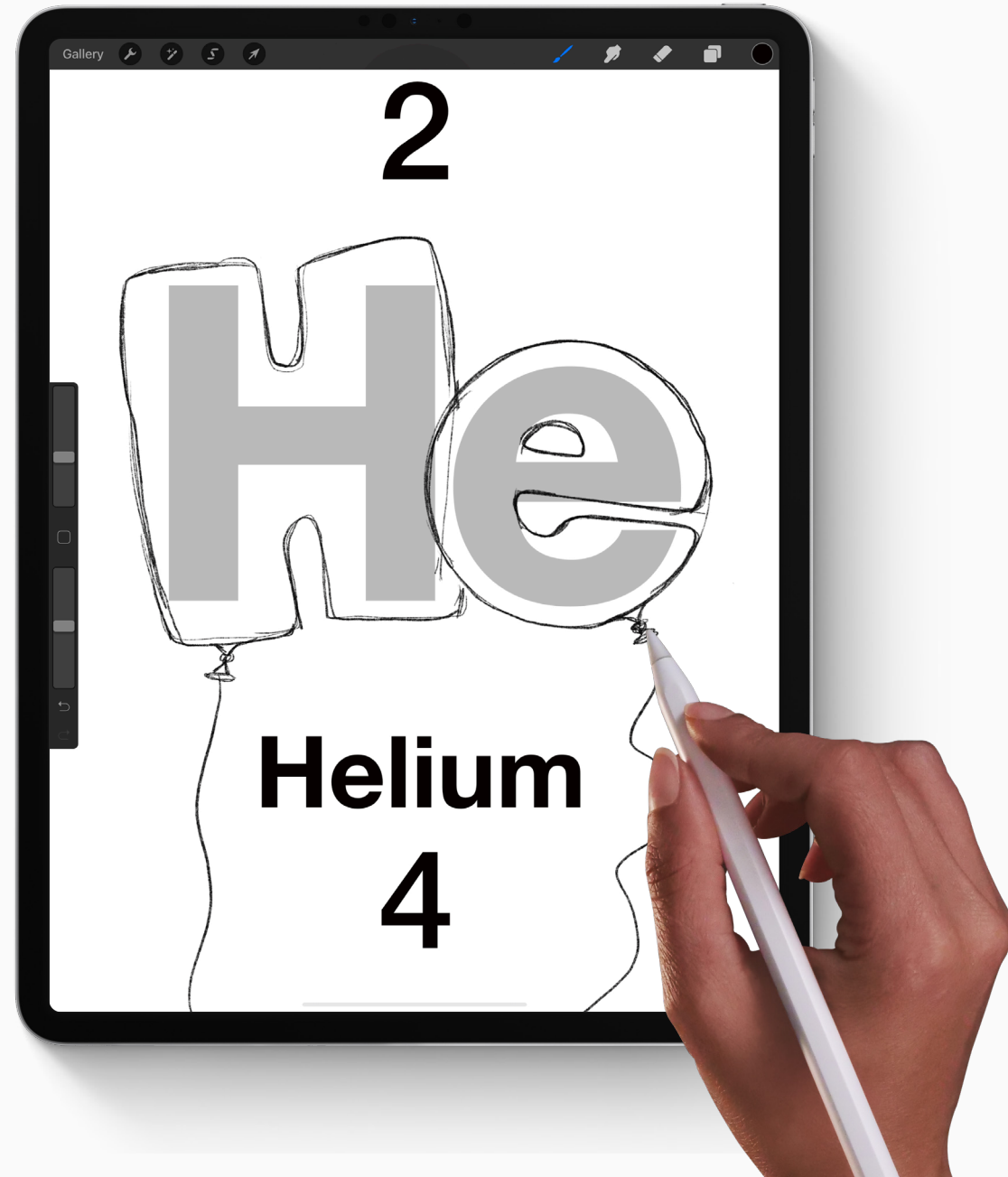
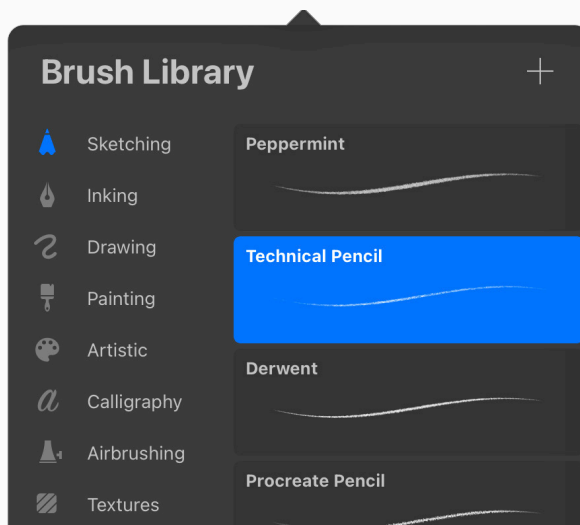
Sketch

Now that all the parts of your tile are in place, think back to your research and find a way to visually represent your element through illustration.

Using the faded letters as your guide, select a brush and start sketching your design.

BRUSH

Use the *Technical Pencil* under *Sketching* for your initial design.



Color

Experiment with other brushes to color your typography.

Think about how the symbol interacts with the other parts of your tile and how to use color to bring excitement to your illustration.

When you're finished, hide the sketch and template layers you were using as a guide to help you paint your symbol.



Painting tips

QUICKSHAPE

Draw perfectly smooth, straight and curved shapes and lines easily by holding your finger at the end of each line.

COLORDROP

Drag your selected color from the top right to fill any area in your artwork.

PALETTES

You can save colors you'd like to use in a palette so that you can easily access them.

You will find palettes in your *Color Panel*. Simply tap an empty space in your palette to add a color.

MASKS

You can use a *Clipping Mask*, *Layer Mask*, or *Alpha Lock* to help create your artwork. To learn how to use Masks have a look at our Intermediate 'How to' Series.



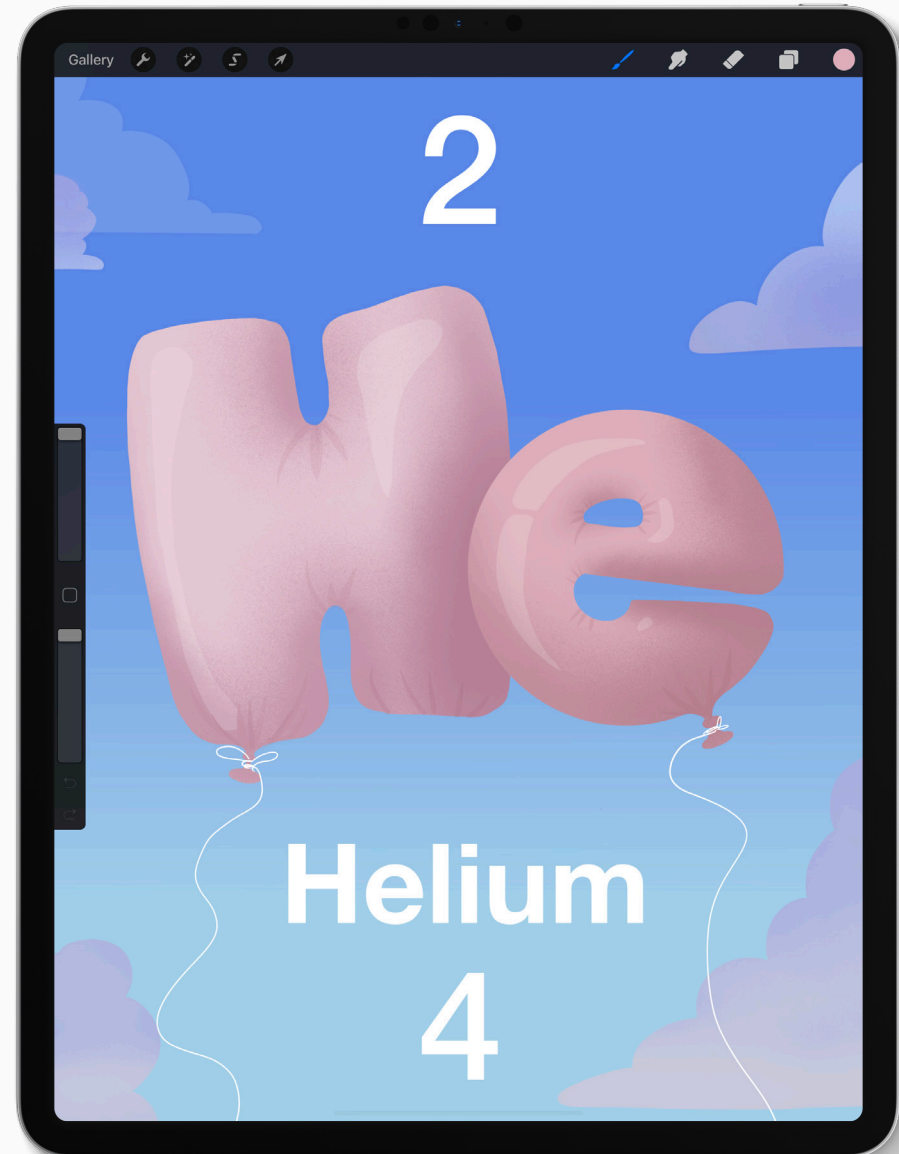
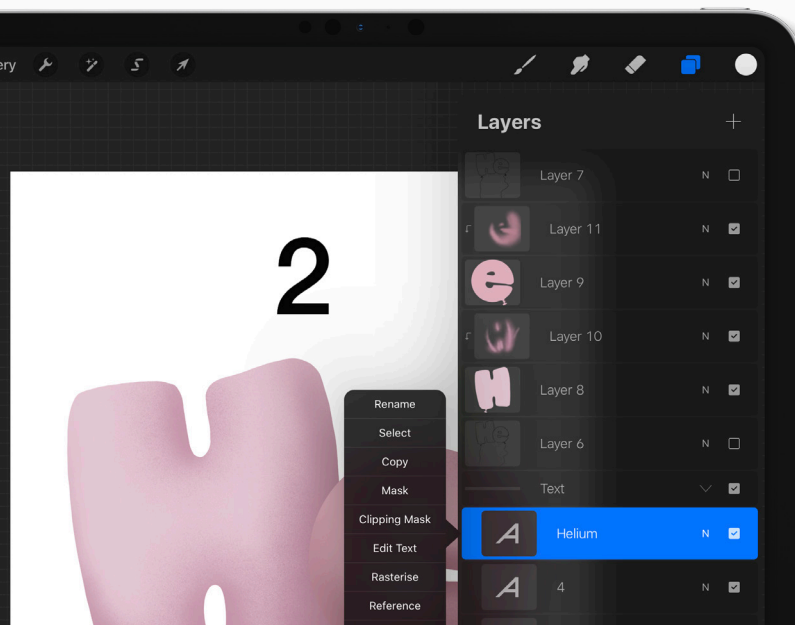
Set the scene

Add a background

Once you're happy with your typography, paint the rest of your tile to bring the image to life.

TYPOGRAPHY TIP

To be able to *Warp*, use *Color Drop*, and draw onto your letters, you will need to *Rasterise* them. This turns the live type into pixels that you can draw on and edit like any other shape. Once you do this you can't go back, so don't forget to check your spelling.



Take it further

10.

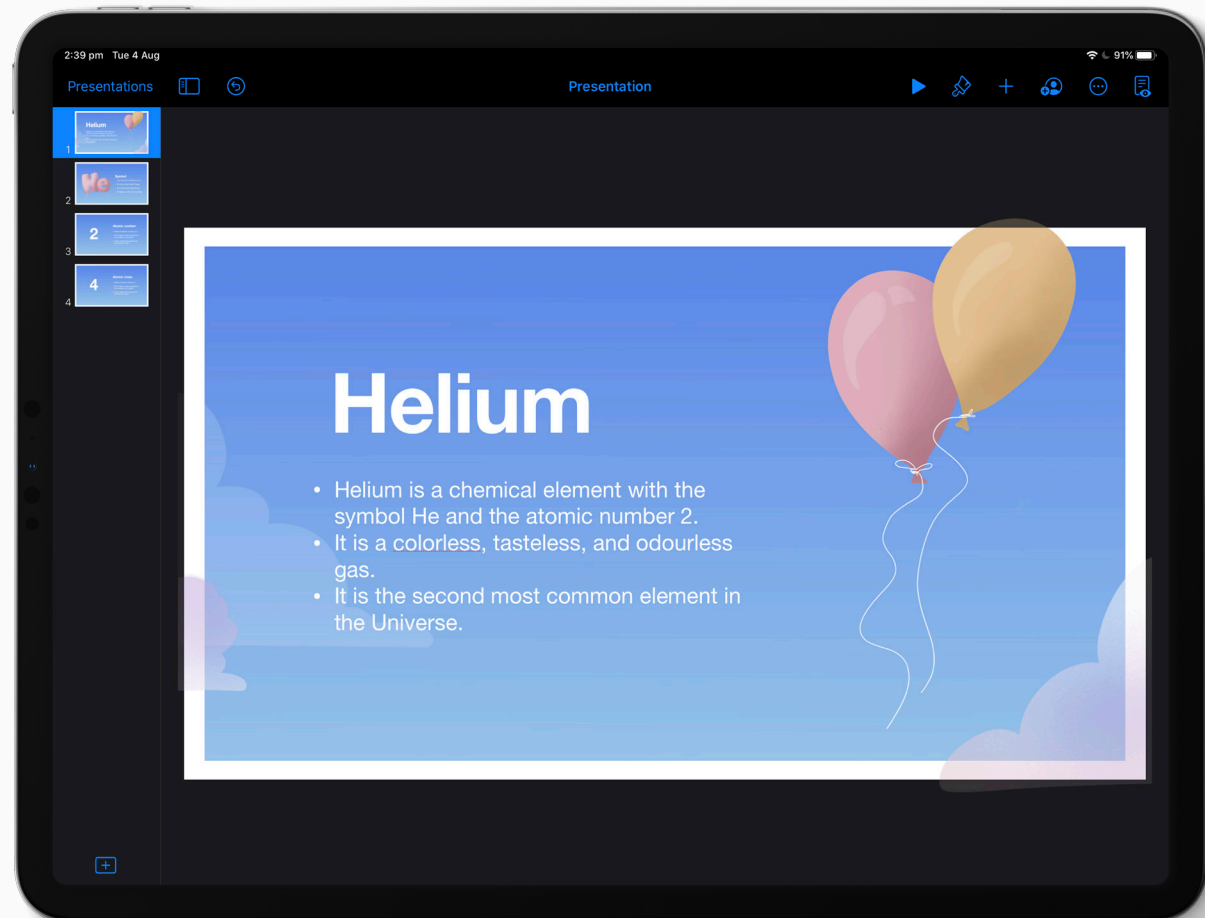
Bringing it together

Print out your tile design on an A4 piece of paper and work with your classmates to make a display by ordering your elements as they appear on the Periodic Table.

How many elements are you missing?
You might like to fill in the gaps!

Share what you know

Using Keynote, make a presentation to share what you've learnt about your element. You can copy and paste the layers from Procreate straight into your presentation.



Create

Artistic expression helps make education meaningful, memorable and fun. Find more creative lesson ideas at education.procreate.art

To dive deeper into the full creative potential of Procreate, see our Handbook at procreate.art/handbook



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