Mario Petrucci

Royal Literary Fund Fellow

"A stimulating, versatile and highly practical pack of exercises, using the most elementary scientific techniques to generate fresh ways of seeing and knowing."

"The science is clear and by no means daunting; the step-by-step creative writing exercises are easy to follow. Trustworthy as a Delia Smith recipe."

"Very practical and extremely productive."

This creative writing pack deploys science as a spur for new work, in prose or poetry. Target users include:

* Creative writing students and tutors   * Adult writers
* Anyone working with Science and Poetry   * English teachers in schools.

Varied and accessible, these activities will be of value not only to students studying, or interested in, creative writing generally, but also to adult writers across the board. They are excellent for the classroom, enabling secondary school teachers to meet a variety of English National Curriculum targets, including:

'Reading for information'
'Reading increasingly demanding texts, using a repertoire of reading strategies'
'Responding to texts, including analysing and evaluating'
'Developing skills in writing'
'Increasing control of different forms of written texts'
'Listening with understanding'
'Participation in discussions'
and   'Ability to adapt writing for meaning and effect'.

It should be relatively easy for teachers to determine which of these (or other/ future) curriculum targets are best met by any given activity, adjusting the approach taken and the emphasis given to different parts of the exercise. It is also straightforward for teachers and tutors to tailor the activities to suit particular aims, the available time slot, or the ability and interests of the group.

Finally, this pack is ideal for anyone (including science teachers and their students) wishing to use what they know of science – however rudimentary, or advanced, their grasp may be – as a launch pad for creative writing.

CONTENTS

ENDORSEMENTS

*As a resource for **Adult Writers/ Creative Writing Tutors**…*

"Random numbers, microscopes and telescopes, filtering and evolution – Petrucci has formulated some fascinating mechanisms to help writers of all levels to extend the boundaries of their usual practice."

*As a resource for **Teachers**…*

"Here are novel ways of getting your students writing and editing exciting material which will improve both their literary skills and self-confidence… these are inventive off-the-peg worksheets that draw together aspects of literacy and science in both group and individual work. I recommend them."

Martyn Crucefix
Award-winning poet / Head of English
Brampton College, London

Adult Writers / Creative Writing Tutors…

"These science-based exercises are not merely innovative, but unique. Unintimidating and entirely transparent, they will encourage students to explore strange and vibrant imaginative dimensions. The ideal way to refresh both your course and your clients."

Teachers…

"These exercises are exciting! Their innovative use of scientific techniques would light up any English classroom, and energise the most jaded student, regardless of age or ability."
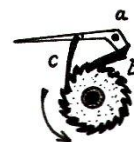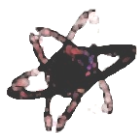
Peter Brennan
Publisher / Former Head of English
The Latymer School, Edmonton

General …

"The scientific aspect gives depth and rigour, engaging one part of the brain so that the other flies free...
I thought there would be a lot of science to get wrong, but that's not how it's turned out at all."

Jacqui Rowe
Creative Writing Tutor
(Schools/ adults)

CREATIVE WRITING THROUGH SCIENTIFIC IDEAS:
an accessible activity pack for schools, universities, writers.

AIMS

To provide a versatile, innovative pack of creative writing exercises using authentic science. To use these to guide, or at least initiate, writing at virtually any level, encouraging participants to experiment with language and surprise themselves with fresh and arresting connections developed within a scientific frame.

APPARATUS

Mostly, all you'll need is pen and paper. The exercises fit on single- or double-sided A4 sheets and (apart from Activity 4) serve as handouts for tutor-led student work. Of course, any adult writer can use them too.

Activity 1 **Watch that Title!** *Transform science objects into new writing. Quick, remarkable results.*

Activity 2 **Microscopes and Telescopes.** *Zoom in, zoom out: the writing benefits of precise observation.*

Activity 3 **Filters.** *With the aid of a scientific 'filter', put a fresh imaginative slant on everyday objects.*

Activity 4 **Five Questions.** *Interview an irresistible chunk of science, then let the element of chance make sparks fly.*

Activity 5 **Making the most of Randomness.** *Grow weird or wonderful 'cut-ups' using random numbers.*

Activity 6 **Iteration and Evolution.** *Watch a text evolve before your eyes… use this to learn about editing.*

METHOD

(1) Even simple procedures can get wordy, especially when avoiding ambiguity and providing user-friendly examples. So, some sheets may seem a little full. Do familiarise yourself with the detail before starting.

(2) These activities target a range of users, from children to mature writers, so are couched in fairly broad terms. Adults can probably access the sheets as they are; but schoolteachers and tutors will need to ensure that the content suits the age-group, group ability and specific teaching purpose at hand. Step-by-step guidance may be required at points of possible confusion or when progressing key outcomes.

(3) Tutors/ teachers can use these sheets as prompts (instead of handouts) for a 'talk-them-through' delivery.

(4) Some familiarity with basic scientific ideas (such as evolution) has been assumed, so you might want to begin by establishing what relevant scientific knowledge your group has. Discuss, for instance, what science is, how it relates to their lives, or what aspects of science excite, fascinate or mystify them. In a schools context, it might be fruitful to consult in advance, or even involve, the Science Department.

(5) The ballpark timings at the head of each activity reflect the elasticity of approach: sheets can be adapted as quick warm-ups *or* more extended workshops. Decide for yourself how much to do, and to what depth. In terms of follow-up: this pack opens the dialogue between science and creative writing, but how the conversation develops subsequent to each exercise is left to you. Canvass participants for ideas.

OBSERVATIONS

I've used these activities in schools, sixth-form colleges, universities, adult workshops. I don't say exercises substitute for the spontaneous, self-guided writing act. Strong work does arise from them, but they're more about opening up *some* of the awareness literature needs – not quite the journey, but a gaining of certain provisions and bearings. That said, science or maths can kick-start writing as much as anything else does. Ideas excite ideas, metaphors spur metaphor. Science lacks neither, and carries a whiff of mystery too.

CONCLUSIONS

I once mentioned the Butterfly Effect at a reading. A woman stormed up. "If those wings cause a tornado in Florida, so what? We've a right to our butterflies and the Yanks will just have to lump it!" Harping on about that butterfly, when a trillion other inputs are as relevant, is bad science *and* bad metaphor. The black holes and time warps invading our screens are fun but likewise steeped in whimsy and misfired science. As a teacher exploring creative writing through *real* science, you'll have to contend with such misconceptions. You may also harbour concerns about how, and at what level, the science can be pitched, particularly if you feel insecure in the subject, or maths is involved. Certainly, straining to plug science into the humanities in a vague or arbitrary way is no better than promoting the stereotype of a lab-coated boffin blowing himself up.

Of course, in creative scenarios, science needn't be deployed rigorously or robotically; but if the connection lacks substance its heat will be short-lived. So, even where this pack uses a simple random process, it's still *genuine* science. Gentle and unintimidating, it keeps the creative outcomes as open as possible, helping all writers (including scientists) to exercise their imaginative, cross-disciplinary muscles. Whether you're a writer-teacher, writer-writer, scientist-writer, or some self-made hybrid like me, I hope you'll rediscover how we're all rooted in one language: the plural, connecting, co-extensive language of consciousness.
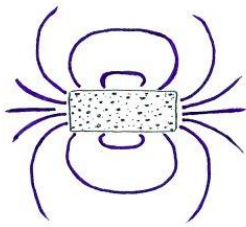
WATCH THAT TITLE !

AIMS.   To transform scientific items into creative writing. To gain a strong idea/ poem quickly.

Suitable for: Year 9 + ; creative writing courses & MAs; adult writers. Youngest users may need guidance.

1. Think of an **object** or **substance** from *any* branch of science or technology. You can use physics or chemistry, astronomy, biology or medicine, geology, ecology, computing, engineering… Try to choose something most of us have heard of. If you get stuck, grab one of these:

Magnet	**Jupiter**	**Blood**	**Amoeba**	**Laser beam**
Chunk of coral	**Black hole**	**Silicon chip**	**DNA**	**Haley's comet**
Enzymes	**Time machine**	**The sun**	**Virus**	**Flying saucer**
Rare orchid	**Fossil** *(of what?)*	**Molecule**	**A DVD**	**Granulated zinc …**

2. When you've picked something, write it down at the top of a sheet of paper – as a **title**.

3. Underneath that title, **describe** your item *plainly*. Focus on its most simple physical features. Use every sense you can. Make short, punchy sentences. Don't edit yet! Some examples…

THE SUN	BLOOD	GRANULATED ZINC	DNA
It is yellow.	It's red and thick.	It is shiny.	It is invisible to the naked eye.
It has spots.	Spilt, it's horrible –	It is hard, with sharp edges.	Without it, we couldn't exist.
Eventually, it sets.	but worse if it's yours.	In acid, it gives a dangerous gas.	We try to unravel its secrets.
It can blind you …	It's best kept inside …	It is kept out of reach in a jar …	It is two snakes embracing …
… etc.	*… etc.*	*… etc.*	*… etc.*

If what you chose is really a total mystery to you, ask for help, improvise, or try another object.

[GROUP WORK]   Read out some of the results. Get a sense of what other people have done.

4. Now for a change of tack. On a sheet of paper, make a list of **emotions** and **abstract nouns,** both positive and negative. Get at least 20 of these. (If working in a group, brainstorm on a flipchart or whiteboard.) If you run dry, feel free to select from the examples below (or their opposites):

Anger	**Jealousy**	**Happiness**	**Regret**	**Hope**	**Old age**
War	**Falling in love**	**History**	**Pride**	**Fear**	**Self-belief**
Respect	**Advice**	**Duty**	**Loneliness**	**Fate**	**Decay**
Curiosity	**Luck**	**Energy**	**Revenge**	**Hunger**	**Friendship**
Memory	**Justice**	**Sleep**	**Death**	**Time**	**Surprise …**

5. This is a key moment. **Cross out your title**. Yes, cross it out! Next, **replace it** with any abstract/ emotion from your list in '**4**'. Choose whatever gives an interesting effect. For instance:

~~THE SUN~~ **PRIDE**	~~BLOOD~~ **ADVICE**	~~GRANULATED ZINC~~ **LUCK**	~~DNA~~ **SLEEP**
It is yellow.	It's red and thick.	It is shiny.	It is invisible to the naked eye.
It has spots.	Spilt, it's horrible –	It is hard, with sharp edges.	Without it, we couldn't exist.
Eventually, it sets.	but worse if it's yours.	In acid, it gives a dangerous gas.	We try to unravel its secrets.
It can blind you …	It's best kept inside …	It is kept out of reach in a jar …	It is two snakes embracing …

6. You can leave the new piece exactly as it is, or try to improve it. Maybe it's stronger with something added or cut out? Perhaps it builds more convincingly if you change the order of the lines? You might feel some lines don't *really* work under the new title (how can advice be "red and thick"?). Or do you think some of these 'wrong' bits are the best of all? If so, why?

7. **[GROUP WORK]** Read the re-titled pieces out. Discuss results, and any thoughts from '**6**'. How is it that changing *one* word (in this case, the scientific title) can transform your piece of writing?

8. For a variation on the theme, replace the title with a memorable event in a person's life, e.g.:
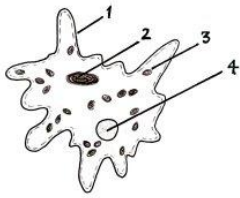
|				
First day at school	**Breaking a bone**	**First kiss**	**A first job**	**Giving birth …**

MICROSCOPES and TELESCOPES

Activity 2
20 – 90 minutes
STUDENT HANDOUT

**AIMS.** To use the senses to zoom in and zoom out on a scene.
For writers to explore the imaginative potential of precisely-framed observation.

Suitable for: Year 8 + ; creative writing courses & MAs; adult writers. Youngest users may need guidance.

Tear a small hole (1 or 2 cm wide) in an A4 sheet of paper, to make a 'frame' (use your fingers: no need to be exact). You can now use this simple piece of technology as a kind of microscope or telescope…
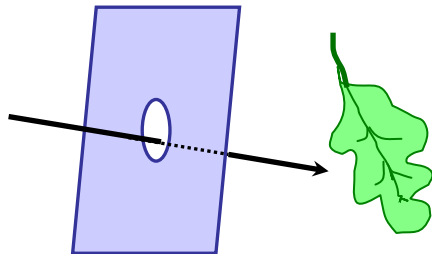
'Microscope'… ZOOM IN
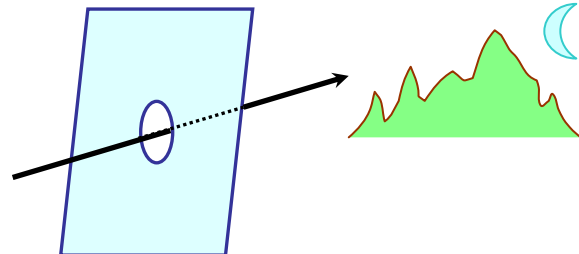
[1] Press the frame, gently, *against* any surface. Something 'ordinary' will do: bricks, grass, a mat, teaspoon or volunteer's elbow…

[2] Look into your 'microscope'. Focus on the qualities of the tiny area exposed.

[3] Detect temperature, texture, smell. Note the smallest details, things you never noticed before. If appropriate, imagine how it tastes.

[4] Now compose a short piece of writing based on your close observations. For example, if you're familiar with haiku why not compose an 'ultra-close-up haiku'?

'Telescope'… ZOOM OUT

[1] Using your 'telescope', frame a small part of the view: a doorway at the end of a long corridor, a section of horizon, a chimney, a distant block of flats, a car windscreen at the end of the road, etc.

Note: You may need the hole to be further from your eye than with the microscope. Adjust the distance to suit you.

[2] Watch and listen for any shifts or changes in your observed sector – however slight or obvious they might be, make a note of them. Ignore nothing!

[3] Focus your mind on the scene like an astronomer. Be patient. Note all thoughts and feelings that arise. Describe any subtle quality of the view that emerges.

Things to talk about… How does the microscope/ telescope influence the way you write about things? Do you sense the world differently using the frame? Does it encourage certain kinds of alertness?

Further work. Repeat the activity *without* the frame, trying to focus your senses as if it were still there.

For older/ adult GROUPS   DISCUSSION …

(a) When writing, what is the value of building up a scene 'scientifically' – that is, attending to observed and actual detail, cataloguing relevant characteristics carefully, in a systematic and revealing way?

(b) Do you think the artist's and the scientist's eye are, in some ways, similar? Is the 'scientific approach' given in this exercise necessarily the best (or only) way to generate a crisp picture or vivid atmosphere?

(c) What do you think it means to 'frame' a subject? Does this activity suggest new ways to write about things?

(d) Have you noticed how, the moment you present someone with a hole in a piece of paper, they almost always have to look through it? Do you think a good piece of writing should be a bit like that? If so, how?

FURTHER ACTIVITY …

Think of a memorable incident or situation – a striking memory, or a historical event you know about. Focus on **one** aspect of it. Now write **three** accounts of that same event, using the following 'frames':

1. First, describe it from a far-off perspective [where everything is 'IT', i.e. detached and distant];
2. Now describe the same situation again, but from 'middle distance' [things are closer now, so use a 'YOU' voice];
3. Finally, produce a third version of what happened, *close up* [use all the senses and a personal, intimate 'I' voice].

Share your results with a reading partner, or the group. How do the three views differ in style and impact?
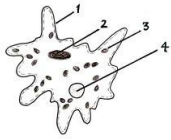
Activity 2: **MICROSCOPES and TELESCOPES**…   **STUDENT/ TUTOR SUPPORT**

Some examples of writers' responses…
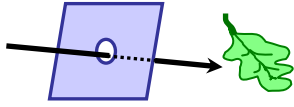
'Microscope'… ZOOM IN

(a) Close-set lines – raised to fingertips and curved: like blank, melting music awaiting my notes… *(grain pattern of desk-top)*

(b) **Example of an 'ultra-close-up haiku'** …

An ear-ring of water, trying to –
oops, cling to the upside
of a blade of grass.
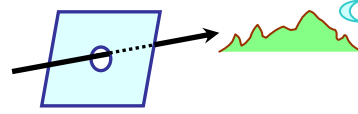
'Telescope'… ZOOM OUT

(a) Black gate. Five bars of iron. Maybe. Swish of crow across it. Arm tired – tired as a gate. Can't keep still. Any move I make, that speck on the glass moves opposite way. Gate blurs…

(b) Pylon playing out wire. Eyes making each thin wire double. Itself and its ghost. A six to a twelve-stringed silence. Flaccid. Swaying as though a breeze had plucked it in slow motion…

'FURTHER ACTIVITY' : useful examples *(older/ adult groups)*

For those who are stuck, here are some incidents/ situations other writers have come up with…

Personal memories:

Falling off a bike	Moving house	Wonky holiday tent	Forgetting my lines
Where *is* my passport…?	Interview from hell	My last exam	First injection
Meeting my first friend	The jelly accident	Ballet lessons	Dad's heart attack

Public / historical subjects:

First human on moon	Building Stonehenge	Socrates' last drink	One of Houdini's escapes
Ski slopes: global change	The last Tyrannosaur	Great Fire of London	Stephenson's *Rocket*
Boarding the Titanic	The Battle of Britain	Slave badges	The grassy knoll (J.F.K.)

Here are some examples of the kinds of approach one might adopt for each of the three (**IT/ YOU/ I**) voices…

(a) IT: Checking Stonehenge on a map. **YOU**: Approaching the stone circle. **I**: An ancient stonemason works/speaks.

(b) IT: Sold house, at a distance. **YOU**: Room without furniture/ carpet. **I**: In your hand, an item left behind.

(c) IT: Skier glimpses Alps from a plane. **YOU**: Skier sees how thin the snow is. **I**: The warming snow speaks for itself.

## Notes for tutors/ teachers leading 'further activity'…

If students use current events, avoid *everyone* picking the 'big' zeitgeist topics (9/11, Princess Diana, etc.). Such subjects should never be taboo, but can sink into predictability or be difficult for younger and less experienced writers. It's helpful, in any case, to get a mix of ideas which includes the distinctively personal and idiosyncratic. Boys may suggest the usual sporting triumphs – which is fine, as long as they're also encouraged into other areas.

When participants go the historical route, make it clear they don't have to be experts on the chosen theme. Nor should they feel obliged to latch onto famous world events or wars. Minor historical incidents reflect the human condition just as poignantly. Where a major historical occurrence *is* chosen, help them to focus on one manageable aspect of what happened, or might have happened – something they can sketch in vivid detail. So, rather than attempt to describe the entire Battle of Britain (by resorting, perhaps, to abstract generalities), they might do better to imagine the thoughts of a losing pilot in a particular dogfight.

The activity can vary greatly in length. You can ask for the three views to be developed in some detail and introduce editing sessions, or else request just a few lines or a single paragraph for each 'frame'.
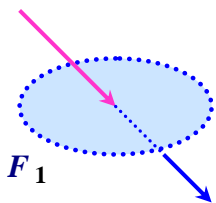
F_1
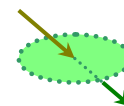
FILTERS

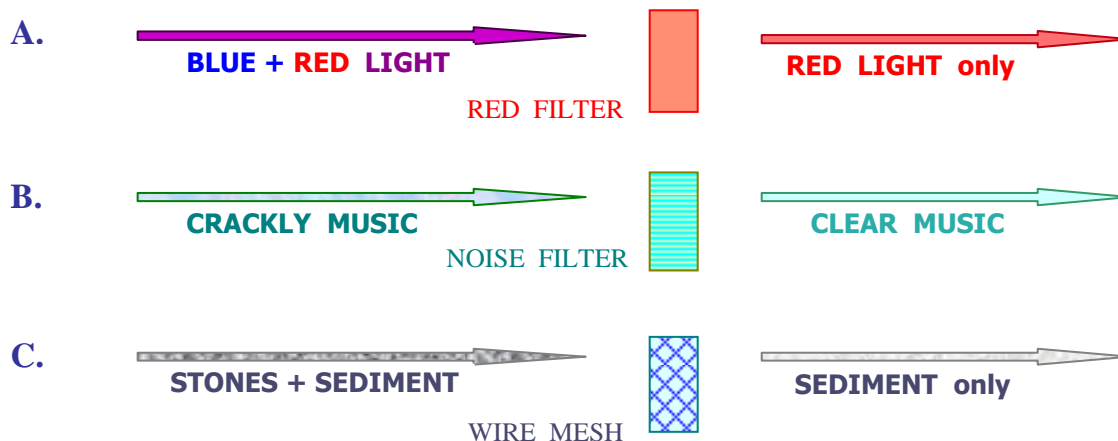**AIM**.   To put an imaginative 'slant' on familiar objects and events via a scientific 'filter'.

Suitable for: Year 11 + ; creative writing courses/ MAs; adult writers. Youngest users **will** need guidance.

1.   In any form you wish (poem, short story, a scene in a play, journal notes…) begin to describe a key event in your life: an intense moment, something from childhood, a vital meeting…

2.   Now examine the following examples of how a filter works in science or engineering…

   A.   **BLUE + RED LIGHT**   **RED LIGHT only**
   RED FILTER

   B.   **CRACKLY MUSIC**   **CLEAR MUSIC**
   NOISE FILTER

   C.   **STONES + SEDIMENT**   **SEDIMENT only**
   WIRE MESH

   If possible, find out about other kinds of filter used in science and technology
   (either from resources provided by your teacher or, later, in a library or on the internet).

3.   Revisit the piece you wrote above, in '1'. **Rewrite** it using any of the three filters (**A**, **B** or **C**):

   Your Experience   **'FILTER' of your choice …**   Style of Writing

   USING Filter A = seeing your experience through a **red** filter, which means thinking about any kind of 'redness' in it (such as angry words, anything to do with blood, sunsets, and so on…)

   USING Filter B = describing the experience only in terms of what was **quiet, still, pure**, etc...

   USING Filter C = sticking with the **tiniest details** or things (say) a child or a spy might notice.

   If you're unsure how to do this, look at the examples below – or ask for help.

Case Study   *Notes produced in '1': **"My mother marched me to the bathroom and scrubbed me with soap…"***

Example of rewrite, **using Filter 'A'** *(= anything red in it – you can interpret 'redness' however you want to):*
"Mum's hands were rough, raw from years at the sink. Now that colour was in her face too, struggling to get me up the stairs. *Look at the state of you*, she said. *Where's that blood from? Get in the bath and stay away from that troublemaker.* She meant Tom O'Brien. Tommy, with his ruddy hair, his redder spirit…"

Example of rewrite, **using Filter 'B'** *(= clean, simple, pure):* "Mum's face shone. Skin wax-like, unmarked, white as soap. Every surface in that bathroom – tile, tub, my mother's face – was a complexion of her one light…"

Example of rewrite, **using Filter 'C'** *(= only the fine details get through):* "That fine line of scum round the tub, where dad had had his bath. Still that faint whiff of tobacco off his skin. I watched the level rise as mum's hands, cobwebbed with fine red lines, lowered me in. The cracked, dirtied soap was a pure-white scone with raisins…"

DISCUSSION   *(older/ more experienced groups)*

Redo the exercise using other kinds of filter, taken from science if possible.

Was the 'filter approach' useful or interesting? Could it be a good tool when editing new material? Why? Can you see ways in which this approach might help you to structure a piece of work, or to generate focus or variation of style?
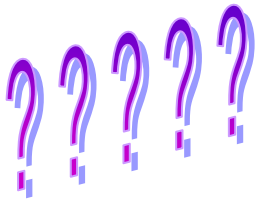
FIVE QUESTIONS

Instructions for Tutor or Teacher leading the session

AIMS. To use scientific objects to generate a fresh piece of writing.
For writers to explore the creative energy engendered by chance and the unfamiliar.

Suitable for: Guided work in schools, particularly Year 9 + ; also, creative writing courses & MAs.

[Adults: by all means do this activity on your own – but try NOT to look at 'C' before 'A' & 'B' are done.]

A. START. Ask students to create a sheet of paper like this:

… i.e. 10 boxes, in two columns of five.

B. CHOOSE. Each person now chooses a number from **1** to **9** (*privately*, in his/her head).

C. SURPRISE! Next, allocate the following science/ sci-fi subjects according to the numbers chosen:

1 = the 'Big Bang'	2 = a clone	3 = Saturn's rings
4 = a gaseous life-form	5 = a dinosaur skull	6 = plutonium
7 = electricity	8 = an *incredibly* advanced robot from the year 2999	
9 = a species (not yet discovered) at the bottom of the sea		

[You may, of course, construct your own list, especially when using this exercise more than once.]

D. IMAGINE.

Give people time to quietly contemplate their respective subjects (**no** writing yet). Encourage them to visualise the specifics… *where* the plutonium is, which sea the species is in, what *kind* of dinosaur, etc.

Younger or less confident students might need some help here, especially with items like the gaseous life-form or the Big Bang. You can field questions, or flesh out each object with a few facts or ideas on a handout or whiteboard. Make it clear they don't have to be experts on their new subject. A little uncertainty doesn't undermine the exercise – in fact, it often adds an inventive spark.

E. QUESTION.

Now they imagine they're about to **interview** their object on prime-time TV. (Yes – the Big Bang *can* talk!) They write down 5 questions in **the <u>left</u> column**. They should keep these **short** but **interesting**.

It's useful to provide a few examples of how a good (open) question can draw an interviewee out. For instance, with the living gas, "What colour are you?" is fine, but "What would happen if I breathed you in?" might be even better. There's no reason you can't ask plutonium "What makes you laugh?" or Saturn's rings "What do you do to relax?"

Q1	
Q2	
Q3	
Q4	
Q5	

F. PAUSE… to ensure everyone has written down at least 4 decent questions. Those with fewer should be urged to wrap things up with simpler queries like "What's your favourite colour/ food?"

G.   Some ANSWERS…

Here's the crunch: they now **become the object** being interviewed. So, in the **right-hand column**, they try to answer their own questions. Their replies should (i) **avoid naming the object** and (ii) be **legible**.

The best type of answer is a **concise sentence** or **suggestive phrase**. Curt replies (Yes/ Don't know/ It depends), or rambling ones, won't work as well. "Usually *after* I've eaten" is a far more intriguing response to "Do you get hungry?" than a flat "No." They can also answer with another question.
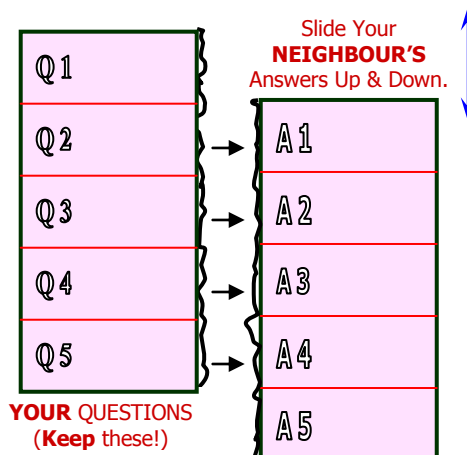
Steer them away from trying to get 'the right answers'. Responses can be 'made up' or off the wall, as well as factual or serious. If anyone dries up, try to help them to be more confident about improvising.

H.   SCISSORS and SWAPS…

(a) When everyone has at least 4 answers in place, arrange the students into GROUPS OF FOUR OR SO. Once that's settled, ask them to cut (or tear) their sheets **vertically** down the middle.

(b) They now SWAP ANSWERS with someone else in their group. [It's crucial that you ask them to KEEP THEIR OWN QUESTIONS at **all** times – they swap answers only.]

(c) They slide this **borrowed set of answers** alongside their questions, up and down, hunting for unusual, weird or stimulating question-answer combinations (see diagram →)…

Example: Q. What do you breathe? / A. The earth's crust.

Slide Your **NEIGHBOUR'S** Answers Up & Down.

Q1	
Q2	→ A1
Q3	→ A2
Q4	→ A3
Q5	→ A4
	A5

YOUR QUESTIONS (**Keep** these!)

If (in spite of earlier instructions) anyone gets long or illegible replies, they'll have to guess what's written or cherry-pick the bits they want. That's all part of the game too.

(d) Keep them **swapping answers** within their groups until they have plenty of good lines (hopefully, a mix that's variously surreal, hilarious, powerful). Don't let things get too 'careful': the answer-swapping should be brisk. They can share results as they go, particularly funny ones, but make sure everyone **writes down** at least half a dozen interesting outcomes **of their own** (perhaps on the reverse of their questions, in the right place) or else they'll have no material later. If anyone is confused, offer support.

Also, give them blanket permission to rewrite things *however they like*. Certainly, they can adjust the detail of question-answer pairs to make better sense (changing 'you' to 'they'… that kind of thing).

I.   Some WRITING …

There's a wealth of (plenary) follow-up here. Focusing on **received answers they wrote down** (not their own, *original* answers), explore how a strange idea, or a clutch of phrases, might be taken forward…

- Using one of their 5 questions as a title, and **all** the new answers they noted, each person makes a '**list poem**'. Or they can build a **group piece**, everyone contributing statements as they go.

- They arrange those answers to **get a voice** 'just speaking about itself' (it's often effective when the questions are left *implied* like this). Are there glimpses of an appealing personality or skewed logic? Invite students to listen to that voice, to follow it where it takes them. Maybe they can expand or develop it in some way?

- Does anyone have **a line/ thought** they feel they can run with? Can they say why, or how? Do any of their question-answer pairs prompt an **unexpected way of seeing things**?

- Is there an arresting **image** or **turn of phrase** that can inspire (or act as an opening or closing line in) a new piece? They might try picking one or two statements that invoke a scene or character, then go on to **flesh them out** (if they need to, they can **repeat the exercise** to get more material).

A key outcome is when students begin to see how to pan for gold among apparent duds. For instance, Q. "How old are you?" / A. "I am all colours" might lead to writing about age through a series of differently-coloured emotional lenses. Q. "Do you have friends?" / A. "I'm in the shadows" could suggest a piece on being overshadowed by a friend, or a conversation with one's shadow. In summary, then, the benefits of this exercise include:

- Winkling out the germ of a concept that really grabs them, then being able to develop it;

- Enjoying, and being more confident about, modifying, rearranging, reinventing, etc.;

- Noticing how, in writing, working on one thing can end up going somewhere else.

MAKING THE MOST OF RANDOMNESS

(CUT-UPs and the 'RANDOM LEAP-FROG' method)

AIMS.   Create a 'cut-up'. Show how mathematical randomness can generate fruitful ideas & new material.

Suitable for: Year 12 +; creative writing courses & MAs; adult writers. Younger users may need guidance.

The standard way to make a 'cut-up' is to divide a text into its individual words or phrases using scissors, then pull the pieces at random from a bag, one at a time, to compile it. Here's a less fiddly way to randomise the words of a text...

[A] CHOOSE A SOURCE TEXT.

This can be anything: a newspaper clipping, a travel brochure, a poem. Just make sure it has some vivid language in it and isn't too long (you can use an excerpt). Ten lines to half a page is plenty. If you have in mind a specific theme or place, ensure your starting text is *obviously* about that chosen subject. Make a photocopy of your source text to work on: you don't want to scribble over the original!

[B] THE 'RANDOM LEAP-FROG' METHOD.

(see **SHEET B** for a full example)

- To get a random number, close your eyes and stick a pencil in the **Random Number Box** (*Sheet B*). Let's say you hit a 'six'. That means the sixth word in the source text is the first word of your cut-up. **Write that word down** on a separate sheet, then **cross it out** in the source text – it is now 'used up'.

- **Repeat the procedure**. Say you score 'nine' this time. Count nine words *from the one you've just crossed out*. That's the second word of your cut-up. Add it to the separate sheet, remembering to cross it out in the source text. Carry on, word by word, to build up your cut-up.

- Put in the **punctuation** as you go, wherever you wish. If you want a **poem** out of this, put in line breaks and stanza breaks too. Use **form** or **structure** to take full advantage of any happy accidents.

- When you reach **the end of the source text**, count *through* its last word and back to the beginning as though it were a continuous loop. This time round, 'leap-frog' (i.e. ignore) words already crossed out. If your source text is very short, go round and round until you've used it all up. With a longer text, stop when the cut-up has done something interesting or reaches a good ending all by itself.

If you're unsure about any part of the procedure, refer to the example on *Sheet B*. But please don't worry if you miscount or make mistakes. The process matters more than the rules. The secret is to nurture a curious, playful eye rather than to get hung up on the technicalities. Just enjoy watching your word-creature evolve.

[C] OUTCOMES.

Occasionally, a cut-up will work (in some weird way) exactly as it is. More often, you'll get a mess, but with some sparky bits in it. Home in on one of those. It might be something funny, startling, surreal, or quite serious. It could be a wild opening line, an irresistible image, a surprising connection. Snap up anything that strikes you as a point of departure for a new piece of writing. If you're working in a group, share ideas on how these bits might be worked on. If you can't see a way forward, ask for help.

Don't be devastated if you get nothing spectacular at your first attempt. This is, after all, a game of chance. Be prepared to **repeat the exercise** several times to get one good idea or unexpected phrase. Or try using different source texts to see what happens. It's usually worth the effort!

NOTE for tutors. If we're going to shake language up like this, it helps – from the outset – to establish an alert, open-minded ambience. Even so, there might be an occasional grumble that the cut-up 'doesn't make sense'. Encourage students to persist and bolster their confidence by providing concrete examples of how cut-ups can lead to good writing ideas (see *Sheet B*).

RANDOM NUMBER BOX

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1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8
9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7
8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6
7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5
6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4
5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3
4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2
3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1
2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9
1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8
9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7
8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6
7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5
6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4
5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3
4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2
3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1
2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9
```

HOW TO USE THE RANDOM LEAP-FROG METHOD: an EXAMPLE …
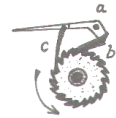
Source text: a short extract from 'The Tenth Parallel' (a play by Mario Petrucci).

"… She tells him all about it in her next letter. She tells him everything. About school. The other girls. How cruel they can be. The time her ma let her down. Even the way she loves to go out at night and watch the clouds. Says she can't bear all that fuss about the moon and stars when we have clouds. *(pause)* Maybe …"

Random Number Box gives (say): **6   9   5   7   2   6   6   5   1   8   4**   6   7   8   1 … etc.
(first time through the source text…)   (second pass...)

Using these numbers, the first word of the cut-up is '**it**', the second is '**About**', and so on, as shown below:

"… She tells him all about ~~it~~ [6] in her next letter. She tells him everything. ~~About~~ [9] school. The other girls. ~~How~~ [5] cruel they can be. The time ~~her~~ [7] ma ~~let~~ [2] her down. Even the way ~~she~~ [6] loves to go out at ~~night~~ [6] and watch the clouds. ~~Says~~ [5] ~~she~~ [1] can't bear all that fuss about the ~~moon~~ [8] and stars when ~~we~~ [4] have clouds. *(pause)* Maybe …"

At the end of the source text, you loop back to the start for a second pass. So, the six at '**we**' means the next word is '**tells**'. As you go round again, leap-frog words that are already crossed out.

Try the cut-up now, using the above numbers, to check you agree with what I get below. In this case, I've organised it as a poem. Notice how I've altered some words to suit my purpose (e.g. '**says**' becomes '**say**'). I've also decided where punctuation and line breaks go. Of course, you could do that very differently.

It. About. How her
let she. Night say she
moon. We
tell letter – girls
cruel …

It's hardly an earth-shattering poem. Have I wasted my time? I don't think so. Already, I like the voice in this piece: it's strange and uneasy. Maybe I've found a way of speaking, one I wouldn't normally use? And I've only just started. I could run the exercise for longer, or begin all over again. It's important to keep at it.

The most valuable result is to see that the gobbledegook often has brilliant stuff lurking in it, if you know how to look. It's great to develop that knack of teasing out a half-hidden idea, or spot how a tiny shift in what you have can lead to something really exciting. For instance, looking at '**Night say she/ moon**', you might ask 'Night' what she thinks of *you*, or turn yourself into a planet and describe what it's like. Or you could quiz those girls. Who are they? Why are they cruel? What, exactly, is *in* that letter? Who is it for…?
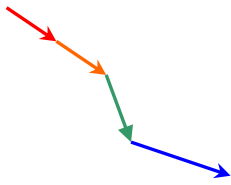
CREATIVE

WRITING ↔ SCIENCE

ITERATION and EVOLUTION

Activity 6
25 – 80+ minutes
STUDENT/TUTOR NOTES

AIMS.   To allow a text to evolve using a technique based on iteration; to explore the editing process.

Group work: Year 12 + ; creative writing groups and MAs. Youngest users **will** need guidance.

Note for students: what is 'iteration'? In computing, it's when a set of instructions is applied again and again until you get the required result. In mathematics, it's a way of solving certain kinds of problem by trying a rough answer first, then executing a cycle of operations over and over: each time you do, you input the results from the *previous* computation. Each 'iteration' gets you closer to the exact solution. We're going to use a similar process – on words. But don't worry: no maths needed!

Group Work: STUDENT INSTRUCTIONS

1.   Split up into groups of 5 or more. Each group should sit quietly, forming an **unbroken** circle.

2.   **Within your circle**, everyone hands their prepared extract [see above*****] to the person on **their left**.

3.   Silently, read the extract you've just received. Register its tone, its message. Without writing anything down, without discussion, imagine **two words** you might alter (to improve it, shift the meaning, create a surreal or unexpected feel, etc.). Note: your two changes can involve **adding** or **subtracting** words.

4.   Working privately, **add** to the sheet your **modified** version of the text, underneath, **legibly**: this should be identical to what you got, **except for your two alterations**. Try not to agonise over your changes – just do (quickly) what feels good. [Note: feel free to *also* alter punctuation or line-breaks, in any way you wish.]

5.   **Check!** The sheet you got from your right should now have an extra item on it: namely, *your* modified version of the text, in clear handwriting, just below it. When everyone's ready, hand this to **your left.**

6.   **Repeat the procedure** (steps 3 → 5) again and again. Each time you do, you'll get a new text from your right: **always modify the last entry on the sheet.** Ignore the earlier versions: focus on what *you* will do with the bottom-most entry. [Meanwhile, your extract is journeying clockwise round the circle, 'evolving' as it goes.]

Be **brisk**: ideally, do each 'iteration' in a couple of minutes. Do your best to keep up. Avoid backlogs.

After (say) half a dozen iterations (or when your tutor signals): **stop**. **Retrieve your original sheet.**

[**Tutors**: at each iteration, make sure students are modifying the *most recent* version of the text, rewriting it legibly beneath.]

P O E M	[PERSON 1 : *Original*]	On lovely spur of cherry – caterpillar tries to hang on sunlit leaf.	**Example** *(using a haiku)*
E V O L V I N G . . .	[PERSON 2 : Iteration 1]	On spur of cherry – caterpillar tries to hang on sunlight's leaf.	1. '**lovely**' cut *[← line-break changed]* 2. '**sunlit**' → '**sunlight's**'
	[PERSON 3 : Iteration 2]	On spur of cherry : spider tries to hang sunlight's leaf.	*[← colon added]* 1. '**caterpillar**' → '**spider**' 2. '**on**' cut
	[PERSON 4 : Iteration 3]	On burr of cherry : spider tries to catch sunlight's leaf **!**	1. '**spur**' → '**burr**' 2. '**hang**' → '**catch**' *[← exclamation mark added]*
	[PERSON 5 : Iteration 4]	On burr of cherry : spider tries to catch – catch sunlight's spark **!**	1. '– **catch**' added / 2. '**leaf**' → '**spark**'

… CHANGES

MADE

Discussion.   In what kinds of ways did your extract evolve? As a group, pool insights. Did anyone *remove* words from your piece to 'tighten things up'? How might iteration be useful in the editing, redrafting or development of your writing? If you didn't use your own work in this exercise, why not redo it using something you've written yourself?

Comments. You'll learn a lot from how others changed your text, but I hope you also felt a real sense of liberation in modifying other people's words (particularly as you were only asked to make *small* changes). It's useful to try to recall that sense of ease when editing your *own* work. Unlike iterations in maths (where you must follow the rules precisely), here you can loosen up the process as your confidence grows. Modify it to suit your own way of editing and redrafting.