



NCCA

An Chomhairle Náisiúnta
Curaclaim agus Measúnachta
National Council for
Curriculum and Assessment

Junior Cycle Graphics Classroom-Based Assessment 2: Example of Student Work 04

January 2024

GEOMETRY OF CANDLE HOLDERS

CBA 2

SECONDARY + PRIMARY RESEARCH BOOKLET

Draw major axis and label it AB
Draw minor axis and label it CD

Divide into 12 parts
Draw lines perpendicular to the major axis and perpendicular to the minor axis.

Circle
Radius angle
more than 180°

Obtuse angle
more than 90° and less than 180°

Concentric circles
Concentric circles are two circles with one inside the other and can be cut and be symmetrical.

Draw a cross foot with both lines being 30° from the vertical line.

DIAMOND
TWO TRIANGLES OPPOSITE FROM EACH OTHER

TRIANGULAR PRISM
all sides are equal
all angles are 90°

CONSTRUCTION OF A TRIANGLE
HAVE AN ARC WITH A CHORD AND OPEN THE LINES.

CIRCLE
CENTRE
DIAMETER
CIRCUMFERENCE
RADIUS

TANGENT
Tangents are 90° angles from the circle

BISECTING A CIRCLE

DEVELOPMENT OF A CYLINDER

Divide into 12 equal parts

Use compass to measure 'r', mark 12 points along the horizontal lines. The last line labelled 'a' is the same generator that is at the beginning of the horizontal lines.

Subtract the radius of the circles from the radius of internal tangent arc. Place point of a compass and swing small arcs. Place compass on point P and swing an arc.

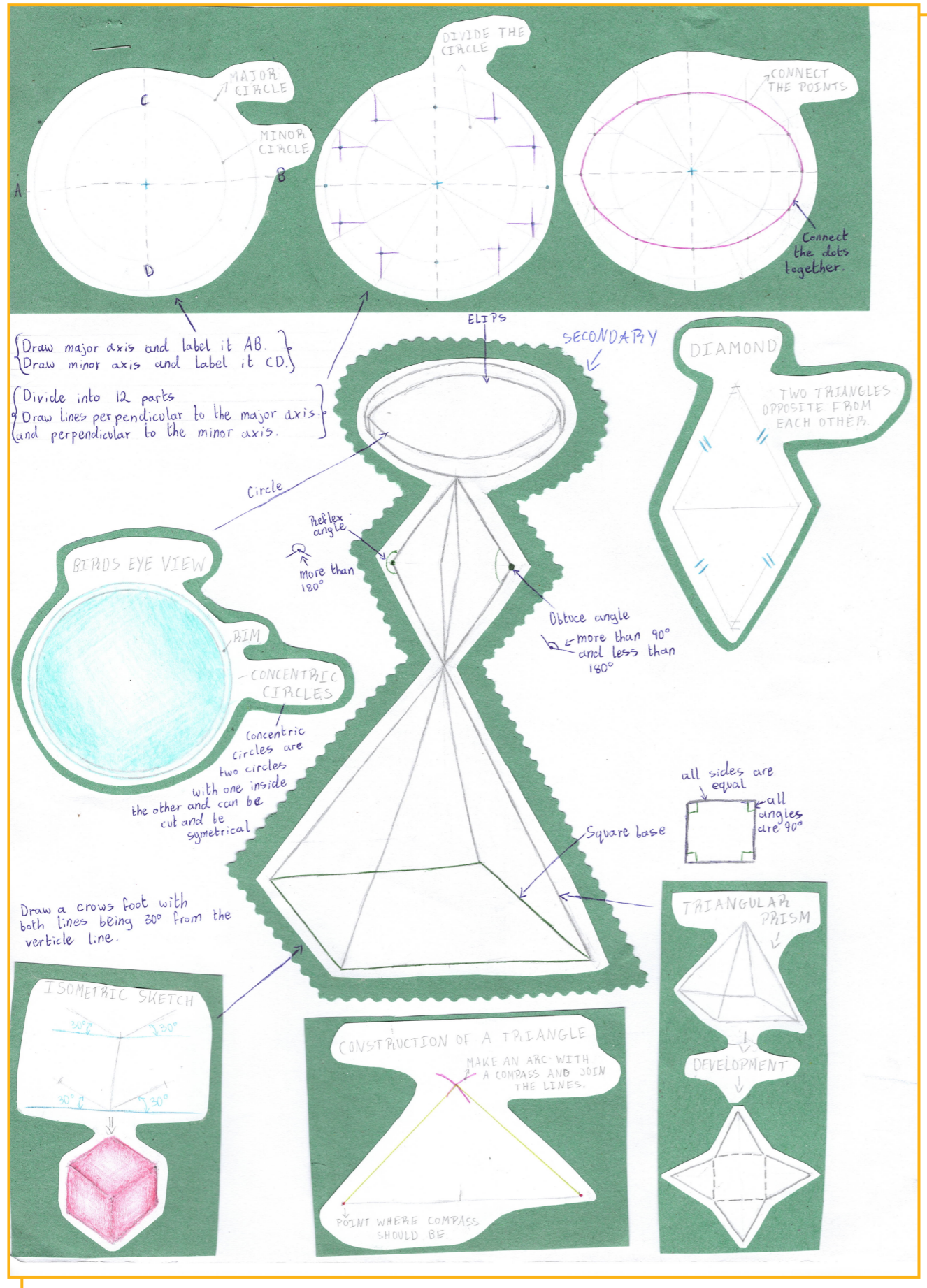
Plane 1
Plane 2
circle on plane 2

CYLINDER
DEVELOPMENT

PRIMARY

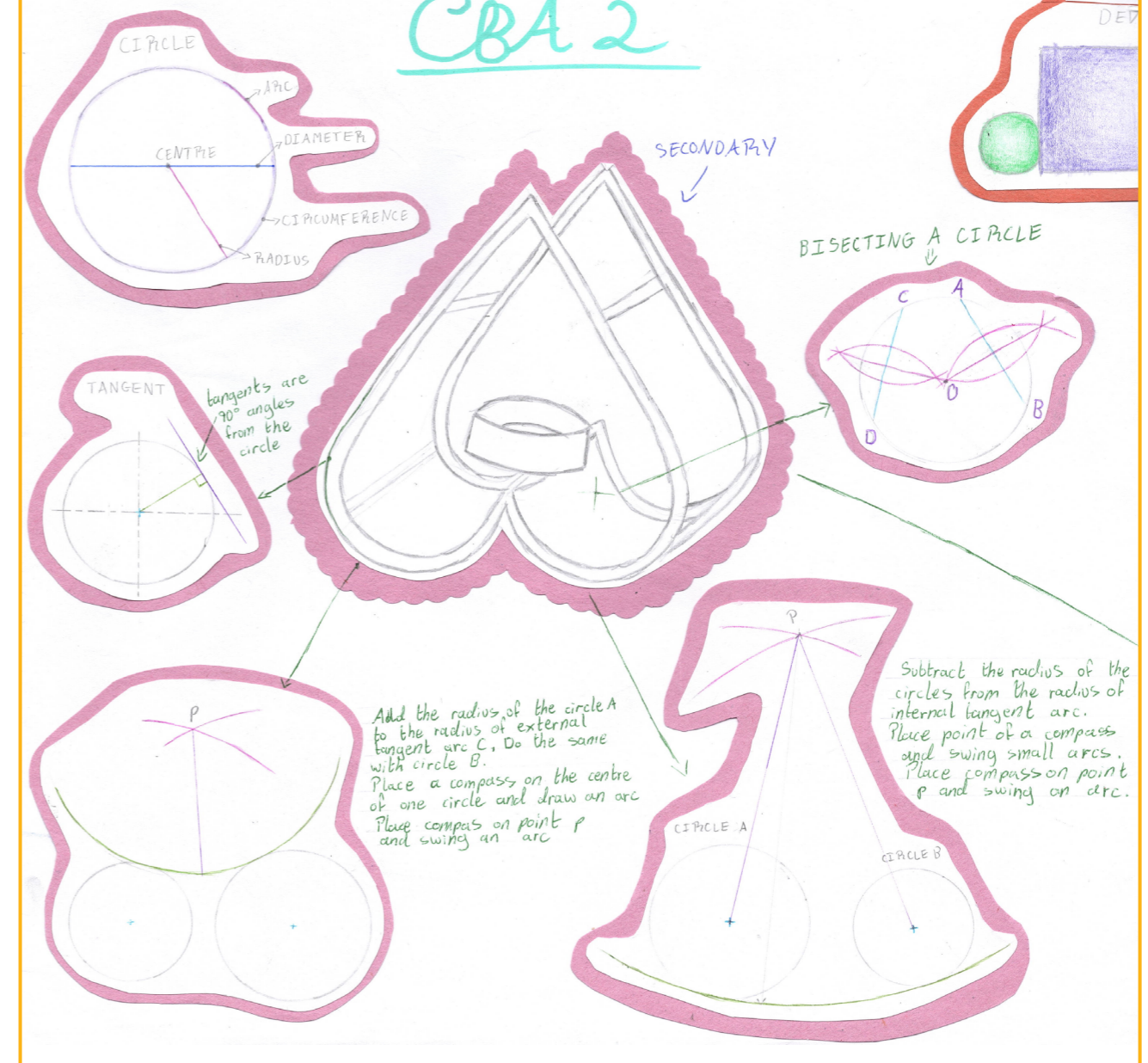
Sweep tool

This poster was approximately A2 in size



G E O M E T R Y O F C A N D L E H O L D E R S

CBA 2



SECONDARY + PRIMARY RESEARCH BOOKLET

PRIMARY

use compass to measure P_1 , mark 12 points along the horizontal lines. The last line labelled 1 as it is the same generator that is at the beginning of the horizontal lines.

DIVIDE INTO 12 EQUAL PARTS

DEVELOPMENT OF A CYLINDER

Plane 1
Plane 2

ellipse circles tangential on plane 1
circle on plane 2

Sweep tool

SECONDARY + PRIMARY RESEARCH BOOKLET

PRIMARY RESEARCH

PRIMARY RESEARCH

FOR MY PRIMARY RESEARCH, I WALKED AROUND THE SCHOOL, AND LOOKED AROUND STORES THAT SOLD CANDLE HOLDERS.

I ALSO LOOKED AROUND AT ALL THE CANDLE HOLDERS I HAD AT HOME AND TOOK A FEW PICTURES OF THEM. ALL WERE MADE OF DIFFERENT MATERIALS, SOME WERE MADE FROM GLASS OR METAL AND SOME WERE MADE FROM WOOD.

SECONDARY RESEARCH

FOR MY SECONDARY RESEARCH, I LOOKED UP SOME NICE PICTURES OF CANDLE HOLDERS ONLINE. JUST LIKE IN MY PRIMARY RESEARCH, ALL OF THEM WERE MADE WITH DIFFERENT MATERIALS AND DIFFERENT GEOMETRIES.

Teacher annotations using the Features of Quality

The annotations capture observations by the teacher, using the features of quality, with a view to establishing the level of achievement this work reflects. The annotations and judgments were confirmed by a Quality Assurance group, consisting of practising teachers and representatives of the NCCA, the Inspectorate, the State Examinations Commission and the Oide support service.

Teacher annotations

Research and analysis:

The research method chosen demonstrated a comparison of a range of sources which led to the production of a comprehensive and detailed analysis of the data/findings. The student completed both primary and secondary research and used this research as a foundation for their exploration of objects with varying geometry styles.

Exploring concepts:

The response demonstrated a comprehensive understanding of a range of concepts in relation to the theme. Using technical drawings and sketches, the student presented a variety of geometric principles associated with each object. These ranged from simple shapes to complex constructions and this approach was complimented by appropriate annotations.

Graphical presentation:

The presentation of the findings was of an excellent standard, using technical drawings, well proportioned rendered sketches, and annotations. The use of colour borders was very effective in highlighting the geometry associated with different candle holders. This allowed for a critical consideration of what information best communicated the Classroom-Based Assessment.

Overall judgement:  Exceptional