

**Ecphrastic poetry & the
development of professional
literacy in physics**

What is ecphrastic poetry?

- Ecphrastic poetry is the conversation between two pieces of art. The writer interprets a work of visual art and then creates a narrative in verse form that represents his or her reaction to that painting, photograph, sculpture or other artistic creation.

<http://www.firkinfiction.com/11.html>

Ecphrastic poetry and physics

- How do you write a physics-related poem ecphrastically?
- Complete the following steps:
 1. View a stimulus image and identify a physics-related concept it evokes.
 2. If required, write down the concept, definition, law, formula etc.
 3. Identify a suitable poetry type and write the poem.

What concept does this image evoke?



Newton's 2nd Law of Motion

What is Newton's 2nd Law of Motion

*The acceleration **a** of a body is parallel and directly proportional to the net force **F** and inversely proportional to the mass **m**.*

$$**F = ma**$$

Example Haiku poem

*The net force on an
object is its mass times its
acceleration.*

What concept does this image evoke?



If Sir Issac Newton and William Tell were brothers, gravity would never have been discovered

Newton's discovery of gravity

What is significant about Newton's discovery of gravity?

As the image alludes to, if the legendary William Tell had been in the vicinity of Sir Issac Newton, then Newton may never have been inspired to discover gravity since William Tell would've shot any falling apple before it hit Newton.

Example Concrete poem

| The Newtons and \ | | / friends were taking |
| tea beneath the boughs of an apple tree |
| when a falling fruit landed on the head |
| of the head of the family. Mrs Newton |
| cried, 'Well dearie me! That could've |
| caused an injury'. But clever |
| Isaac alone could see, |
| the situation's true |
| gravity. |

Adapted: Ben Tweedie
Original Text: Patrick Winstanley.

What concept does this image evoke?



Time

Example Acrostic poem

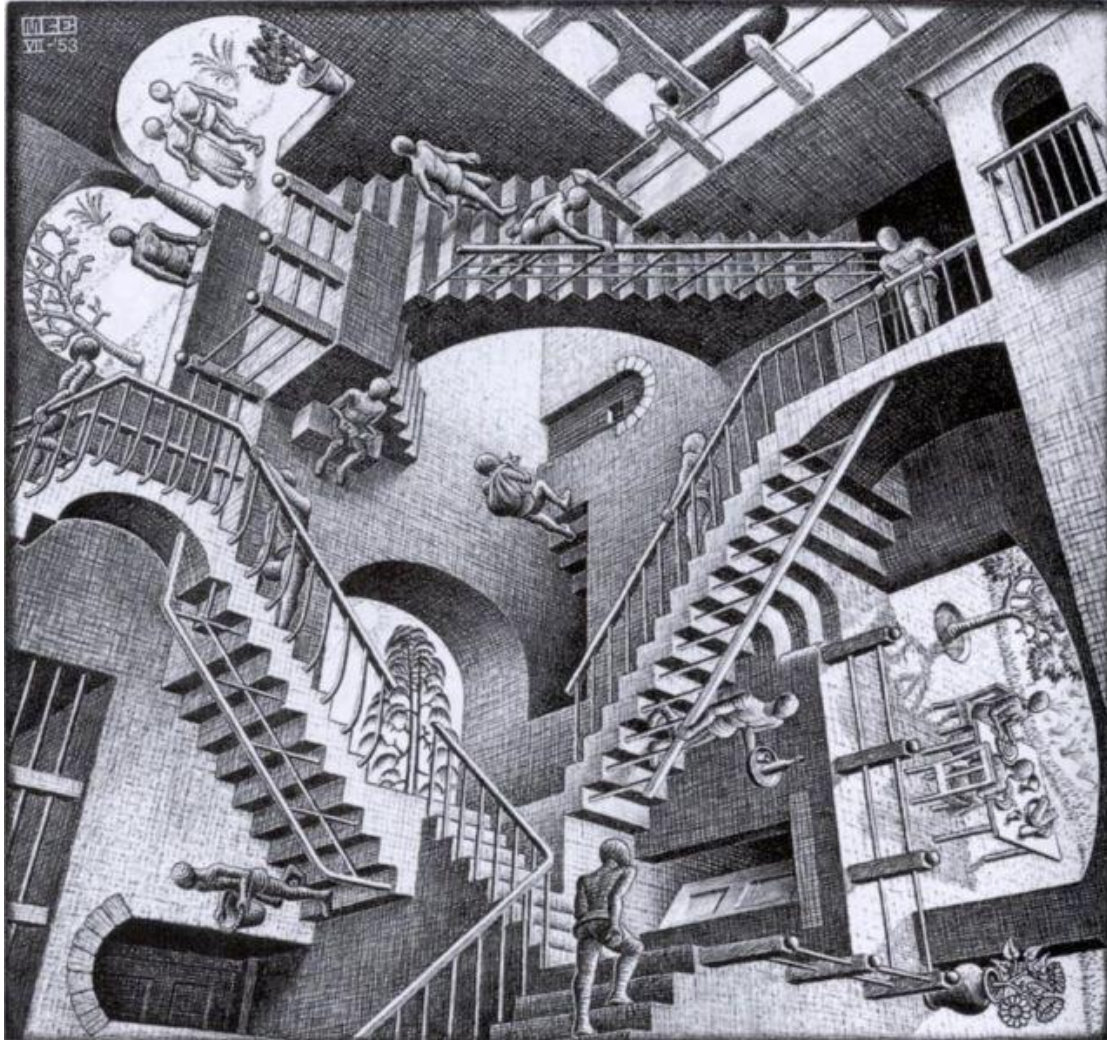
Timekeeping devices are called clocks

Internation System fundamental quantity

Measured in seconds (SI unit)

Equation of acceleration, $a = \Delta v / \Delta t$.

What concept does this image evoke?



Relativity

Example Limerick poem

There was a young lady named Kite
Whose speed was much faster than light.
She left home one day
In a relative way
And returned on the previous night.

What concept does this image evoke?



Archimedes' Principle

Example Free Verse poem

The Sicilian King, Archimedes was told,
ordered a crown from a large lump of gold,
though the weight of the gold was completely correct,
the goldsmith's eye made the King suspect
that he'd made up the weight with some cheaper metal
and stolen some gold, that his debts he might settle.
His problem was then of outstanding immensity
as he had no idea, whatsoever, of density.

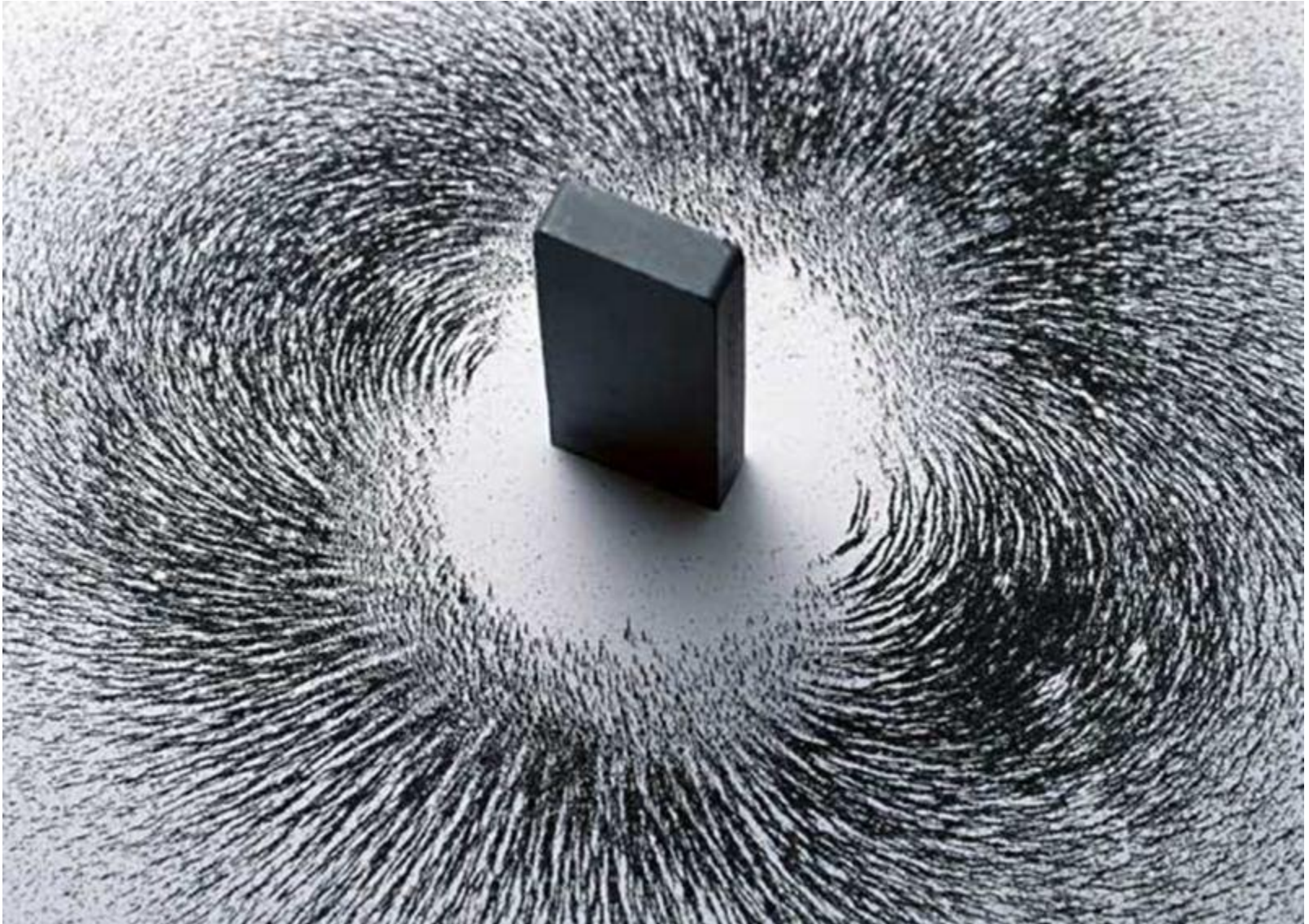
Example Free Verse poem

Climbing into a bath he received a surprise
when he noticed the water beginning to rise.
He suddenly snapped, and let out a scream,
as he realised, with joy, his long-wished-for dream.
He found the upthrust, produced on a body's base,
to be equal in weight to the water displaced,
and soon volumes and weights would make it quite
plain
what various metals the crown could contain.

Example Free Verse poem

And so he could easily show to his Royalty
the absolute proof of the goldsmith's disloyalty.
Leaping out of the bath at remarkable rate,
he made for the palace by doorway and gate –
But the men in the street were completely confounded
to see a naked man shout "Eureka! I've found it!"

What concept does this image evoke?



Magnetism

Example Cinquain poem

Magnet

Magnetic and gravitating

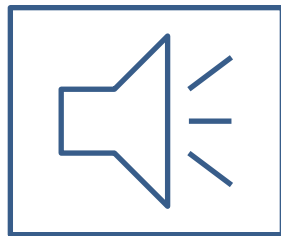
Draws all kinds of metal

Possessing the unbelievable power and facility

Energy

What concept does this musical composition evoke?

Eleanor Rigby by the Beatles.



Brownian motion

Example re-worked song lyric

Ah, look at all the little particles. (2x)

Brownian motion tries to explain how a dust mote can move when there's nothing else there except the air.

Air isn't moving - there must be something that is on the move but that we cannot see.

What can it be?

All those little particles. Why do they rise and fall?

All those little particles. Why do they move at all?

Activity

Using the given stimulus material, create the following types of poetry:

- Free verse
- Acrostic
- Cinquain
- Haiku
- Limerick

STIMULUS IMAGE 1



STIMULUS IMAGE 2



STIMULUS IMAGE 3



STIMULUS IMAGE 4



STIMULUS IMAGE 5

