

## Summary

### Architectural Design and 3D design Skills

Subject  
Design

Year  
MYP Grade 9, MYP Grade 10

Start date  
Week 4, August

Duration  
**10 weeks** 15 hours

## Key and Related Concepts

### Key Concepts

Key Concepts	Definition
Communication	<b>Communication</b> is the exchange or transfer of signals, facts, ideas and symbols. It requires a sender, a message and an intended receiver. Communication involves the activity of conveying information or meaning. Effective communication requires a common 'language' (which may be written, spoken or non-verbal).
Related Concept(s)	Form



### Related Concept(s)

## Inquiry

### Concept Statement

A conceptual model originates in the mind. Learning to communicate in various forms and methods will enhance their technical ability and skills

### Global Context



### Guiding Questions

Type	Inquiry Questions	Line of Inquiry
Factual	What are the different aspects of form?	conceptual model originates in the mind. Learning to communicate in various forms and methods will enhance their technical ability and skills



IB MYP Architectural & 3D Design (MYP Grade 10) Block C

Type	Inquiry Questions	Line of Inquiry
Conceptual	How can the impossible become possible?	students begin with no drawing skills a such , by the time the course finishes, students who thought what was impossible to do themselves becomes possible.
Debatable	Do Traditional drawing techniques still need to be learnt?	compare drawings at end of the course with the start of the course



## Curriculum

### Content (topics, knowledge, skills)

before a student can start designing a simple building they will need some formal drawing skills



## ATL Skills

### ATL skills

Description

**Learning Experiences:**

**Communication:**

- Students will learn before attempting a design project they need to have a set of communication skills i.e. how to tackle different forms of drawing- presentation
- **Clear board set up: Paper set correctly, Neat title block, should be clear to read Pencil no pen!**
- **Perspective drawing. 1,2 3 and multi point: examples needed of each + 1 of your own ( not covered in grade 10 skills)**
- **Orthographic Drawing**
- **Isometric Drawing**
- **Exploded Isometric/ cut away/section**
- **Design sketching skills: practice examples, shading,colouring.**

**2d CAD to 3d Cad : Sketchup but utilizing optional enhancement software, floor plan and level structure with the option to use 'Twinmotion' an architectural realisitc renderer**

**Thinking:**

While the students are going through each type of drawing technique they will have the opportunity to enhance a house drawing but adding there own features, creating ground and upper floor plans to scale making sure consideration to scale of wall, door widths, inner wall widths, positioning of windows and stairs etc.

to take one idea from drawing to 3d and CAD 3d drawing for later enhancement.



## Communication

IB MYP Architectural & 3D Design (MYP Grade 10) Block C

- I. Communication skills

Exchanging thoughts, messages and information effectively through interaction

Use a variety of media to communicate with a range of audiences



**Thinking**

- IX. Creative thinking skills

Generating novel ideas and considering new perspectives

Apply existing knowledge to generate new ideas, products or processes



**Developing IB Learners**

**IB Learner Profile**



**Thinkers**

Description

**Thinkers:**

applying measurements to drawings to communicate correct scale of drawings for someone else to read.



**Assessment**

**Formative Assessment**

AUG

23

First mini task: Quick house design starter-

🕒 Friday at 11:00 AM

Today I will give an overview of the course and what's expected!

The first few lessons will be to see what drawing skills you possess. I will give a simple brief and it will be up to you to show me how you present it!

OCT

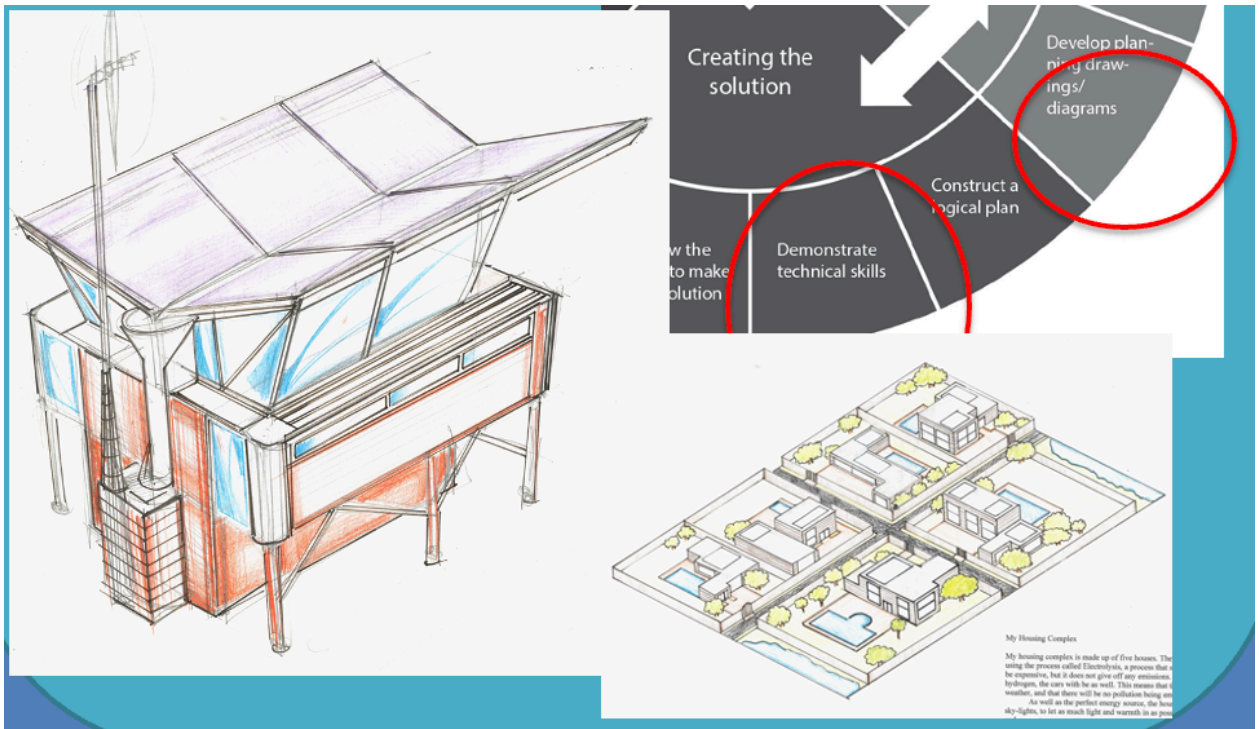
17

Architecture Drawing skills section

🕒 Thursday at 7:55 AM

This first quarter is dedicated to drawing skills, this is not a design project but a number of drawing techniques. Project work begins in quarter 2. The skills go towards criterion b and c in the project section.

Drawing work is now placed into your own dedicated storage tray. You are also assigned a drawing equipment tray.



1Architectural Design skills grade 9 sem1.pdf  
8.37 MB

**board set up: Paper set correctly, Neat title block, should be clear to read Pencil no pen!**

**Perspective drawings**

**Orthographic Drawing**

**Isometric Drawing**

**2d CAD to 3d Cad : Sketchup**

## Summative Assessment

JAN

16

Grade 9 Chalet Project: final drop box A- to D document

0/17 Students

Thursday at 8:20 AM

You first project! overview today.



Grade 9 mini project - chaletversion4.pdf  
10.02 MB



IB MYP Architectural & 3D Design (MYP Grade 10) Block C

### MYP Assessment Criteria

N/A ☒ A: Inquiring and analysing

N/A ☒ B: Developing ideas

N/A ☒ C: Creating the solution

N/A ☒ D: Evaluating

Description



### Learning Experiences

#### Prior Learning Experiences

If the students had completed the previous course in grade 9 they would have learnt a range of hand drawing techniques such as , setting up a drawing page, title block , how to add info, perspective skills, orthographic skills, scale units, isometric 3d , followed by computer CAD skills based around buildings.

#### Learning Experiences and Teaching Strategies

Live walkthrough demonstrations, using screen and visualizer, short video tutorials , mini projects using selected assessment strands to keep the focus on skills in order to prepare the e-portfolio later

#### Student Expectations

Project brief , outline/guidelines attached to each project task. set out in selected criteria- use of dropbox to collect work

#### Feedback

Comments added to specific task improvements

#### Differentiation

When drawing with the class I record the drawing through camera and post the video so they can use this at their own speed. Also short cad clips are posted so they can also follow cad tutorials. Use of online resources for this are also posted.



### Stream & Resources

#### Resources



**William (Bill) Belcher**

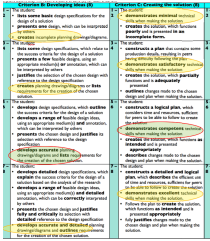
Posted **photo** on Nov 9, 2020 at 4:35 PM

#### assessment rubric

You are marked scores from 1 strand each from criterion B and C, Planning drawings and demonstrating technical skill level

IB MYP Architectural & 3D Design (MYP Grade 10) Block C

Screen\_Shot\_2020-10-21\_at\_8.22.49\_AM.png



**William (Bill) Belcher**

Posted **website** on Oct 19, 2020 at 10:07 AM

orthographic internal plan view

orthographic internal plan view

[https://drive.google.com/file/d/1-fwAQ21GboEK8m\\_-J-k0Vgal3EYgBrLo/view?usp=sharing](https://drive.google.com/file/d/1-fwAQ21GboEK8m_-J-k0Vgal3EYgBrLo/view?usp=sharing)



**William (Bill) Belcher**

Posted **1 file** on Oct 19, 2020 at 9:40 AM



orthographic\_house\_internal\_layout.mp4

200 MB File



**William (Bill) Belcher**

Posted **1 file** on Oct 12, 2020 at 9:35 AM

how to invert a drawing

open your isometric drawing. You may have to convert your drawing into a .jpg or .bmp first if you are using a scanned image from the printer.



Usng\_Krita\_software\_to\_invert\_image.mov

50 MB File



**William (Bill) Belcher**

Posted **1 file** on Oct 12, 2020 at 9:33 AM

software install video

how to download krita



how\_to\_download\_krita.mov

10 MB File



**William (Bill) Belcher**

Posted **note** on Oct 12, 2020 at 9:32 AM

To enhance your finished drawing try using KRITA, simliar to photoshop but free

Image manipulation software, free download

<https://krita.org/en/>



**William (Bill) Belcher**

Posted **1 file** on Oct 9, 2020 at 3:15 PM



isometric\_cityscape\_part\_2.mp4

100 MB File



**William (Bill) Belcher**

Posted **website** on Oct 5, 2020 at 4:13 PM

isometric cityscape part 1

isometric city part one, border to set up of 100mm square block to 100mm isometric square, populate the plan view with building positions then transpose to isometric square plot

[https://drive.google.com/file/d/1x3xtX1ir\\_ul37f\\_q-7tQEt7ww\\_VoFrrH/view?usp=sharing](https://drive.google.com/file/d/1x3xtX1ir_ul37f_q-7tQEt7ww_VoFrrH/view?usp=sharing)



**William (Bill) Belcher**

Posted **website** on Oct 5, 2020 at 9:05 AM

isometric drawing introduction

<https://drive.google.com/file/d/1d-VMQirSlpZ6RRwZbQuxNq2EnZ1bh55z/view?usp=sharing>



**William (Bill) Belcher**

Posted **website** on Oct 5, 2020 at 9:03 AM

isometric drawing introduction

This is a traditional 3d drawing technique which forms the basis of 3d architectural drawing

<https://drive.google.com/file/d/1d-VMQirSlpZ6RRwZbQuxNq2EnZ1bh55z/view?usp=sharing>



**William (Bill) Belcher**

Posted **website** on Sep 25, 2020 at 3:44 PM

orthographic house elevation part 1

part 1 of drawing a simple house elevation, learning how each view links to each other. Use of scale of 1cm = 1m ( 1:100)

<https://drive.google.com/file/d/1etiRK68WFSLGq7UfrMGD15O6AGQy-FYW/view?usp=sharing>



IB MYP Architectural & 3D Design (MYP Grade 10) Block C



**William (Bill) Belcher**

Posted **website** on Sep 25, 2020 at 3:41 PM

orthographic house elevation part 2

part 2 of drawing 3 views of a house

<https://drive.google.com/file/d/1KNIFVfvOzShMhs6LlnlQQVigF0h3o0ln/view?usp=sharing>