



Student Learning Log



E-mining

Sustainability | Resources | Technology

Name: _____

Class: _____

Step-Up 2018-2020

Castletroy College

How sustainable is your smart phone???

in **10** years of smartphone sales

7.7 billion smartphones were produced globally

968 terawatts hours of electricity was used to make all these smartphones, enough energy to power Ireland

for **39 years**



there are only **2.53 billion** global smartphone users yet there are **7.4 billion people** in the world

did you know ...

that every smartphone contains up to **€1 worth of gold** yet only

20% of global electronic waste is recycled
researchers estimate that....

there are more than **£40 billion's** worth of recoverable materials in unwanted electronic devices lying idle in UK homes alone

when manufacturing

1

smartphone



- 0.25 gigajoule of energy is consumed
- 13 tonnes of water is consumed
- 16kg of CO2 is emitted*

* larger screens tend to have a larger carbon footprint

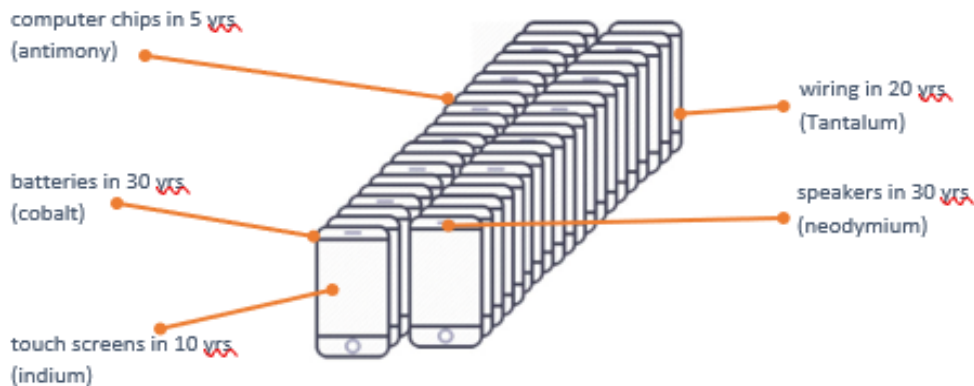
On average a smartphone is replaced every **21 months**,
so you might own as many as

41 smartphones during your lifetime

Now imagine if

some of the raw materials needed to make smartphones
were no longer available

we could run out of....



QUESTION: Is our current design, manufacture, use and disposal of
smart phone sustainable??



Dear student,

Over the next four weeks all 2nd year students will experience and participate in a cross curricular unit of work called 'emining' which has been designed by a group of your teachers over the past few months. Some information about the project is given here, but if you have any other questions then please do ask any of the teachers involved in the delivery.

What subject areas are involved?

Emining will be delivered across the subject areas of Science, CSPE, Geography, Business and Metalwork.

What's the 'big idea' behind this project

Our stuff is made of stuff. Our appetite to have new stuff appears to be unbounded. Billions of people around the world aspire to our standards of living and consumption. We never think about where the materials for our stuff come from and whether or not they will always be available to us in the future.

So, where do our materials come from? How are they mined/extracted? Why do we use the specific materials that we do? Where does our stuff end up?

During this programme of study, you will study the origin, properties, design and use of various metals. You will study the environmental, social and economic consequences of current global as well as individual practices in terms of origin, manufacture, design, use and disposal of materials.

The way we currently use materials is very wasteful and has complex environmental, social and economic consequence both for now and for the future.

We need to move from this 'take-make-dispose' linear economy to a circular economy where products, their components and materials are used more efficiently and multiple times. How do we do this? What is involved? What actions can be taken? Is there any action you could take?

What is the purpose of delivering a unit across many subject areas.

The purpose of planning and designing lessons across different subject areas and delivering them at the same time is to give you, our students, a deeper understanding of particular topics and concepts by allowing you to make deeper connections between learning in various subject areas.

What type of learning experiences should you expect?

All learning in this unit of work has been linked closely to Junior Cycle learning outcomes and the lessons have been designed to maximise your participation and engagement. As well as gaining a deeper understanding of the subject area, we hope that you will get many opportunities to develop a wide range of key skills and competencies as you learn through a variety of innovative learning experiences both individually as well as in groups such as

discussions, research, videos and guest speakers, designing, planning, problem solving and marketing and taking action.

How will we gather evidence of your learning?

There is a variety of methods of assessment built into this unit of work and you can showcase your learning and understanding in various way such as by participation in group and class discussion, successful completion of class and homework activity sheets, answering questions in class, presentation of your research project, written report on class investigations which fulfilling specific success criteria, planning and problem solving and even through a table quiz!

What is the purpose of this learning log?

This learning log is a personalised record of your own learning. It is like a diary where you can record your reflections on your learning experiences.

The **Learning Log** is a technique to help you focus on what you are **learning** in your classes by writing your thoughts, reactions, and responses to class activities, videos, speakers, discussions.

In a learning log, you are asked either to take what you have been learning in class and reflect on it or relate something out of class to what you have been learning in class. When you make personal **connections** with the subject matter, it has been proven that more meaningful learning will occur for you.

What is expected of you?

There is an opportunity for you to log where you are at with your learning **at the start and end of each week** so you can monitor the progress you have made during the week and identify your areas of strength and your areas for further improvement.

You must make use of this learning log and ensure that it is filled in completely by the end of each week. There are prompts on page 34 to help you with your reflective writing. There is also a table on page 37 where you can log all new words and concepts that you may encounter during this time.

In conclusion

We hope that you enjoy this learning experience and we look forward to working together on emining for the next 4 weeks. We welcome any feedback that you may have that will assist us in making improvements moving forward.

Many thanks, The Eming team.

Project Coordinator: Ms. Kiely

Design Team: Ms. Delaney, Mr. Grant, Ms. Hannon, Mr. Keehan, Ms. Kiely, Ms. McMahon.

Week 1: Have some idea: ☐ ☐ ☐ Work in progress ☐ ☐ ☐ There: ☐ ☐ ☐

I can:	Start of week	End of week
Science		
Define the term elements, mixtures and compounds.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Identify from the periodic table metals and non-metals and list their properties.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Make generalizations about the properties that differentiate metals from non-metals.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Explain how the elements used in mobile phones has changed over the past decade	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Work in a group to plan, design and carry out an investigation to determine if a material is a conductor of heat and electricity	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
I can use a multi meter to measure resistance.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Define the term critical raw material and give 3 examples of critical raw materials	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
CSPE		
Understand the term ecological footprint.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Calculate my ecological footprints.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Use images and texts to show my ecological footprint.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Investigate ways that I can lesson my ecological footprint	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Create a definition of sustainable development	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Become aware of the UN Sustainable Development Goals	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
BUSINESS		
Explain the term "economic resources"	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Identify and explain each of the factors of production	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Distinguish between needs and wants	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Explain the term scarcity.		
Describe how a business uses each of the factors of production to create goods, services and wealth	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Explain how scarcity, choice and opportunity cost impact on the production of goods and services	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
List the rewards associated with each of the factors of production	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Week 1: Invited Guest Speaker: iCRAIG

Topic: Mining (Navan v's Africa)

Comments:

Overall reflection on learning.

WWW (What Went Well)- mention two things

I really enjoyed.....

because....

EBI (Even Better If)

Week 1: Science

This week's topic: _____

Reflect on key words, facts and ideas from this week's lesson



My reflection:

Comments, questions and thoughts



A skill I used was.....

What helped me to learn was.....

What connection, if any, did you make to learning in another subject area?



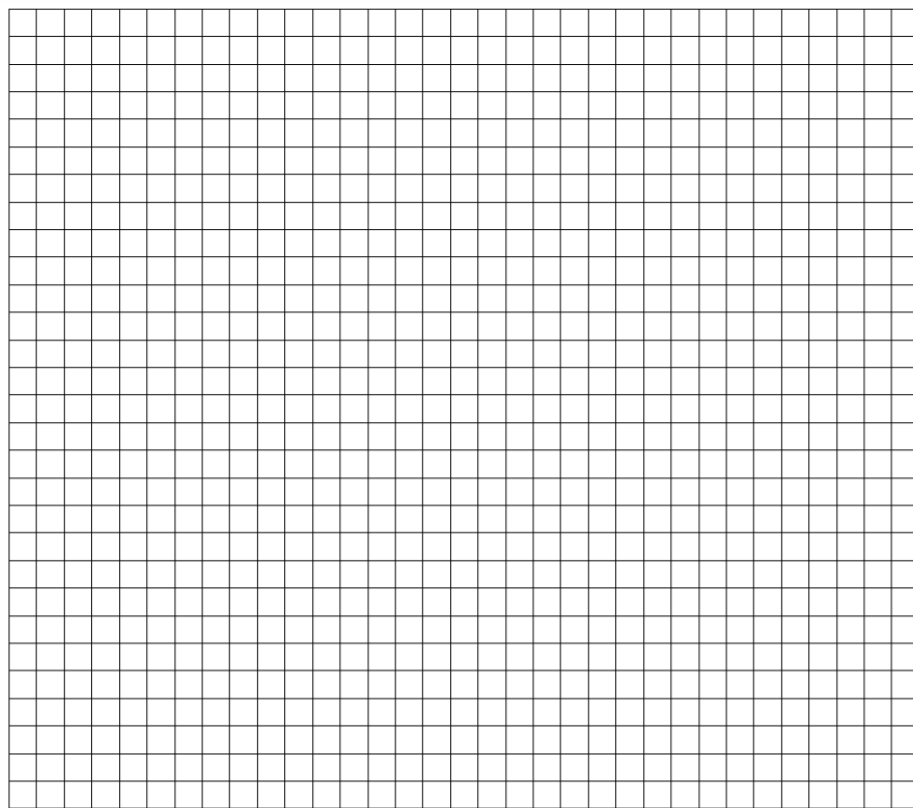
what's the connection ?



Week 1: CSPE

Topic _____

Week 1: Lesson 1 Compile a visual representation of your ecological footprint.



Week 1 Lesson 2

Looking at your ecological footprint - complete the following statement.

What surprised me was

Week 1: Business

Topic: _____

The most important thing I learned is...

The most interesting part was:

What help me understand was....

For this week's work I would give myself the following comment.....



What connection, if any, did you make to learning in another subject area?

End of week reflection

Do a CNQ on one learning experience for example a invited speaker, a classroom learning experience, an activity etc. (C - Connections N- what was new Q- Questions)

Connections (C) you made to prior knowledge or to your learning in subject areas.

What was **NEW** (N)?

QUESTION(S) (Q) you may have...

Week 2 Have some idea: ☐ ☐ ☐ Work in progress: ☐ ☐ ☐ On there: ☐ ☐ ☐

I can:	Start of week	End of week
Science		
Define the term critical raw material.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Identify three Critical raw materials and explain their origin and method of extraction.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Carry out research on smart phone elements and present it to my class in a clear and effective way.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Describe how CRMs are extracted.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Recognise the energy demands of the extraction process.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
CSPE		
Create a definition of sustainable development	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Become aware of the UN Sustainable Development Goals	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Identify how SDG12 can be connected to critical raw materials.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Analyse a global issue – unsustainable consumption and production of critical raw materials	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Identify 2 or more causes of unsustainable consumption.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Interpret data collected during house survey.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Geography		
I can explain how the features of land can influence where settlements occur	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
I can explain how access to resources can influence where settlement occurs.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Business		
I can distinguish between economic systems, for example free market, mixed economy and centrally planned.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
I can explain different sectors of society, for example public, private and third.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
The sector of economy that waste-recycling companies work in and identify spin off companies created by recycling products.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Understanding conscious and sustainable consumption.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
I know the difference between an open and closed economy.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
I can explain the importance of imports and exports for a country.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Engineering		
Understand the key stages of the engineering design process	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Explain how design impacts on the function and quality of a product	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Week 2: Invited Guest Speaker: Dell computer

Topic: Computer carbon foot printing.

Comments:

Overall reflection on learning.

WWW (What Went Well)- mention two things.

I really enjoyed.....

because....

EBI (Even Better If)

Week 2: Science

Topics: _____



The most important thing I learned is...	What helped me to learn was.....
A key skill I used/developed was:	I could have learned better if



What connection, if any, did you make to learning in another subject area?

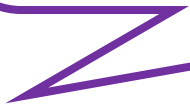
Week 2: CSPE

This week you learnt about how the unsustainable consumption and production of critical raw materials is a global issue.

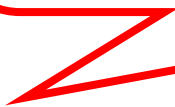
What have I learned?



So what **could** I do?



Now, what **will** I do?



Week 2: Geography

This week's topic: _____

Reflect on key words, facts and ideas from this week's lesson



My reflection:

Comments, questions and thoughts



A skill I used was.....

What helped me to learn was.....



What connection, if any, did you make to learning in another subject area?

Week 2: Business

Topic_____

3 things I learned

-
-
-

2 things I found interesting

-
-

1 question I am left with

-

The activity I liked best was, because



What connection, if any, did you make to learning in another subject area?

Week 2: Metal work

Topic: _____

The most important think I
learned is...

The most interesting part was:

What help me understand
was....

For this week's work I would
give myself the following
comment.....



What connection, if any, did you make to learning in anther subject area?

End of week 2 reflection:

Do a CNQ on one learning experience for example an invited speaker, a workshop, a learning activity, a project etc. (C - Connections, N- what was New, Q- Questions)

Connections you made to prior knowledge or to your learning in subject areas.

What was **new**?

Questions you may have...

Week 3: Have some idea: ☐ ☐ ☐ Work in progress ☐ ☐ ☐ I'm there: ☐ ☐ ☐

I can:	Start of week	End of week
Science		
Explain the social and environmental impact of mining.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Calculate the energy used while charging my mobile phone.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Identify what my phone needs to interact with in order to function.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Working in groups, analyse data from a survey and identify patterns and trends in current mobile phone use.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Present survey data in an appropriate format - table, chart, graph.		
Explain the difference between a circular and a linear economy.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
CSPE		
Identify the consequences of electronic waste	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Discover how electronic waste has an impact on the lives of people in Ghana and China.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Compare and analyse information	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Identify possible solutions to the challenge of unsustainable consumption of CRM e.g. circular economy and recycling events	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Geography		
Identify three uses of cobalt in everyday life.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Compare how resources are extracted in developed v's 3 rd world country.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Identify a country as developing or developed based on how they extract resources from the earth (primary economic activities)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Understand how poorer countries can be exploited by wealthier countries.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Business		
Explain how an economy works	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Identify the factors of production.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Understand the different types of Government Revenue and Expenditure	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Demonstrate how companies are affected by Supply/Demand and different economic systems.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Know how price and other factors will affect demand and supply	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Metal work		
Evaluate the factors that influence their own design and that of others	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Apply their knowledge of the property's materials associated with a range of engineering	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Understand the properties associated with a range of engineered materials	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Week 3 : Invited Guest Speaker: ERP- European Recycling Platform **Topic:** WEEE and Marketing

Comments:

Overall reflection on learning.

WWW (What Went Well)- mention two things.

I really enjoyed.....

because....

EBI (Even Better If)

Week 3: Science

Topic _____

3 things I learned

-
-
-

2 things I found interesting

-
-

1 question I am left with

-

The activity I liked best was, because



What connection, if any, did you make to learning in another subject area?

Week 3: Geography

Topic: _____

The most important think I learned is...

The most interesting part was:

What help me understand was....

For this week's work I would give myself the following comment.....

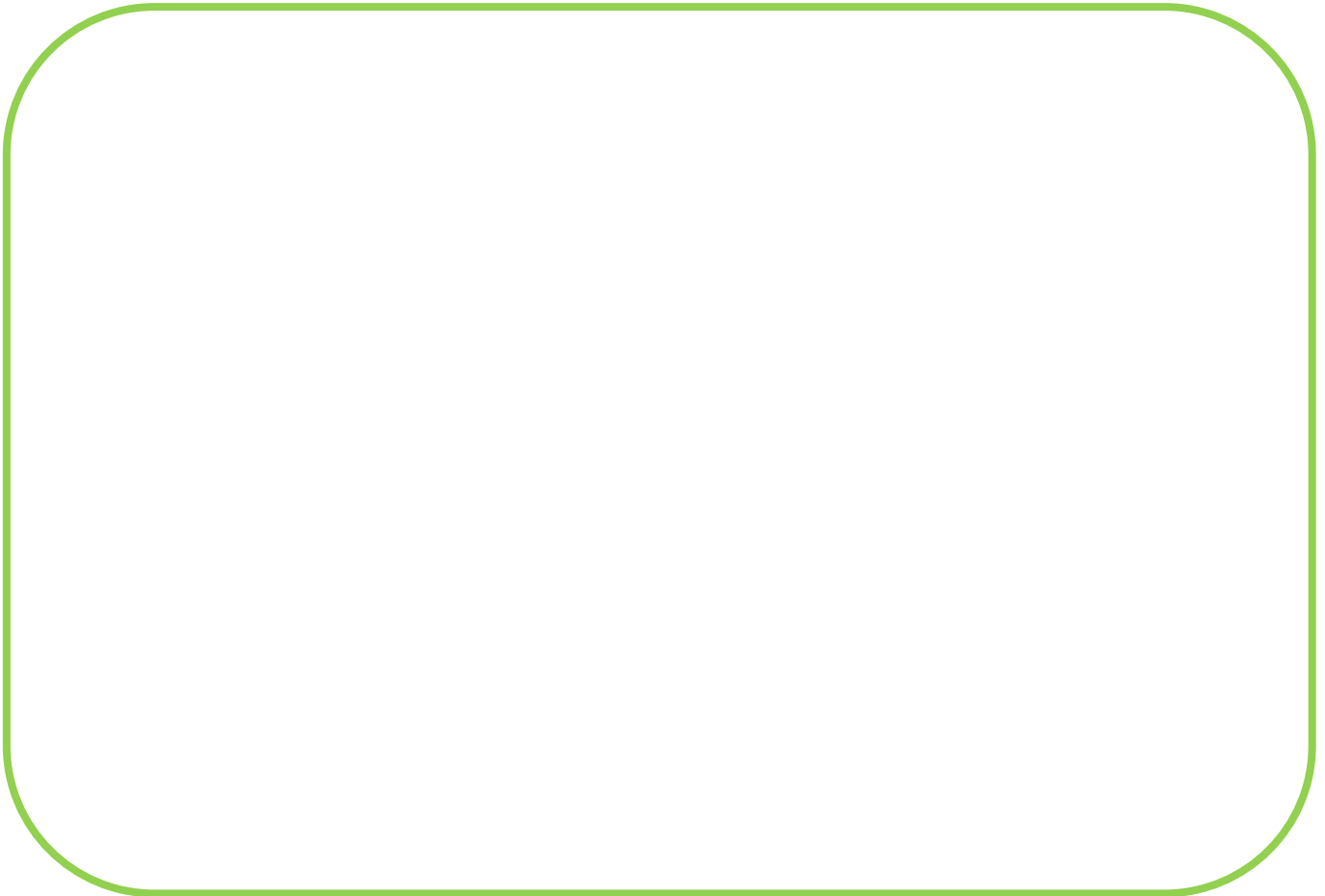


What connection, if any, did you make to learning in anther subject area?

Week 3: CSPE

Lesson 1: Diary Entry

Imagine you live in either Ghana or China. Describe your typical day as you work extracting critical raw materials.



Week 3 Lesson 2 3R's **REDUCE REUSE RECYCLE**

Using your household survey and the knowledge you learned from creating a representation of your ecological footprint identify if the 3Rs could be applied in your home Take 4 items and fill in the table

Item/ activity	Reduce	Reuse	Recycle

Week 3: Business

Topics:

The most important thing I learned is...	What helped me to learn was.....
A skill I used was	I could have learned better if



What connection, if any, did you make to learning in another subject area?

Week 3: Metalwork

This week's topic: _____

Problems and questions



solutions and answers



A skill I used was.....

What helped me to learn was.....



What connection, if any, did you make to learning in another subject area?

End of week 3 reflection: Do a CNQ on one learning experience for example a invited speaker, a workshop etc. (C - Connections N- what was new Q- Questions)

Connections you made to prior knowledge or to your learning in subject areas.

What was **new**?

Questions you may have...

Week 4: Have some idea: ☐ ☐ ☐ Work in progress

☐ there: ☐ ☐ ☐

I can:	Start of week	End of week
Science		
Appreciate the scale and impact of electronic waste and the danger of human toxicity.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Analyse survey data and identify trends and patterns in our recycling rates.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Identify and list of advantages and disadvantages of our current system for dealing end of life products.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Distinguish between a linear and circular economy.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Analyse sources of information for credibility and bias.		
Propose two questions on digital dumping for a Q& A session with our guest speaker.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
CSPE		
Evaluate how I can contribute to reducing the unsustainable consumption and production of critical raw materials	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Help organise a WEEE collection event.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Identify waste materials in my environment that I can contribute to the waste recycling event.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Work as part of a team to organise a waste collection event	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Employ our organisational and creativity skills to achieve our tasks.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Work efficiently and utilise our time management skills.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Begin to identify possible topics for CSPE CBA	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Business		
Identify factors that affect demand and supply.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Value, apply and cost a business plan.		
Identify what are the main source of materials in Ireland and other countries	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Explain the different type of production that occurs in certain countries and why?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Justify the importance of sustainability when creating business plans.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Identify three current environmental issues and regulations.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Discuss Ethical business behaviours - choices that are ethically correct (CSR)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Identify Safety regulations in the workplace	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Understand the word marketing and construct a marketing plan.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Communicate with necessary stakeholders to inform on an upcoming event	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Understand the importance of internal and external stakeholders in an organisation	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Explain the effect that marketing has on an event	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Metal work		
Evaluate the factors that influence their own design and that of others	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Apply their knowledge of the properties associated with a range of engineering materials	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Understand the properties associated with a range of engineered materials	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Understand the properties associated with a range of engineered materials	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Week 4: Invited Guest Speaker: Peadar King RTE **Topic:** Digital dumping in Ghana

Two questions that I could ask during the Q&A session:

1)

2)

Overall reflection on learning.

WWW (What Went Well)- mention two things.

I really enjoyed.....

EBI (Even Better If)

because....

Week 4: Science

Topic: _____

The most important think I
learned is...

The most interesting part was:

What help me understand
was....

For this week's work I would
give myself the following
comment.....

What connection, if any, did you make to learning in anther subject area?



what's the connection ?

Week 4: CSPE

Reflect on your **ACTIONS** during **ALL** of your Classes over the past two or three weeks. Fill in the actions into the shapes below.

**Reduce Reuse
Recycle**

SDG's

**Ecological
footprint-CSPE**

**Household survey plus
data analysis.**

**Critical raw material
research project -Science**

**Marketing a collection
event-Business**

In CSPE you are required to undertake an action and discuss it for your Classroom Based Assessment. Pick 3 actions that could form part of your CBA from the list above

1. _____

Questions to focus your thinking.	Yes	Maybe	NO
Would you enjoy researching the action further?			
Would you be able to explain how you carried out your action?			
Did you play an active role in your action?			
What extra supports would you need to help with your CBA? E.g. time to practice, the internet etc			

2. _____

Questions to focus your thinking.	Yes	Maybe	NO
Would you enjoy researching the action further?			
Would you be able to explain how you carried out your action?			
Did you play an active role in your action?			
What extra supports would you need to help with your CBA? E.g. time to practice, the internet etc			

3. _____

Questions to focus your thinking.	Yes	Maybe	NO
Would you enjoy researching the action further?			
Would you be able to explain how you carried out your action?			
Did you play an active role in your action?			
What extra supports would you need to help with your CBA? E.g. time to practice, the internet etc			

Week 4: Business

This week's topic: _____

Reflect on key words, facts and ideas from this week's lesson



My reflection:

Comments, questions and thoughts



A skill I used was.....

What helped me to learn was.....



what's the connection ?

What connection, if any, did you make to learning in another subject area?

Week 4: Engineering

Topic_____

3 things I learned

-
-
-

2 things I found interesting

-
-

1 question I am left with

-

The activity I liked best was, because



What connection, if any, did you make to learning in another subject area?

End of week 4 reflection: Do a CNQ on one learning experience for example an invited speaker, a workshop, a video you watched etc. (C - Connections N- what was new Q- Questions)

Connections you made to prior knowledge or to your learning in subject areas.

What was **new**?

Questions you may have...

Impact of the 4 week block



Final overall Reflection

- You can decide on the format of your final individual reflection. There **are sentence starters** and ideas on page 33 of this booklet to assist you.
- In this reflection, it would be important to not only focus **on what** you learned but more importantly **on how** you learned and **how your opinions or perceptions changed** over the 4-week block.
- You could also reflect on the **key skills** that may have been developed using the image on page 32 for guidance. How and when were these key skills developed?

Appendix 1: Junior Cycle Key Skills



Appendix 2: Prompts to help you to reflect on your learning.

<p>Some sentence starters</p> <ul style="list-style-type: none">• The most important thing I learned was...• The way I learned was.....• What I found difficult was....• What I enjoyed most was...• What I need more help with is....• What still puzzles me is.....• What surprised me was.....• What I found difficult was....• What I enjoyed most was...• What I need more help with is....• What still puzzles me is.....• What surprised me was.....• What I learned that is new is....• What helped me when something got tricky was...• What really made me think was...• I might have learned better if.....• If I did this project again, I would change....• When I heard the speaker I felt..... <p>NCCA: FOCUS ON LEARNING</p>	<p>When thinking about how you learn:</p> <p>I know that I need to change the way I</p> <p>I really admire how.....</p> <p>I need to go back over.....</p> <p>I learn best when.....</p> <p>I need to ask for more help about.....</p> <p>What I learned today reminds me about.....</p> <p>I need to think more deeply about...</p> <p>When I read over my reflective journal I am sure at how my thinking has changed because....</p> <p>I the future I know I will have to.....</p> <p>When I listened to the discussion in my groups it became to clear to me that.....</p> <p>I like to consider others points of view because....</p> <p>I found the feedback helpful because...</p> <p>Can you think of some sentence starters of your own??</p>
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Appendix 3: The ingredients of an early cell phone

[illegible]

Appendix 5: New terms and key words

Key Word	It's meaning written in my own words.	Image or example

Notes, Comments, diagrams.....

