

Hillcrest High School

Grade 8

TECHNOLOGY

JUNE 2025

MARKS: 100

EXAMINER: Mrs N. Magubane

TIME: 1 hour 30 minutes

MODERATOR: Mrs T. Tonkin

INSTRUCTIONS

1. The question paper consists of 5 questions and 5 pages including the cover page.
2. Question 5 and the Computer Literacy questions are attached to your answer booklet.
3. Write your name and grade clearly and neatly in the space provided on the answer booklet.
4. Technological based answers must be written.
5. All drawings/sketches must be completed using a sharp pencil and drawing instruments unless otherwise instructed.
6. Marks will be deducted for untidy work especially drawings/sketches.

QUESTION 1 SHORT QUESTIONS

[20]

1.1. Read the multiple choice questions and choose the correct answer from the questions that are asked below. Write only the question number and the letter you have chosen. **e.g. 1.1.1-B** (6)

1.1.1. are used to show hidden details.

- A Centre lines
- B Construction lines
- C Outline
- D Dashed lines

1.1.2. The function/s of a structure is/ are:

- A Spanning a gap
- B Supporting a load
- C Enclosing people, animals or objects
- D All of the above

1.1.3. The line shown in the picture is a _____

- A Centre Line
- B Hidden Detail Line
- C Dimension Line
- D Construction Line



1.1.4. A statement that describes how the designer intends to solve a problem is called...

- A Design process
- B Evaluation
- C Communication
- D Design brief

1.1.5. In Technology, drawing can be produced using enlarging scale, reducing scale or actual scale. Which one of the following is an enlarging scale?

- A 1:2
- B 1:1
- C 1: 0
- D 2: 1

1.1.6. A beam which is supported at one end only is known as a _____

- A Column
- B Continuous support beam
- C Lintel
- D Cantilever

1.2. Choose the correct word from the frame given below and match with the following explanations: (4)

Compression, tension, shear, bending, torsion

1.2.1. Stretch the material by pulling its ends apart.

1.2.2. Twist a material by turning the ends in opposite directions.

1.2.3. Crush a material by squeezing it together.

1.2.4. Tear material by pushing it in opposite directions.


- 1.3. Match the terms in Column A with the description in Column B. (10)
Write the number and the letter only E.g. 1.3.1. K

Term		Definition	
1.3.1.	Frame Structure	A	Frame structures that are used to support heavy objects over great distances.
1.3.2.	Roof Truss	B	A member that pulls two other members of a structure together.
1.3.3.	King Post	C	Holds a frame structure together by pushing against it.
1.3.4.	Queen Post	D	Makes a structure stiff by members that cross over one another.
1.3.5.	Strut	E	A beam that connects two opposite rafters it is in tension.
1.3.6.	Tie	F	A framework used to construct the roof of a house.
1.3.7.	Rafter	G	A truss with the centre beam attached to the tie beam.
1.3.8.	Tie Beam	H	This structure supports a load or spans a gap. Made from rigid parts that are joined together.
1.3.9.	Pylon	I	Multiple parallel beams that are connected to a roof truss.
1.3.10.	Cross Bracing	J	A truss with two supporting beams attached to the tie beam.

QUESTION 2 WHAT IS TECHNOLOGY

[20]

- 2.1. Technology has changed every aspect of life, making it easier, better and different. Technology has changed living. Our needs are met with greater ease. Technology has brought advancement and boosted every industry. List five noticeable advancements in technology. (5)
- 2.2. List four disadvantages of technology (4)
- 2.3. Using your knowledge on systems diagrams, redraw the table below into your answer book and fill in the missing values. (6)

Item	Input	Process	Output
			

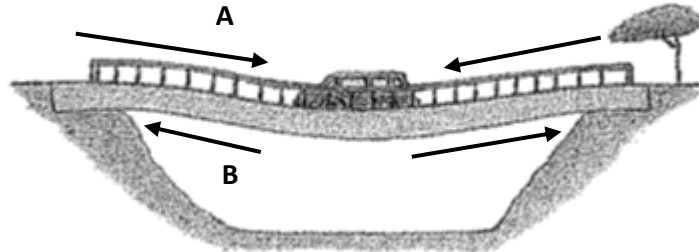
- 2.4. The design process consists of 5 steps that must be followed when creating a new product, list the last 3 steps of the design process. (3)
- 2.5. Explain how the evaluation process is done. (2)

QUESTION 3 STRUCTURES

[30]

- 3.1. Define the following terms:
 - 3.1.1. Toppling over (2)
 - 3.1.2. Triangulation (2)
 - 3.1.3. Fracture (2)
 - 3.1.4. Top heavy (2)
 - 3.1.5. Buttress (2)

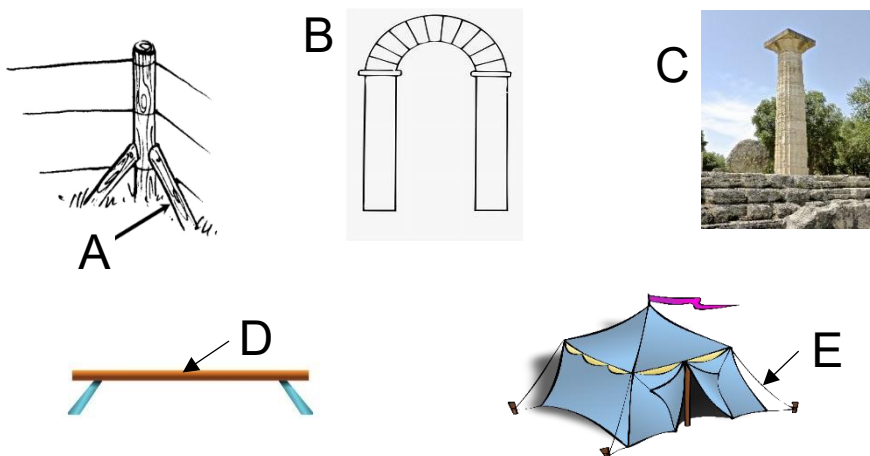
3.2. Study the diagram and answer the questions that follow.



- 3.2.1. In the diagram above there are TWO types of forces acting on the bridge. Name the two forces A and B. (2)
 - 3.2.2. What is the difference between the forces? (2)
 - 3.2.3. Give two suggestions on how they could have avoided the load bending the bridge. (2)
 - 3.2.4. What are the two functions of a bridge? (2)
- 3.3. Identify this type of bridge and explain how it is connected. (2)



3.4. Study the diagram below and answer the questions that follow:



- 3.4.1. Identify the figures below: **A-E** (5)
- 3.4.2. List the functions of the above figures. (5)

QUESTION 4 GRAPHIC COMMUNICATION

[10]

Graphic communication uses signs, logos and symbols as a universal language for designers to understand drawings well. Logos make the products recognisable to all users even if the language is a barrier.

4.1. Identify the following common logos below: (5)

4.1.1.



4.1.2.



4.1.3.



4.1.4.



4.1.5.

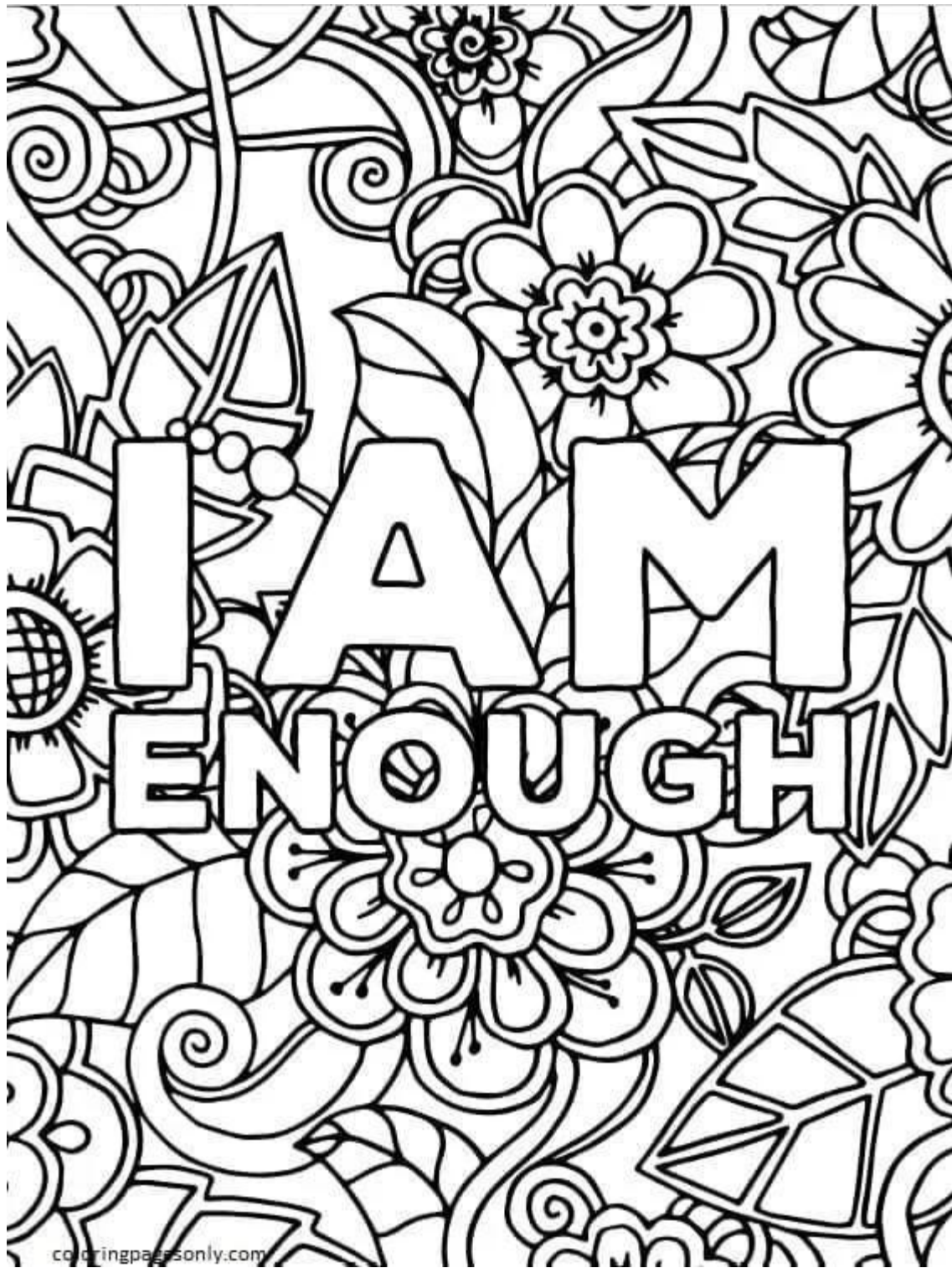


4.2. Various techniques can be used to enhance a drawing and make it look more realistic. Define the following terms:

4.2.1. Colour (1)

4.2.2. Texture (2)

4.2.3. Shading (2)



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NAME: _____ GRADE 8 _____

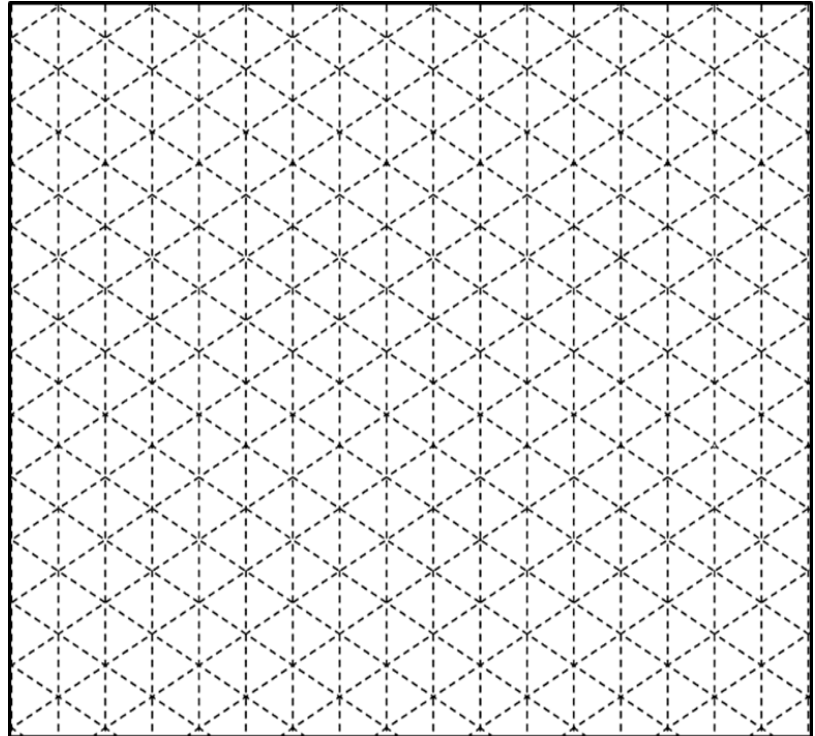
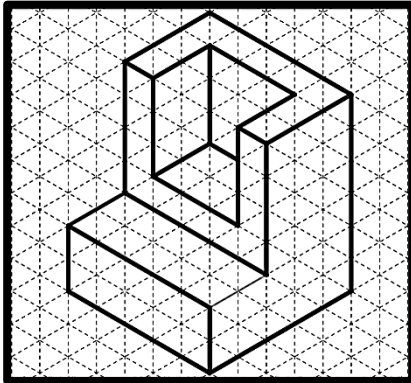
SUBJECT EDUCATOR: GORDON/STOLS/MAGUBANE

Q1 20	Q2 20	Q3 30	Q4 10	Q5 20	TOTAL 100

QUESTION 5 DRAWING

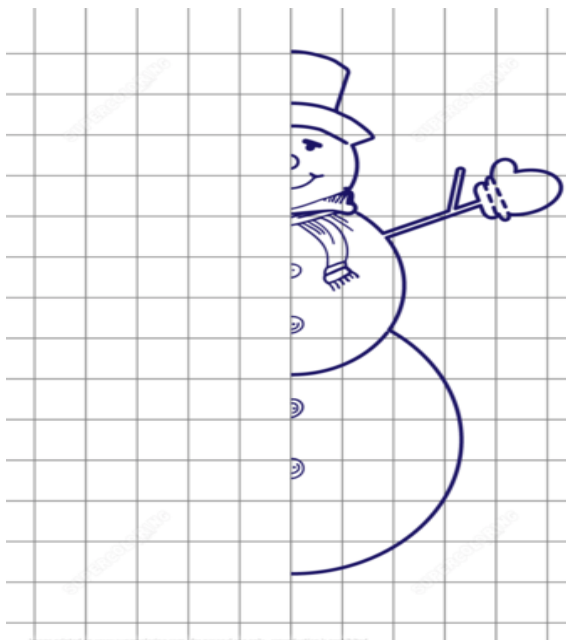
[20]

5.1. Redraw the isometric grid below on the grid provided. (15)



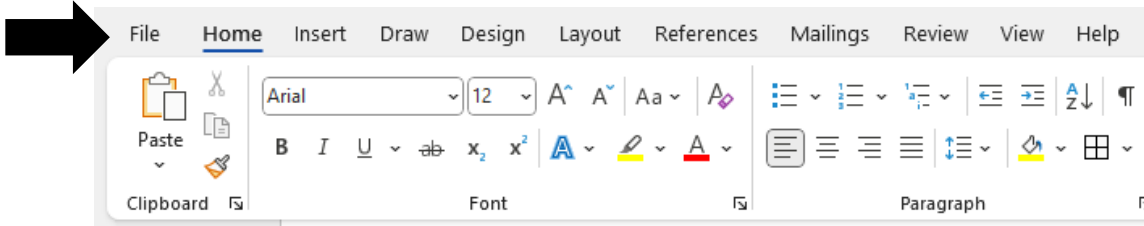
RUBRIC		
Lines	12	
Colour	3	
TOTAL	15	

4.4. Finish the drawing on the grid provided include colouring in (5)



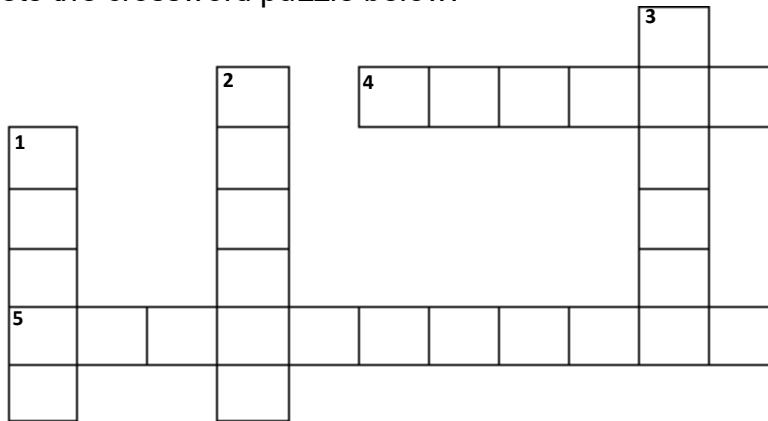
RUBRIC		
Accuracy	3	
Colour	2	
TOTAL	5	

1. Using the image below, name the Ribbon Menu Option (tab) that you would find the following features under: Example. “**File**” – To save a document. (5)



- 1.1. To add SmartArt to a document _____
- 1.2. To add a Watermark to a document _____
- 1.3. To add a Bibliography to a document _____
- 1.4. To change the font of text in a document _____
- 1.5. To edit the page margins of a document _____

2. Complete the crossword puzzle below: (5)



DOWN

- 1. An easy way to change the format of a heading
- 2. The bottom of a page that will contain the page number
- 3. The gap between the edge of the page and the text

ACROSS

- 4. The menu option to save a new or existing document with a different file name
- 5. To increase the gap between each line in a paragraph