

the HUMAN project

Anna Stillwell and Erika Ilves

To humans who dare dream beyond their lifespan.

Curriculum content and lesson plans designed by Rohan Roberts

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Module 1:

HUMAN Questions

Who Are We?

What should be the
Purpose of Our Species?

What Can One Human
Life Mean?

1

Human Questions

Concept

Shared humanity

Duration

1hour

Cross Curricular Links:Biology
History
Sociology
Philosophy**Skills**Group work
Mini-Presentation
Poster designing**Intelligences**Interpersonal
Linguistic
Visual-spatial
Existential**Resources Required**Laptop
Access to internet
Microsoft PowerPoint
Flipchart / A3 papers
Board markers
Stationery**Energiser:** Survival of the fittest (5 min.)**Objectives:**

- To examine who we are as a species
- To analyse what it means to have a shared humanity

Introductory Video: [YouTube Who are we](#) (1min.)

It's quite subtle. Nearly imperceptible. Not where we might think of looking first: how we see ourselves—our identity—shapes our future as a species. So let's tell a story about ourselves—let's build a cultural identity that moves us to dream bigger, learn faster.... go places, evolve into something even better.

Starter: Identify the odd one out (5 min.)

Choice of images:

Gorilla, Chimpanzee, Bonobo, Gibbon, Human, Orang-utan, Rhesus monkey

Activity 1: Mini-presentation

5 min. prep time | 5 min. presentation time

Participants are divided into groups to discuss and then present

Group 1: discuss and present what it means to be human.

Group 2: discuss and present the good humans have done.

Group 3: discuss and present the meaning of “cultural learning.”

Activity 2: Designing a poster

10 min. prep time | 5 min. display time

Hand out copies of resource sheet 1a: Who Are We?

Create a poster that captures the essence of the extract.

Plenary: Taboo

Participants pair up and discuss what they've learnt in the last hour but they're not allowed to use the following taboo words:

*Humans, Species, Project***Extension Activity:**

Create a 2-min. movie-trailer introducing humans to an alien species.

(Use either Animoto, MovieMaker, GoAnimate!, or iMovies)

Reading Task:

Read the HUMAN project app content on *What should the purpose of our species be.*

WHO ARE WE?

7 billion humans.
We are one species but we are not of one mind.
Our shared biology is now a fact.
Our shared identity is still under construction.

Some of us think our shared humanity is a given.
If we only dig deep enough inside... all of us will find it.
But what if it does not come pre-installed?
Others say we must raise our consciousness.

Cultivate our compassion.
That's how we'll realize we're all one.
But how long will it take us?

Some of us want to talk issues, not identity:
We're stuck on this planet together.
So let's just deal.
But how inspired is a trapped soul?

To create an inspired future...
We need good stories about who we are already.
Look at us in the grand scheme of existence.
The 100 billion who came before. The 7 billion alive today.
What's the red thread?
We are a creative species!
We practice the most complex art in our universe:

CULTURAL LEARNING.

We are our own work in progress.

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2

Human Questions

Concept

Human Purpose

Duration

1hour

Cross Curricular Links:

Literature

History

Sociology

Philosophy

Skills

Pair work

Literary Analysis

Silent Reflection

Intelligences

Interpersonal

Linguistic

Intrapersonal

Existential

Resources Required

Laptop

Access to internet

Microsoft PowerPoint

Flipchart / A3 papers

Board markers

Stationery

Chocolates

Energiser: Earthquake / Eviction (5 min)

Objectives:

To reflect on the purpose of humans

To distinguish between being and becoming

Introductory Video: YouTube [Purpose of Our Species](#) (1min.)

The HUMAN Project should be the ultimate infinite game. Let's play it to keep playing... beyond our individual deaths, beyond the end of our sun, maybe even beyond the end of our universe.

Starter: Arrange in order of importance

(5 min.) Resource sheet 2a

List of words (based on Maslow's hierarchy of needs):

Food, companionship, parents, home, money, fame, sanitation, health, altruism, creativity

Activity 1: List-o-mania

2 min. prep time | 5 min. discussion time

Divide participants into groups of 4-5

Ask each group to make a list of things that humans have accomplished over the last 10,000 years. The group with the biggest list wins. (Chocolates as reward)

Activity 2: Think-pair-share

3 min. thinking time | 5 min. sharing time

Think about/Reflect on where our species will be 10; 100; 10,000 years from now.

Pair up with a partner and discuss/clarify your views.

Share with the rest of the group.

Activity 3: Literary Analysis

Display the quote from Hamlet '*To be or not to be, that is the question.*' Ask participants what they think it means.

Then hand out a copy of resource sheet 2b and ask them what they think is the difference between being and becoming?

Plenary: Provocation

Stewart Brand says, 'We are as gods and might as well get good at it.' What could this statement mean and how would you respond? What should our purpose as HUMANS be?

Extension Activity:

Watch Jason Silva's video mash-up "Beginning of Infinity"

Read a review of David Deutsch's *Beginning of Infinity* by Rohan Roberts on 'Phoebus Online.'

Research on the Deutsch's concept of 'Jump to Universality'

Reading Task:

Read the HUMAN project app content on *What can one human life mean?*

Starter: Based on Maslow's Hierarchy of needs

Food and Drink



Companionship



Home and Parents



Altruism



Creativity



Money and Fame



Health and Sanitation

WHAT SHOULD THE PURPOSE OF OUR SPECIES BE?

To be or to become?

We must choose carefully.

Any purpose with a final destination is shrink wrap on the human spirit.

We are not built to arrive, we are built to journey.

Think of the stream of human existence as an ongoing human project.

How long should it go on for? No end.

What should it accomplish? No limits.

Our purpose: Survive and ascend.

KEEP BECOMING.

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Energiser: Human Knot Game

Objectives:

- To recognise the meaning of one life
- To interpret and comprehend the meaning of infinity

Introductory Video: YouTube [One Human Life](#) (1min.)

My life is not an end in and of itself. My life is a contribution to the ongoing human project.

Starter: A-Z (5 min.)

Write down a key/related word related to the concept of infinity for as many letters of the alphabet as you can.

Activity 1: Mantle of Expert

5 min. research time | 10 min. sharing time

Divide the audience into 5 groups. Give each group 5 min. to research the following topics related to infinity and then 2 min. to present:

1. Zeno's paradox
2. Infinite Monkey Theorem
3. Hotel Infinity
4. Fractals (Mandelbrot Sets)
5. Pi

Activity 2: Snowballing

3 min. writing time | 5 min. sharing time

Divide the audience into 3 groups.

Group 1: Make a list of things you'd do if you could live for infinity

Group 2: Make a list of things humans have achieved by collaborating over many generations.

Group 3: Make a list of things humans should focus on if our species could exist forever.

Plenary: Instructions for Dummies

Hand out resource sheet 3a.

Write out a set of instructions on how humans can solve our problems and start to dream big dreams for our species.

Extension Activity:

- Watch [The Cosmos Universe or Multiverse?](#) on YouTube
- Write an article or blog post about the meaning of one life and how what we do in our lifetime can have an impact on other lives.

Reading Task:

Read the HUMAN project app content on *We are Matter*.

3

Human Questions

Concept

The meaning of one life

Duration

1 hour

Cross Curricular Links:

Mathematics
Cosmology
Philosophy

Skills

Group work
Mini-presentation
Creative Thinking

Intelligences

Interpersonal
Logical-mathematical
Intrapersonal
Existential

Resources Required

Laptop
Access to internet
Microsoft PowerPoint
Flipchart / A3 papers
Board markers
Stationery
Chocolates

WHAT CAN ONE LIFE MEAN?

Think of a human life as a one-off,
And you are walking down a blind alley.

Think of a human life as a contribution to the ongoing human project,
And you may be surprised.
Suddenly, infinity lies within a finite life.

Imagine your last breath filled with knowing:

Your ascendants...
Can know things you could not know.
Can go places you could not go.
Can become what you could only dream of.
Because you gave your everything.

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Module 2:

HUMAN Identity

We are matter

We are life

We are culture

Energiser: Who is the leader (7 min.)

Objectives:

- To recognise our material connection with the universe
- To comprehend what $E=MC^2$ means

Introductory Video: YouTube [We are matter](#) (2min.)

In cosmic terms, we are just tiny clumps of matter. Like all matter, we are subject to the forces of cosmic evolution. Is our fate then inextricably tied to the fate of our Universe? Not necessarily, after all we are no ordinary clumps of matter.

Starter: Match the terms (5 min.) Resource Sheet 4a

Choice of word pairs:

Big+Bang, Space+Time, Matter+Energy, Hydrogen+Helium, Albert+Einstein, Cosmic+Radiation, Black+Hole, etc.

Activity 1: Conversion

2 min. reading time | 5 min. viewing time

In groups, convert the information in resource sheet 4b into a timeline or a flowchart.

Activity 2: Seek the answer (7 min)

Ensure the pieces of evidence for the Big Bang Theory in resource sheet 4c have been cut and hidden around the classroom before the lesson begins.

On the count of three, participants search for the evidence and stick it on the whiteboard.

Activity 3: Reward the expert

Display the equation $E=MC^2$ on the board and elicit responses about what participants think it means.

Plenary: Triads: Symphony of Science

7 min. viewing time | 5 min. discussion time

Watch the 2 Symphony of Science Videos titled '*We are star-dust*' and '*We are all connected*'.

In groups of three, explain to each other what it means to say "we are stardust" and "we are all connected" from a *scientific perspective*.

Extension Activity: Read about Carl Sagan, Lawrence Krauss, Richard Feynman, and Neil deGrasse Tyson

Reading Task:

Read the HUMAN project app content on *We are Life*.

4

Human Identity

Concept

Our material composition

Duration

1hour

Cross Curricular Links:

Biology
Astrophysics
Cosmology
Music

Skills

Converting texts
Mini-discussions
Group discussion
Critical video-viewing

Intelligences

Interpersonal
Bodily-Kinaesthetic
Existential
Musical



























Resources Required

Laptop
Access to internet
Microsoft PowerPoint
Flipchart / A3 papers
Board markers
Stationery

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Starter Activity: Match the terms

	Big		Bang
	Space		Time
	Matter		Energy
	Albert		Einstein
	Cosmic		Radiation
	Dioxyribo		Nucleic Acid
	Isaac		Newton
	Amino		Acids
	Four		Fundamental Forces
	Third Law of		Thermodynamics
	Speed of		Light
	Universal		Constant
	Parallel		Dimensions

Activity 1: Conversion


Convert the information in the paragraph below into a timeline/flowchart


Group 1


The Big Bang theory is the prevailing cosmological model that describes the early development of the Universe. According to the theory, the Big Bang occurred approximately 13.798, which is thus considered the age of the universe. After this time, the Universe was in an extremely hot and dense state and began expanding rapidly. After the initial expansion, the Universe cooled sufficiently to allow energy to be converted into various subatomic particles, including protons, neutrons, and electrons. Though simple atomic nuclei could have formed quickly, thousands of years were needed before the appearance of the first electrically neutral atoms. The first element produced was hydrogen, along with traces of helium and lithium. Giant clouds of these primordial elements later coalesced through gravity to form stars and galaxies, and the heavier elements were synthesized either within stars or during supernovae.


Activity 2: Evidence for the big bang (TBB)


Hide the following pieces of evidence around the room before the lesson begins.

 **Evidence 1:** TBB is the best theory that accounts for the overwhelming abundance of lighter elements like Hydrogen and Helium in the universe


 **Evidence 2:** Edwin Hubble discovered that galaxies are flying apart. We now know that space is expanding. This means galaxies were closer together in the past.

 **Evidence 3:** George Gamov predicted in 1948 that there should be a faint glow left over from when the universe was much hotter and denser. This “echo” from the big bang has been discovered and is referred to as the cosmic microwave background radiation.

 **Evidence 4:** The universe is homogenous on a large scale. (*Homogenous*: of the same or similar nature)

 **Evidence 5:** We do not observe stars that are older than a few billion years. This means the universe had a beginning in a particular point in time.

 **Evidence 6:** The farther away the Hubble Telescope sees the farther back in time it sees. The oldest galaxies are amorphous and irregular compared to galaxies that evolved later.

 **Evidence 7:** The number of quasars drops off for very large redshifts (or the farther back in time we look). This observation means that the universe was not old enough to produce quasars at those large redshifts. The universe did have a beginning.

Evidence 8: The quantum equations and mathematical model for the big bang are consistent with observations.

5

Human Identity

Concept

Meaning of life

Duration

1 hour

Cross Curricular Links:

Astrobiology
English
Art

Skills

Drawing
Debate
Mindmaps

Intelligences

Interpersonal
Linguistic
Existential

Resources Required

Laptop
Access to internet
Microsoft PowerPoint
Flipchart / A3 papers
Board markers
Stationery

Energiser: Who are you? (7 min.)

Objectives:

- To discuss what constitutes life.
- To consider the features of extra-terrestrial life.

Introductory Video: YouTube [We are life](#) (3 min.)

In biological terms, we are a complex form of life. Like all life, we harvest matter and energy from our surroundings. We rely on the energy of a star. Is our fate then inextricably bound to the fate of our star? Not necessarily, after all, we are no ordinary form of life.

Starter: Pictionary (5 min.)

Choice of words:

Virus, bacteria, coral, seed, orang-utan, whale, insect

Activity 1: Radio infomercial

10 min. prep time | 10 min. performance time

In groups, participants create a radio infomercial in which they talk about what life is and what its features are. They may use some of the content in resource sheet 5a

Activity 2: Debate

10 min. prep time | 10 min. debate time

Motion: "This house believes that seeds are a form of life."

Plenary:

Mind map/Spider diagram

In pairs, draw a mind map of some of the features of possible life on an alien planet. Be prepared to justify your views.

Extension Activity: Search for extra-terrestrial life

Research about SETI

Write either a blogpost, or a magazine article, or, an argumentative essay justifying the search for extra-terrestrial life.

Make a painting/sketch of what alien life might look like. (Don't be inspired by Hollywood).

Reading Task:

Read the HUMAN project app content on *We are Culture*.

WE ARE LIFE

We are clumps of matter that live!

Just how widespread life is in our universe is still in question. For now, to talk about we have to narrow our field of vision from the expanses of our universe to the outskirts of one of the hundred billion galaxies and zoom in on a smallish planet orbiting an average star. We call that planet Earth. That's where life as we know it took up residence 4 billion years ago.

We can't yet say for sure how life began and whether it began on Earth. The move from inanimate matter to live matter was likely gradual and slow, taking millions of years. We can, however, make a compelling case that life is not just more complex than other matter; it is an entire new way of being. In cosmic evolution mass is destiny. When a massive clump of matter like a star burns through all the matter within, it's done being a star. If life lived off only what's within, life spans would be measured in hours and days because in cosmic terms, all life forms are just tiny specks of matter. What life lacks in mass, it makes up for in sophistication.

Life keeps itself going by harvesting matter and energy from the outside—it absorbs sunlight, it eats. What it stores inside is information in its DNA about how to do this, a template that allows it to reproduce. Life passes this information from generation to generation. And it does it almost perfectly. But once in a while random errors crop up. In biological evolution, imperfectly copying genes are destiny.

Life started off as the simplest form and evolved into millions of more and more complex forms. The creative exuberance of biological evolution was the result of the interplay between two ways of being: Cosmic evolution kept serving up changes in conditions on the planet. Life kept adapting by blindly generating imperfect copies of its templates. Some worked well, kept surviving and evolving. Other didn't and became evolutionary dead-ends. We are a product of the lineage that worked out.

Life adapts, so its fate is harder to predict. So far life has survived all the curve balls that cosmic evolution has indifferently hurled its way, from deadly asteroids to massive volcanic eruptions. But in the end the fate of all Earth-based life might be inextricably bound to the fate of our star. In a billion years the sun will get so hot, it will boil off all water from the surface of our planet, sterilizing it. Despite a 4 billion year track record of adaptation, life might not be equipped to deal with such a radical change. In that case, the life span of life would be just 5 billion years—a mere cosmic instant.

In biological terms, we are a complex form of life. Like all life, we harvest energy and matter from our surroundings, we rely on the energy of a star. Is our fate then inextricably bound to the fate of Earth-based life?

Not necessarily. After all, we are no ordinary form of life.

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Human Identity

Concept

Significance of Culture

Duration

1hour

Cross Curricular Links:

Sociology
 Anthropology
 Biology
 Culture Studies

Skills

Design
 Critical Thinking
 Group discussion

Intelligences

Interpersonal
 Linguistic
 Existential

Resources Required

Laptop
 Access to internet
 Microsoft PowerPoint
 Flipchart / A3 papers
 Board markers
 Stationery

Energiser: The Sun Shines on... (7 min.)

Objectives:

- To discuss what we mean by culture
- To analyse the difference between genes and memes

Introductory Video: YouTube [We are culture](#) (2 min.)

We are a culturally learning species. Could we learn our way to the end of the 22nd century? Could we outlive our star? Could we prevail over entropy?

Starter: Definition (5 min.)

Participants use mini-whiteboards to write their own definition of what culture is.

Activity 1: Spectrum of Agreement (5 min.)

Display the different statements in resource sheet 6a about the importance of intercultural dialogue. Participants stand in different parts of the room depending on whether they agree, disagree or are not sure.

Activity 2: Information brochure

10 min. prep time | 5 min. display time

Participants research on the internet and design an information brochure about the difference between memes and genes.

Plenary: Group discussion / Critical thinking

David Deutsch says, “*We are now at the beginning of infinity. Whatever is not prohibited by the laws of physics is possible.*”

What can it mean to be at the beginning of infinity? Think 500 years into the future – what can the human species achieve through rational memes, exponential growth in technology, and by culturally collaborating on a species level?

Extension Activity:

Read about Ray Kurzweil’s Six Epochs of Information Evolution

Read about John Smart’s Transcension Hypothesis

Watch Jason Silva’s video mash up on the ‘Transcension Hypothesis’

Reading Task:

Read the HUMAN project app content on *Our Mental Frames*

Spectrum of Agreement

Is a waste of time; People should just talk to people from their own cultures	Is more important now than it was in the past	Means opening your mind and accepting that everyone is different
Is about having friends in different countries	Simply means exchanging information	Can cause problems but it can also have happy endings
Is impossible because everyone disagrees about food, religion, clothing, education etc.	Is for politicians, not for people like us	Means that everyone should communicate with someone from another culture at least once in their life.
Can be just two people talking or it can be hundreds of nations communicating	Can be just two people talking or it can be hundreds of nations communicating	Means diluting cultures.
Is about showing people that everyone is the same on the inside	Is about helping people to understand immigration	Saves lives
Is too much effort because of all the different languages in the world	Involves teaching each others that stereotypes are misleading and dangerous	Is about treating the world as one big family

From 'Connecting Cultures'

the HUMAN project

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Module 3:

HUMAN Future

Our mental frames

How we sustain
ourselves

How we resolve
conflicts

How we spend our lives

How we create
knowledge

How we use knowledge

How we share
knowledge

How we organize

How we expand our
presence

7

HUMAN Future

Concept

Our mental frames

Duration

1 hour

Cross Curricular Links:Technology
Current Affairs
Futures Studies**Skills**Discussion
Drawing
Reflection**Intelligences**Linguistic
Existential**Resources Required**Laptop
Access to internet
Microsoft PowerPoint
Flipchart / A3 papers
Board markers
Stationery**Energiser:**

Group statues (5 min.)

Objectives:

- To highlight the challenges that could impact the survival of our species
- To discuss 2050 milestones for our species

Starter: Bingo – Existential threats (5 min.) Resource Sheet 7a

Choice of words:

Global warming, nuclear holocaust, asteroid impact, supernova, magnetic reversal, pandemics, alien invasion, grey goo, biological warfare, Entropy, Big Crunch, Andromeda Collision, Alien Invasion, Super Volcano, Genocide, A.I., Mega-Tsunami, Peak Oil, Dark Nebula, Black Holes, M.A.D.

Activity 1: Discussion Carousel

5 min. reading time | 10 min. discussion time

The Earth Wall; The Time Wall; The Abstraction Ceiling

YouTube Video: [2045 – A new era for humanity](#) (7 min.)

The main goals of the 2045 Initiative: the creation and realization of a new strategy for the development of humanity which meets global civilization challenges; the creation of optimal conditions promoting the spiritual enlightenment of humanity; and the realization of a new futuristic reality based on 5 principles: high spirituality, high culture, high ethics, high science and high technologies.

Activity 2: Storyboard (10 min) Resource sheet 7b

Individually, think of one milestone for the year 2050. Draw a sequence of events storyboard on how we might achieve it.

Plenary: What if...? (5 min.)

What if we hadn't done today's lesson?

What if you weren't allowed to know what we've learnt today?

Extension Activity:

Read about Ray Kurzweil's predictions about events that will lead to the technological singularity.

Visit 2045.com and critically read their vision.

Reading Task:

Read the HUMAN project app content on *How we sustain ourselves*.

Starter Activity: Bingo









Activity 2: Story Board

[illegible]

Energiser:

As and Bs (5 min.)

Objectives:

- To identify the issues relating to sustainability.
- To create a manual/charter for Club EARTH 2050

Starter: Tableaux – Sources of Energy (5 min.)

Divide participants into groups. Each group creates a tableaux of one of the forms of energy: Wind energy, Solar Energy, Tidal Energy, Nuclear energy, Zero-point energy, Fossil Fuels

YouTube Video: [Pale Blue Dot](#) (3 min.) (Resource sheet 8a)

This excerpt from Carl Sagan's book, *A Pale Blue Dot* was inspired by an image taken, at Sagan's suggestion, by Voyager 1 on February 14, 1990. As the spacecraft left our planetary neighbourhood for the fringes of the solar system, engineers turned it around for one last look at its home planet. Voyager 1 was about 6.4 billion km away, when it captured this portrait of our world.

Activity 1: Earth Manual

(25 min. prep time)

Use the resource sheet 8b to create an earth manual for **Club EARTH 2050**.

Focus on :

- Mission Statement
- Club Members
- How the governors will be chosen
- Issues to tackle
- How to amend the charter.

Plenary: Charter Presentation (15 min.)

In their respective groups, participants present their charter for Club EARTH 2050 to the rest of the class.

Extension Activity:

Visit earth2hub.com and review its contents.

View Earth 2.0 : Initialisation on YouTube

Reading Task:

Read the HUMAN project app content on *How we resolve conflicts*.

8

HUMAN Future

Concept

Human Sustainability

Duration

1hour

Cross Curricular Links:

Cosmology
Earth Sciences
Global Perspectives
Future Studies

Skills

Role Play
Charter design
Reflection

Intelligences

Linguistic
Existential
Bodily-Kinaesthetic

Resources Required

Laptop
Access to internet
Microsoft PowerPoint
Flipchart / A3 papers
Board markers
Stationery

Transcript of Pale Blue Dot video

From this distant vantage point, the Earth might not seem of any particular interest. But for us, it's different. Look again at that dot. That's here. That's home. That's us.

On it everyone you love, everyone you know, everyone you ever heard of, every human being who ever was, lived out their lives. The aggregate of our joy and suffering, thousands of confident religions, ideologies, and economic doctrines, every hunter and forager, every hero and coward, every creator and destroyer of civilization, every king and peasant, every young couple in love, every mother and father, hopeful child, inventor and explorer, every teacher of morals, every corrupt politician, every "superstar," every "supreme leader," every saint and sinner in the history of our species lived there - on a mote of dust suspended in a sunbeam.

The Earth is a very small stage in a vast cosmic arena. Think of the rivers of blood spilled by all those generals and emperors, so that, in glory and triumph, they could become the momentary masters of a fraction of a dot.

Think of the endless cruelties visited by the inhabitants of one corner of this pixel on the scarcely distinguishable inhabitants of some other corner, how frequent their misunderstandings, how eager they are to kill one another, how fervent their hatreds. Our posturings, our imagined self-importance, the delusion that we have some privileged position in the Universe, are challenged by this point of pale light.

Our planet is a lonely speck in the great enveloping cosmic dark. In our obscurity, in all this vastness, there is no hint that help will come from elsewhere to save us from ourselves. The Earth is the only world known so far to harbor life. There is nowhere else, at least in the near future, to which our species could migrate. Visit yes. Settle, not yet. Like it or not, for the moment the Earth is where we make our stand.

It has been said that astronomy is a humbling and character building experience. There is perhaps no better demonstration of the folly of human conceits than this distant image of our tiny world. To me, it underscores our responsibility to deal more kindly with one another, and to preserve and cherish the pale blue dot, the only home we've ever known.

How to create a charter *(modified from eHow)*

1

Start by defining your mission. This **mission statement** will serve as the summary of what Club EARTH is about, so it should be specific and detailed. It should spell out your **goals** and briefly describe your plans to achieve them.

2

Detail what is required to become a **member** of the organization.

3

Define how the Club EARTH will be **governed**. Will there be a board of directors? A president, secretary and treasurer or any other positions you may find necessary? Whatever titles and structure you choose, think about what is expected from the people who hold these titles.

4

Be sure to include a procedure to **amend** the charter of Club EARTH should the need arise. This will prevent future organizational leaders from having to rewrite the entire charter just to make minor changes.

Excerpt from the HUMAN project

The Earth Manual:

“You are human. Conduct yourself wisely.” These could be the first words of our evolving Earth Manual. After 10,000 years of trial and error and our recent advances in Earth systems science, we know quite a bit. We can now use our understanding to design new sets of smarter practices with fewer unintended consequences, some to enable us to use Earth’s physical and biological processes wisely (e.g., how much fish can we take without causing collapse in fish stocks in our oceans), some to create our own parallel systems (e.g., fish farming). Our Earth didn’t come with a manual but now we’re smart enough to make one. By 2050 we should have gone through quite a few major revisions.

9

HUMAN Future

Concept

Conflict Resolution

Duration

1 hour

Cross Curricular Links:

Economics
Culture Studies
Global Perspectives
Future Studies

Skills

Critical Thinking
Recipe creation
Anagrams

Intelligences

Linguistic
Existential

Resources Required

Laptop
Access to internet
Microsoft PowerPoint
Flipchart / A3 papers
Board markers
Stationery

Energiser:

Tide's in, tide's out (5 min.)

Objectives:

- To differentiate between rational and irrational memes.
- To identify reasons for human conflicts and means of resolution
- To design a Peace Meme Collaborative

Starter: Lists (5 min.)

Make a list of all the reasons for human conflict.

YouTube Video: [Jason Silva on Abundance](#) (2 min.)

This video is inspired by the new book ABUNDANCE, written by X-Prize Founder and Singularity University co-founder, Peter Diamandis and writer Steven Kotler. In it, they explain how exponentially emerging technologies can be leveraged to address humanity's grand challenges...

The possibilities are dazzling.

Activity 1: Rational and Anti-rational Memes

10 min. discussion time | 5 min. display time

Hand out resource sheet 9a about memes.

Divide the audience into groups of 4-5. Ask them to come up with examples of rational and anti-rational memes in the world today that will contribute to or take away from world peace.

Activity 2: Recipe

10 min. writing time | 5 min. display time

In the form of recipe instructions, participants write their thoughts on how to create a Peace Meme Collaborative

Plenary: Anagram (10 min.)

Participants unscramble anagrams of memes and separate them into rational and anti-rational groups. (Terrorism, religion, language, censorship, plastic surgery,)

Extension Activity:

Watch Steven Pinker's TED talk on the surprising decline in violence

Watch Peter Diamandis' TED talk on Abundance

Reading Task:Read the HUMAN project app content on *How we spend our lives*.

Memes

A meme is "an idea, behavior, or style that spreads from person to person within a culture."

A meme is a unit for carrying cultural ideas, symbols, or practices that can be transmitted from one mind to another through writing, speech, gestures, rituals, or other imitable phenomena.

Memes may be regarded as the non-biological counterparts to genes in that they self-replicate, mutate, and respond to selective pressures.

Examples of memes

- Racism
- Writing/Language
- Religion
- Bathing
- Making tools
- Fashion

How Memes Spread

Memes spread either vertically by cultural inheritance (as by parents to children) or horizontally by cultural acquisition (as by peers, information media, and entertainment media)

Rational Memes

A rational meme replicates among society because people find it valuable.

An open society is dominated by rational memes and makes progress.

Modern Britain is thriving in the fields of art, music, technology, science, invention, and literature, because it is dynamic, embraces the values of the age of enlightenment, and is dominated by rational memes.

Anti-rational memes

An anti-rational meme replicates by disabling its holder's rational thinking so that one has no choice but to spread it.

A static society is dominated by anti-rational memes and changes so slowly that people do not notice.

The Easter Island society went extinct because it was static and filled with anti-rational memes.

What if ...we created a Peace Meme Collaborative? Think of it as a network of people united by a shared goal: design new memes that have the power to alter or displace the current memes that lead to violent conflict or stasis. Admittedly, this may be more demanding than rocket science. Meme design requires an in-depth insider understanding of what the different humans involved in the conflict are thinking as well as tremendous creativity about what new ideas they might be willing to adopt. But the good news is, propagating new ideas in the 21st century is easier than ever. So we can quickly see which ideas fall flat and which ideas have that something to become memes. Take an authoritarian nuclear-weaponed society like North Korea. What kinds of ideas would we need to open it up?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

[illegible]

Energiser:

O Kabita! (5 min.)

Objectives:

- To analyse the importance of creativity and the freedom to create.
- To discuss the meaning of creativity.

Starter: Reframing matrix (5 min.)

In groups, participants write their responses to problem 1 and problem 2 in the reframing matrices. (Resource sheets 10a, 10b)

YouTube Video: [Jason Silva on Radical Openness](#) (2 min.)

An anthem on the power of IDEAS. “” Ideas are like organisms, they replicate, they have infectivity and spreading power; they leap from brain to brain and compete for the limited attention of our minds.

Activity 1: Creativity and Multiple Intelligences

10 min. prep time | 10 min. presentation time

Divide the audience into groups based on ability. They are required to present their ideas on what creativity means, either through: art, music/song, role, play, poetry, rap, essay, or speech.

Activity 2: Role Play: Press Conference (10 min. prep time)

The classroom transforms into a press conference to announce the idea of a **Universal Freedom to Create**. Choose

1. A panel of expert speakers who will make a statement.
2. A selection of reporters who will question the experts and quiz them for more information.

Use information from resource sheet 10c

Plenary: Press Conference role play (15 min)

Participants role play and enact the press conference. (The aim is to tease out what a Universal Freedom to Create means)

Extension Activity:

Watch Ken Robinson's TED talks on How Schools Kill Creativity

Think about this statement: *“We could one day become substrate independent minds that will infuse intelligence into every corner of the universe. We could be landscaping the fabric of space itself.”*

Reading Task:

Read the HUMAN project app content on *How we create knowledge*.

10

HUMAN Future

Concept

How we spend our lives

Duration

1 hour

Cross Curricular Links:

Art
Music
Drama

Skills

Critical Thinking
Role play
Performance
Textual analysis

Intelligences

Linguistic
Existential

Resources Required

Laptop
Access to internet
Microsoft PowerPoint
Flipchart / A3 papers
Board markers
Stationery

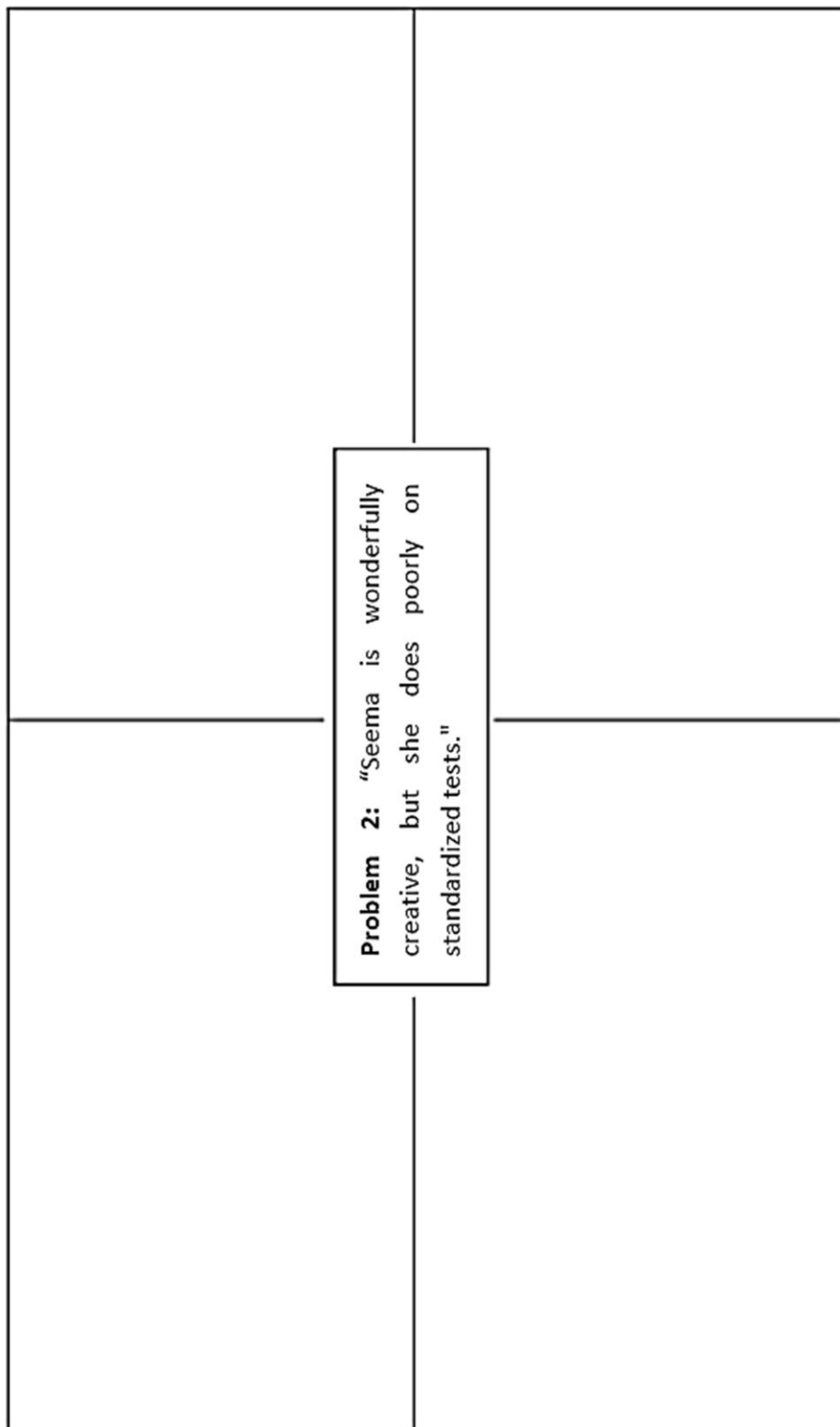
Reframing matrix

REFRAMING MATRIX

	<p>Problem 1: "Alice is brilliant, but she doesn't have a drop of creative talent."</p>	

Reframing matrix

REFRAMING MATRIX



Universal Freedom to Create

From the HUMAN perspective, both Abundance and Happiness are Sirens' calls—irresistible but dangerous. A single-minded pursuit of Abundance can lead us toward an endless proliferation of increasingly exotic needs. A single-minded pursuit of Happiness can lead us toward self-indulgence.

Ulysses had to bind himself to the mast to resist the Sirens' call. We too would be better off binding ourselves—to an ultimate goal that turns all of us into players of an infinite game of self-improvement. We could strive to minimize the number of waking hours we have to spend on merely sustaining ourselves, and maximize the number of waking hours we can spend on creating species-advancing explanations and designs. Instead of dreaming of our freedom from fear and want, we could dream bigger—we could dream of our freedom to create. Imagine who we might become once all of us are free to spend our lives on advancing the ongoing human project. We could transform the very essence of what it means to ascend as a species. Perhaps it will be the wisdom and beauty of our universal creations that would become the measure of our advancement.

We could be hundreds, or thousands of years away from the universal freedom to create. We might discover that this ultimate goal is a perpetually moving target because the more we learn about our universe and beyond the more threats to our survival we discover; the more we tinker with ourselves and our cosmic and biological givens the bigger our challenges from unintended consequences. There might be plenty of new entries on our list of things we have to do to stay alive. We may never attain the universal freedom to create but the idea itself gives us a sense of direction for how we should transform the contents of human lives. In the beam of this light-house, prosperity or abundance for all is no longer our end-game but only the means to the goal beyond.

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Erika Ilves & Anna Stillwell

Energiser: Dodgeball (5 min.)

Objectives:

- To consider the difference between fact and opinion.
- To analyse whether science is the best way to acquire knowledge.

Starter: Fact or Opinion (5 min.)

In groups, participants discuss the difference between fact, opinion, value judgement, and revelation. They then assign each one of those to one of the four statement displayed:

“The sun is made of hydrogen and helium.”

“I think the moon is a huge ball of cabbage.”

“It is wrong for people to eat meat.”

“I knew the 9/11 attacks would happen because I had a dream of a plane crashing into a building.”

YouTube Video:

Jason Silva: To understand is to perceive patterns (2 min.)

To understand is to perceive patterns. Of course what this means is that true comprehension comes when the dots are revealed and you get Steven Johnson's long view when you see the big picture.

Activity 1: Plus, minus, interesting

10 min. discussion time | 10 min. sharing time

Divide the audience into triads. Hand out resource sheet 11a. Participants fill in the grid for the action below:

Action: Humans should pursue unlimited knowledge. With time, we should aim to know everything.

Activity 2: Ladder of Inference (15min. prep time)

Use the Ladder of Inference resource sheet 11b and 11c

Ask participants to reflect on the following statement: “Science is the best way to acquire knowledge” and fill in the form.

Here’s a 5 min TED Ed video that explains the Ladder of Inference:
<http://ed.ted.com/lessons/rethinking-thinking-trevor-maber>

Plenary (10 min)

Participants share their views on the conclusions they’ve reached from the ladder of inference activity.

Extension Activity:

Consider all the things you believe to be true. Reflect on how true you think they are and whether they are fact, opinion, or revelation.

Reading Task:

Read the HUMAN project app content on *How we use knowledge*.

11

HUMAN Future

Concept

How we create knowledge

Duration

1hour

Cross Curricular Links:

Philosophy
Science

Skills

Critical Thinking
Lateral Thinking

Intelligences

Linguistic
Existential

Resources Required

Laptop
Access to internet
Microsoft PowerPoint
Flipchart / A3 papers
Board markers
Stationery

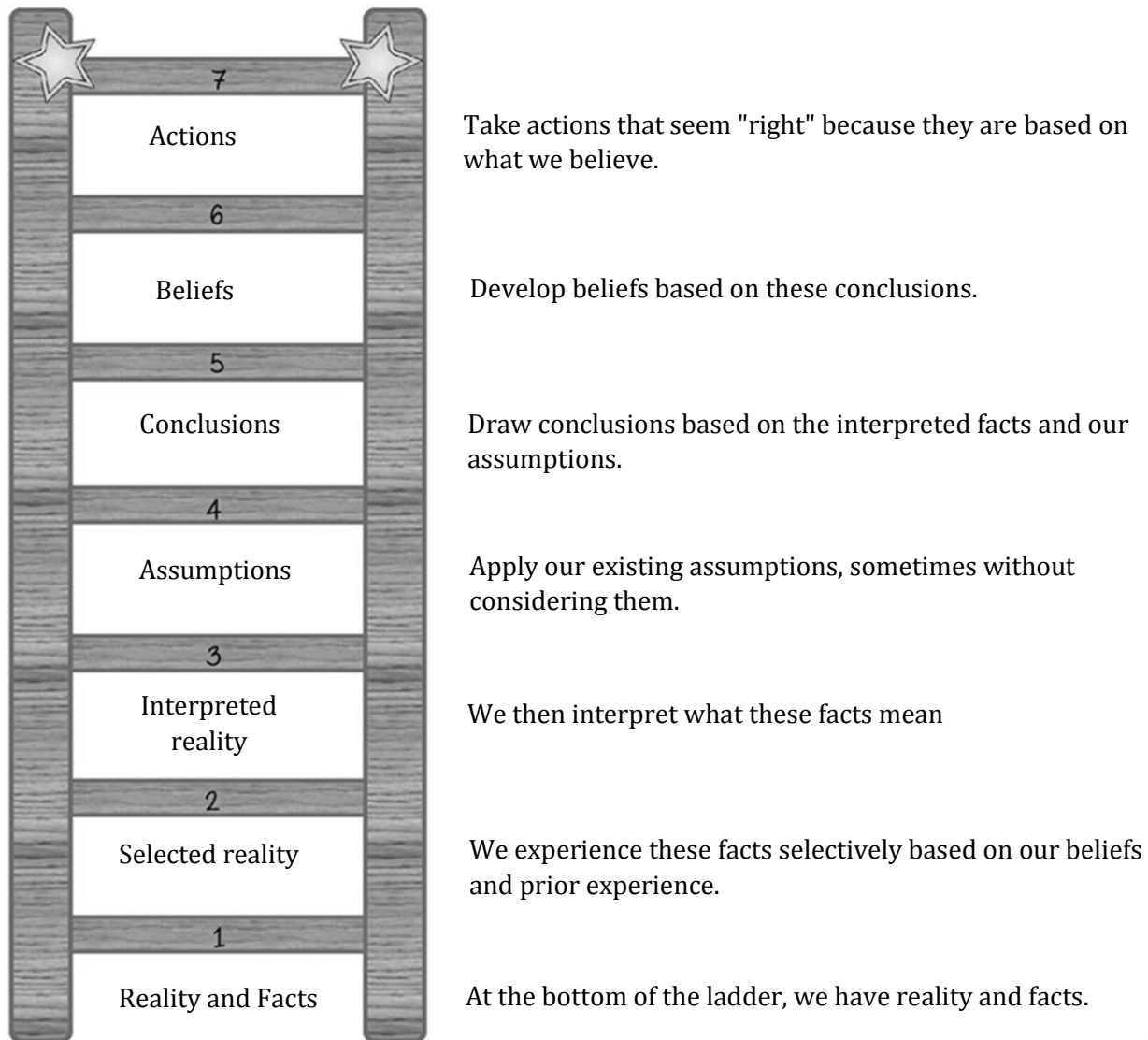
Action: “Humans should pursue unlimited knowledge. With time, we should aim to know everything.”

[illegible]

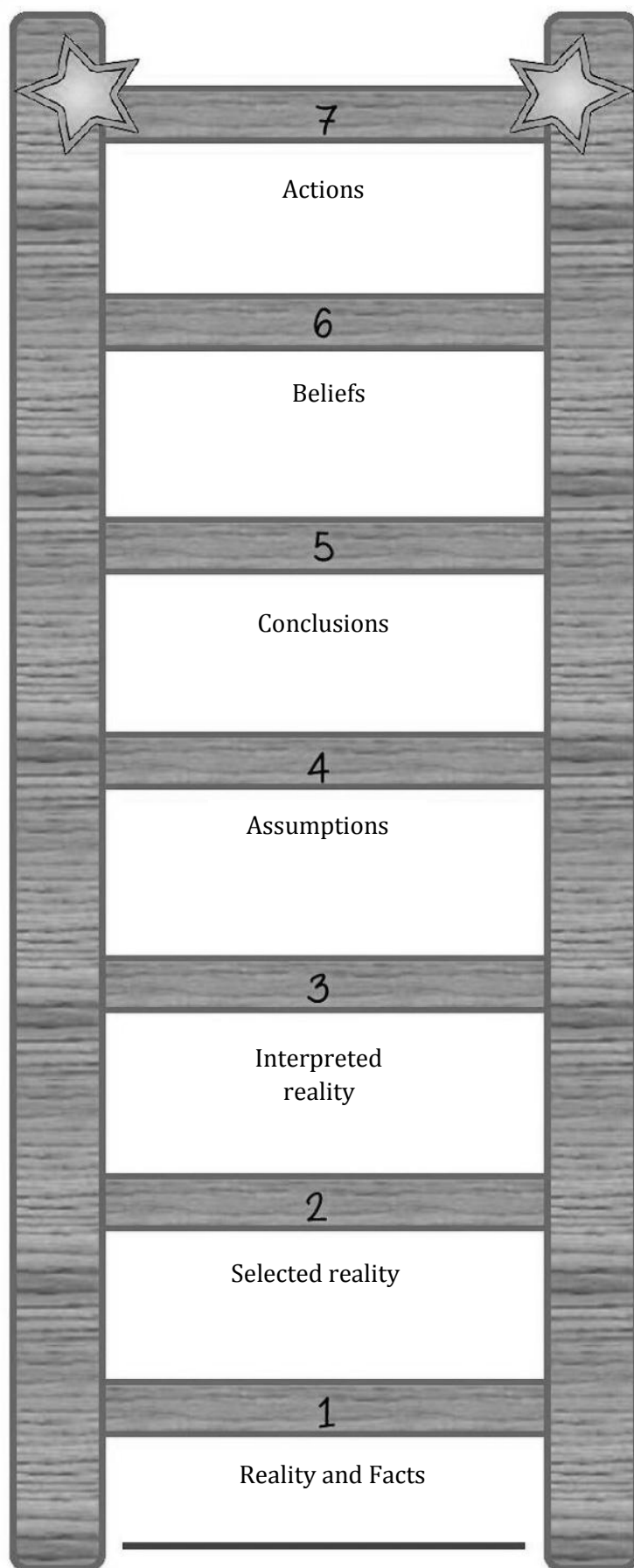
Ladder of Inference

This is a useful technique to figure out whether one has leapt to the wrong conclusion. We are inundated with information, fall under peer pressure, and are influenced by social networking. It is not inconceivable that we occasionally are wrong about our beliefs. On the flip side, oftentimes, we may be right about them too.

The Ladder of Inference describes the often preconscious process we take to get from a fact to a decision or action. The thinking stages can be seen as rungs on a ladder:



Ladder of Inference Action: "Science is the best way to acquire knowledge."



Write your thoughts here:

Energiser: Sagidi Sagidi Sapupo (5 min.)

Objectives:

- To evaluate how we use knowledge.
- To analyse what it means to be human now and in the distant future

Starter: Paint a picture with words (5 min.)

“We use knowledge to create new realities.” – the HUMAN project

“Think of exciting future possibilities and pull the present to meet it.” -
The Imaginary Foundation

Paint a picture in words of how we can use knowledge to create new future realities and describe what it would look like.

YouTube Video: [Jason Silva: Transcension Hypothesis](#) (2 min.)

The Transcension Hypothesis by John Smart offers an account of what comes after the technological singularity.

Activity 1: Six Thinking Hats

15 min. discussion time | 10 min. sharing time

Divide the audience into 6 groups. They think about the possibility of uploading the human mind to computers and living for ever.

Blue hat: How we might overcome death – the process behind it.

White Hat: Just facts about uploading consciousness/the human mind

Red Hat: Feelings about living forever either biologically or digitally

Green Hat: Future possibilities for the human species

Yellow Hat: Benefits of living forever.

Black Hat: Things to be cautious about; potential dangers; play devil’s advocate - say what opponents might say about living forever.

Plenary: News Bulletin (10 min)

Divide participants into groups. Each group creates a 30 sec news bulletin for one of the following statements. Participants cheer or hiss in response:

- Smart, dexterous machines that can perceive, think, learn and move at inhuman speeds without a wink of sleep.
- The first genetically modified and enhanced human being created in a lab.
- 3D printer successfully prints food.

Extension Activity:

Read about how Singularity University and the techno-progressive think tank IEET run programs to explore future impacts of advanced technologies and prepare the general public for what’s coming.

Reading Task:

Read the HUMAN project app content on *How we share knowledge*.

12

HUMAN Future

Concept

How we use knowledge

Duration

1 hour

Cross Curricular Links:

Philosophy

Science

Future Studies

ICT

Skills

Critical Thinking

Lateral Thinking

Intelligences

Linguistic

Existential

Resources Required

Laptop

Access to internet

Microsoft PowerPoint

Flipchart / A3 papers

Board markers

Stationery

13

HUMAN Future

Concept

How we share knowledge

Duration

1 hour

Cross Curricular Links:

Philosophy
Design
Future Studies
Technology

Skills

Design Thinking
Collaborative Learning

Intelligences

Linguistic
Existential
Interpersonal
Visual-Spatial

Resources Required

Laptop
Access to internet
Microsoft PowerPoint
Flipchart / A3 papers
Board markers
Stationery

Energiser: Captain's coming (5 min.)

Objectives:

- To examine how we share knowledge.
- To create a library of utopia using the design thinking process

Starter: Arrange in the right order (5 min.)

Participants arrange the words in resource sheet 13a in the right order of technological evolution.

Clay tablets, papyrus, papyri books, block-printed books, moveable type printers, paperbacks, CDs, Kindle

YouTube Video: [Jason Silva: A mind made for mating](#) (2 min.)

With the advent of culture, we use "technologies of rhetoric" to 'capture the attention' of others, except no longer to spread our genes but to spread our MEMES, a new replicator, born from the primordial soup human culture... one that leaps and spreads...

Activity 1: Design Thinking (40 min.) Resource sheet 13b

Design a Library of Utopia think about the possibility of uploading the human mind to computers and living for ever.

Participants go through the first four steps of design thinking:

1. Discovery
2. Interpretation
3. Ideation
4. Experimentation.

Points to consider:

What will go in the library? Who will have control over content? Where will it be stored and in what form? Who can add to it?

Plenary: Prototype (10 min)

Each group presents the prototype that they've developed in the experimentation phase.

Extension Activity:

If we had to compress the totality of human knowledge onto mere 10 pages of text or 10 minutes of a documentary, what would they be like?

Reading Task:

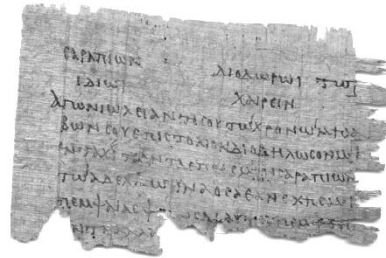
Read the HUMAN project app content on *How we organise*.

Arrange in chronological order of invention

Stone Tablet



Papyrus



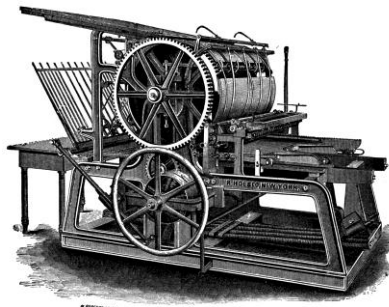
Papyrus Book



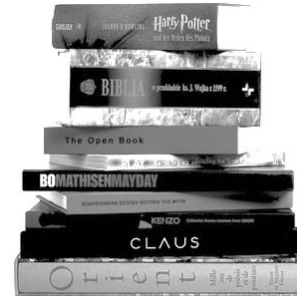
Block-printed book



Moveable-type Printing Press



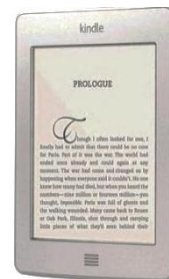
Paperback books



CDs



Kindle/electronic paper



Resource Sheet 13b

Design Thinking is a structured approach to generating and evolving ideas. It has five phases that help navigate the development from identifying a design challenge to finding and building a solution.

Design Thinking is the confidence that everyone can be part of creating a more desirable future, and a process to take action when faced with a difficult challenge. That kind of optimism is well needed in education.



Discovery

During this phase, participants immerse themselves in learning. They conduct research. The goal is to develop background knowledge through these experiences. They use their developing understandings as a springboard as they begin to address design challenges.

Interpretation

Interpretation transforms your stories into meaningful insights. Observations or just a simple conversation can be great inspiration—but finding meaning in that and turning it into actionable opportunities for design is not an easy task. It involves storytelling, as well as sorting and condensing thoughts until you've found a compelling point of

Ideation

Ideation means generating lots of ideas. Brainstorming encourages you to think expansively and without constraints. It's often the wild ideas that spark visionary thoughts. With careful preparation and a clear set of rules, a brainstorm session can yield hundreds of fresh ideas.

Experimentation

Experimentation brings your ideas to life. Building prototypes means making ideas tangible, learning while building them and sharing them with other people. Even with early/rough prototypes, you can receive a direct response & learn how to further improve and refine an idea.

Evolution

Evolution is the development of your concept over time. It involves planning next steps, communicating the idea to people who can help you realize it, and documenting the process. Change often happens over time, and reminders of even subtle signs of progress are important.

-- *Designthinkingforeducators.com*

Energiser: Verbal Tennis (5 min.)**Objectives:**

- To discuss how we should organise to reach our goal of sharing, surviving, and ascending as a species.

Starter: Scavenger Hunt

Social networks + crowd-funding platforms + massive scale collaboration platforms = unprecedented potential to accomplish shared goals.

(15 min.) Resource sheets 14a-d

Divide the audience into groups. Assign them to the following groups:

1. Social Networks
2. Crowd-funding platforms
3. Massive-Scale Collaboration
4. Philanthropic Foundations

Each group has 15 minutes search online and find as many examples of the category they've been assigned to.

YouTube Video: [Jason Silva: Radical Openness](#) (2 min.)

An anthem on the power of IDEAS and the free exchange of information.

Activity 1: Presentations

(20 min.)

Each group presents 3 of the most interesting examples of the category they'd been assigned to. 5 minutes per group.

Plenary: Group Discussion (10 min)

How can we make the most out of our expanding connections to take on the challenges that affect the trajectory of the on-going human project?

Extension Activity:

Read more about the collaboration platforms and crowd-sourcing forums in the world today.

Reading Task:

Read the HUMAN project app content on *How we expand our presence*.

14

HUMAN Future

Concept

How we Organise

Duration

1 hour

Cross Curricular Links:

Current Affairs
Psychology

Skills

Online Research
Mini-Presentations
Group Discussion

Intelligences

Linguistic
Visual-Spatial

Resources Required

Laptop
Access to internet
Microsoft PowerPoint
Flipchart / A3 papers
Board markers
Stationery

Social Networking:



Crowd-funding platforms:



Collaborative Enterprises:

WIKIPEDIA
The Free Encyclopedia



TED
IDEAS WORTH SPREADING

Linux™



ANSARI
PRIZE®



X
THE LONG NOW
FOUNDATION

CC creative
commons

SPACEX
Space Exploration Technologies



LibriVox



PROJECT POLYMATH
One da Vinci changed the world. Let's create thousands.

earth
2.0
TIME TO UPGRADE

Philanthropic Foundations



The Giving Pledge is an effort to invite the wealthiest individuals and families in America to commit to giving the majority of their wealth to philanthropy.

Bill & Melinda Gates Foundation

Total Giving (2009) – \$3.05 billion

Total Global Development Giving – \$2.5 billion (82 percent)

Open Society Foundations

Total Giving (2009) – \$683 million

Total Global Development Giving – \$404 million (59 percent)

Ford Foundation

Total Giving (2010) – \$520 million

Total Global Development Giving – \$135 million (26 percent)

William and Flora Hewlett Foundation

Total Giving (2010) – \$358 million

Total Global Development Giving – \$103 million (29 percent)

Children's Investment Fund Foundation

Total Giving (2010) – \$214 million

Total Global Development Giving – \$96 million (45 percent)

United Nations Foundation

Total Giving (2009) – \$108 million

Total Global Development Giving – \$108 million (100 percent)

John D. and Catherine T. MacArthur Foundation

Total Giving (2010) – \$230 million

Total Global Development Giving – \$92.4 million (40 percent)

Conrad N. Hilton Foundation

Total Giving (2010) – \$100.1 million

Total Global Development Giving – \$67 million (67 percent)

Rockefeller Foundation

Total Giving (2009) – \$136 million

Total Global Development Giving – \$54.75 million (40 percent)

Gordon and Betty Moore Foundation

Total Giving (2009) – \$178.4 million

Total Global Development Giving – \$19.4 million (11 percent)

Energiser: Celebrity/Stereotype Party (5 min.)

Objectives:

- To identify reasons why we should leave our planet.
- To analyse what cosmic culture might look like.
- To create a list of responsibilities for the cosmic citizen.

Starter: Treasure Hunt

(10 min.) Resource sheets 15a

Cut up and hide the reasons from resource sheet 15a under the chairs before the lesson starts. Participants search for the reasons and tack it on to the whiteboard.

YouTube Video: [Jason Silva: Imagination](#) (3 min.)

Sartre said "Because we can imagine, we are Free!"... this video mash up is an exploration of just what that idea means...

Activity 1: Giant Poster – Cosmic Culture

(15 min.) Resource Sheet 15b

Join several A3 sheets of paper (at least 20) to form one giant sheet of paper. Ask all participants together to make a visual representation of what cosmic culture will look like.

They may add post-its, mind-maps, images, phrase etc.

Activity 1: Bill of Rights and Responsibilities

(15 min.) Resource Sheet 15c

Divide the participants into groups and give each group a copy of the bill of rights and responsibilities to complete (resource sheet 15c).

Plenary: Display (10 min)

Each group displays their Bill of Rights and Responsibilities and other groups walk around and read.

Extension Activity:

Read more about the existential threats facing our planet.

Reading Task:

Read the HUMAN project app content on *The Purpose, Agenda, and Organisation of the HUMAN project*.

15

HUMAN Future

Concept

How we Expand our Presence

Duration

1hour

Cross Curricular Links:

Cosmology
Exobiology
Sociology
Culture Studies

Skills

Poster Design


Intelligences

Linguistic
Visual-Spatial
Existential

Resources Required

Laptop
Access to internet
Microsoft PowerPoint
Flipchart / A3 papers
Board markers
Stationery

Reasons to leave the planet

	Meteor Impact	Over Population
	Climate Change/ Pollution	Limited Resources
	Nuclear holocaust	Global Terrorism
	Pandemics	Disastrous Solar Flares
	Encounter new life and new civilisations	Encounter new technology
	Encounter new cultures	We are explorers
	Super Nova Explosion	Super Volcanoes
	Aging Sun	Collision with Andromeda Galaxy



Aspects of Culture

Language and dialect

Religion

Technology

Cuisine

Aesthetics - art, music, literature, fashion, and architecture

Values, ideology

Social conventions, including norms, taboos, and etiquette

Gender roles

Recreational activities such as festivals and holidays

Commercial practices

Social structure

the
HUMAN
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Erika Ilves & Anna Stillwell

Cosmic Citizen Bill of Rights and Responsibilities

Cosmic Citizen
Bill of Rights and Responsibilities

The Cosmic Citizen will have the right to...	The Cosmic Citizen will have the responsibility to...

Rohan Roberts
Head of Professional Development
The Winchester School,
Jebel Ali Gardens
Dubai (UAE)
www.roharoberts.com

the **HUMAN** project

Erika Ilves & Anna Stillwell



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