Co-constructing success criteria

This resource was developed as part of an Applied Technology CPD 2019/2020 workshop which took place during the 2019/2020 school year. All materials used during this workshop can be viewed in the Technologies section of www.jct.ie within the CPD Workshops tile.

Website Link:
https://www.jct.ie/technologies/cpd_supports_applied_technology_cpd_workshops_2019_2020

The learning experiences below were showcased as part of a unit of learning during this workshop and focused on how teachers could co-construct with students' success criteria for effective research, design, and realisation in response to a design task. This sample resource may assist you in planning and developing suitable challenges for your student's context. Reference to this resource can be found on slides 66-79 of the Applied Technology 2019/2020 CPD workshop presentation.

What is included in this PDF?

1. Sample unit of learning

Included is a sample unit of learning developed by the Applied Technology team using a generic school context. Contained in the plan are the learning outcomes and key learning activated by engaging with the challenges below.

2. Sample success criteria activities.

Included in this resource are activities for students to engage with to help develop success criteria. It is important to take note of the learning outcomes, key learning and the action verbs in the unit of learning plan which contextualise the worksheet activities.

Link to Resource

Note: It is recommended that you view the CPD workshop materials in conjunction with using this resource to contextualise the resource and develop a better understanding of how the unit of learning was developed.

Teacher Name: *Click or tap here to enter text.*   Class Group: 1st years

Unit: **CPD Day 2019/2020**   Duration: **4-6 weeks**   Date Commence: *Click or tap to enter*

AGE AND STAGE:

First Year

i. April/May 1st year
ii. 4-6 week unit of learning

PRIOR LEARNING:

- 2 Design and Make Projects and portfolios
- Introduction to materials technology, electronics
- Applied control introduction

FOCUS OF LEARNING:

- Develop deeper understanding of applied control
- Promote student curiosity – social issues
- Focus on an issue in your community and build awareness of others
- Further develop visual and realisation communication skills

EXPLORE STRANDS AND ELEMENTS:

1.1, 1.2, 1.8, 1.10, 1.13, 2.2, 2.4, 2.8, 3.3, 3.4, 3.6

CHOSEN LEARNING OUTCOMES

1.1 develop a design solution drawing on experience and using evidence, reasoning and decision making

1.2 analyse problems using a systematic approach

1.13 communicate evidence of the iterative process of design

2.4 design a logical sequence of instructions to control a device or system

2.8 create control solutions to indentified problems

3.3 explain how human, societal, and environmental considerations affect solutions and outcomes

Consider the age stage and prior learning of the students.
What learning do we want to focus on?
Explore both the strands and elements when choosing learning outcomes.

Identify the learning outcomes for your unit of learning.
Identify the key learning for students using action verbs to support your thinking.
Consider how we will audit and report evidence of learning

LENS TO FOCUS THE LEARNING
(OPTIONAL)

Sustainable Development Goals

KEY LEARNING

1.1, 1.2, 1.13: Further develop students understanding and experience of research, design and realisation

1.2, 2.4, 2.8: Apply control and systems thinking to create a solution to this brief

1.1, 1.2, 3.3: Building student awareness of road safety and propose solutions to address this in their local area

ACTION VERBS

Analyse: study or examine something in detail, break down in order to bring out the essential elements or structure; identify parts and relationships, and to interpret information to reach conclusions

Communicate: use visual gestural, verbal or other signs to share meaning or exchange information; interaction between sender and recipient; both work together to understand

Create: process and give form to the topic of what is to be created using selected methods and material and/or to give the material used a new form

Design: planning the features of a solution that solves a perceived user problem

Develop: advance a piece of work or an idea from an initial state to a more advanced state

Explain: give a detailed account including reasons or causes

Develop ideas for how students could experience this learning.
How will I know they are learning?

HOW COULD STUDENTS EXPERIENCE THIS LEARNING?

- Thematic brief- success criteria (portfolio +responses) -stages
- Road Safety – RSA representative
  i. Site visit
  ii. Role play > discussion
  iii. Storyboard- scenarios – identify risks – user needs
  iv. Groups – mind-map -local context
- Applied control - software
  i. Traffic sequence – program
  ii. Microbit control – discovery learning (allows experimentation)
  iii. Introduce systems thinking – respond to the brief
- Primary research – evidence gathering
  i. Evidence gathering
  Presentation   Identifying risk /hazards
  Questioning skills focus

ONGOING ASSESSMENT

- Student portfolio to record decisions
- Group critique
- AFL Techniques
- Feedback

Using your own classroom context, what methodologies and resources will support students in experiencing the learning outcomes.
Ensure assessment aligns with the learning Outcomes and their action verbs

RESOURCES

- Focus on microbit response – hardware + software- IT access
- "My Design Guide" – primary research, questioning
- Co-create success criteria
- Material Focus – build on skills – acrylic manufacture

METHODOLOGIES

- AFL – Feedback loop
- Group critique – final
- Learning Log – decisions
- Experts – control programming

ASSESSMENT AND REPORTING

- Portfolio Evaluation
- Recorded feedback
- Success criteria

REFLECTION

Activity: Generating success criteria

Discussion:

In responding to this thematic brief what might effective research, design and realisation look like?

Student brief:
Design a model of a solution to help reduce road traffic accidents in your local area.

Task:

Work together to decide the success criteria for effective research, design and realisation in responding to this brief. Record your agreed criteria in the space below.

Effective research

Effective design

Effective realisation

Activity: Applying success criteria

Using the success criteria, how effective was the quality of learning for each student?

Michael's response – Project A

Quality of research:

Quality of design:

Caoimhe's response – Project B

Quality of research:

Quality of design: