

3D printing catalogue for anatomical teaching specimen

DEVELOPED DURING THE ERASMUS+ CO-FUNDED GRANT
PROJECT **DIRISANA+** (2021 - 2024)

Co-funded by the
Erasmus+ Programme
of the European Union

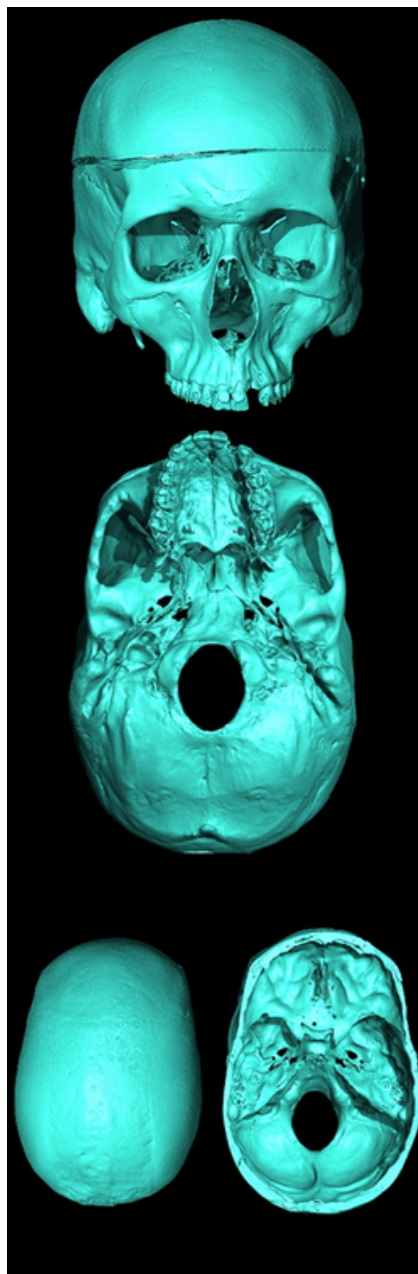


TABLE OF CONTENTS

Osteology	2
<i>Full Skeleton</i>	2
Skeletal Trauma	9
<i>Blunt-force Trauma</i>	9
<i>Ballistic Trauma (Gunshot Trauma)</i>	12
Human Evolution Fossil Models	16
<i>Hominins – Australopithecus afarensis</i>	17
<i>Hominins – Australopithecus sediba</i>	18
<i>Hominins – Paranthropus boisei</i>	19
<i>Hominins – Homo erectus</i>	20
<i>Hominins – Homo heidelbergensis</i>	21
<i>Hominins – Homo neanderthalensis</i>	22
<i>Stone Tool</i>	23
UNAM Anatomy 3D Prints	24
Osteology	25
<i>Anatomical Structures and Organs</i>	26
Our 3D Printers	28

Full Skeleton

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name

Cranium (white South African male)

Printer

Form 3L

Printing material

Resin

Printing volume

(estimate)

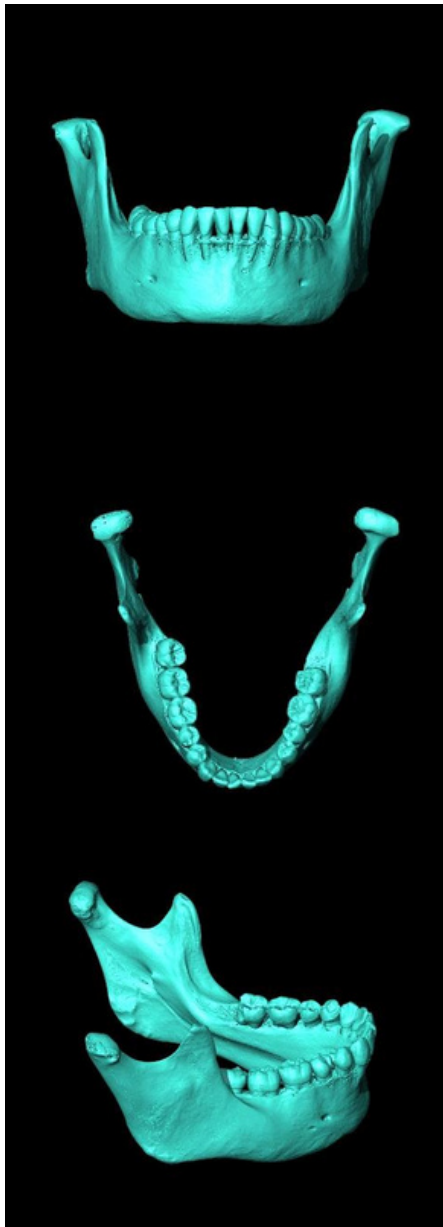
312.48 mL

Printing time

(estimate)

18h 50min

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name

Mandible (black
South African
male)

Printer

Form 3L

Printing material

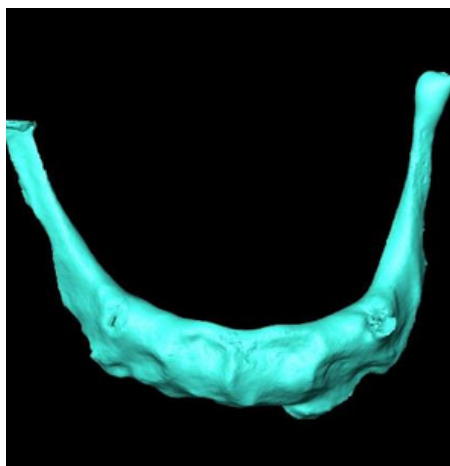
Resin

Printing volume (estimate)

65.21 mL

Printing time (estimate)

5h 8min



Model name

Hyoid

Printer

Form 3L

Printing material

Resin

Printing volume (estimate)

21.93 mL

Printing time (estimate)

4h 50min

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name

Right shoulder girdle (clavicle, scapula, & humerus)

Printer

Form 3L

Printing material

Resin

Printing volume (estimate)

201.96 mL

Printing time (estimate)

26h 34min

**Model name**

Left forearm (radius & ulna)

Printer

Form 3L

Printing material

Resin

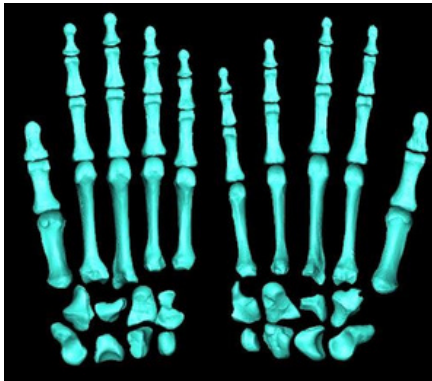
Printing volume (estimate)

97.27 mL

Printing time (estimate)

15h 43min

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name

Hands

Printer

Form 3L

Printing material

Resin

Printing volume (estimate)

183.05 mL

Printing time (estimate)

8h 19min



Model name

Ribs

Printer

Form 3L

Printing material

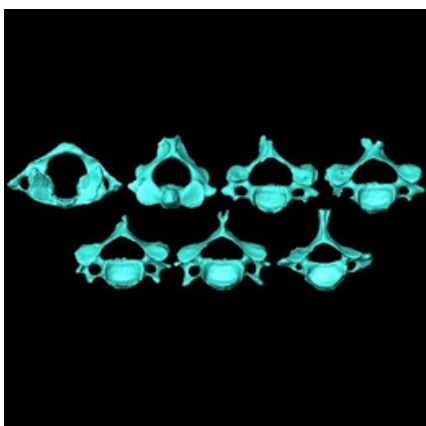
Resin

Printing volume (estimate)

353.73 mL

Printing time (estimate)

32h 28min



Model name

Vertebrae - Cervical

Printer

Form 3L

Printing material

Resin

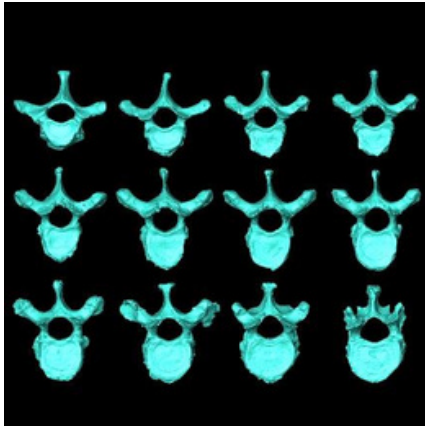
Printing volume (estimate)

98.76 mL

Printing time (estimate)

11h 10min

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name

Vertebrae – Thoracic

Printer

Form 3L

Printing material

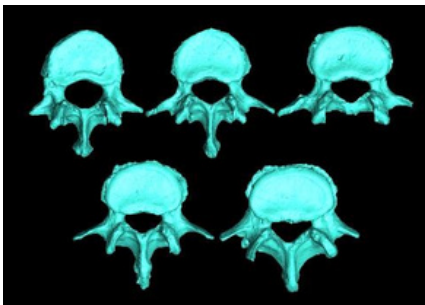
Resin

Printing volume (estimate)

258.11 mL

Printing time (estimate)

15h 38min

**Model name**

Vertebrae – Lumbar

Printer

Form 3L

Printing material

Resin

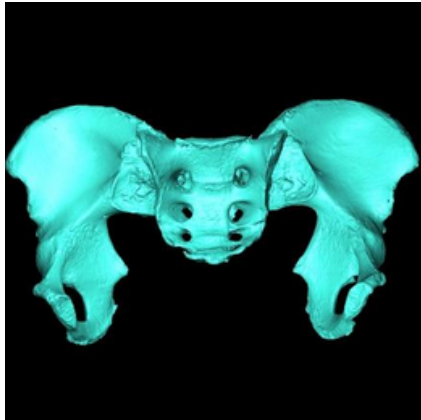
Printing volume (estimate)

158.75 mL

Printing time (estimate)

16h 21min

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name

Pelvic Girdle (os coxae & sacrum)

Printer

Form 3L

Printing material

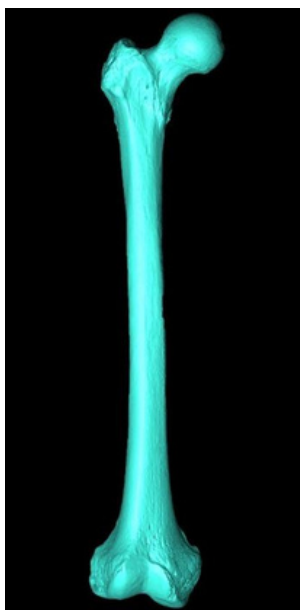
Resin

Printing volume (estimate)

744.73 mL

Printing time (estimate)

26h 27min



Model name

Right femur

Printer

Form 3L

Printing material

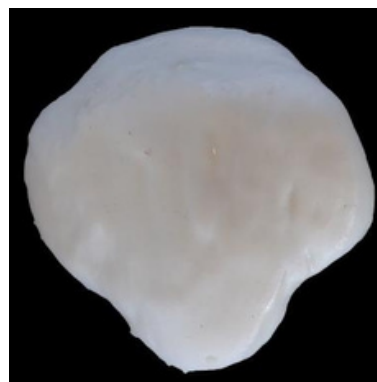
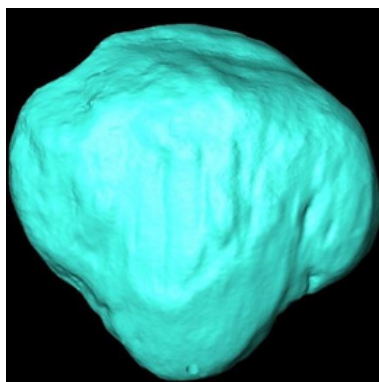
Resin

Printing volume (estimate)

224.3 mL

Printing time (estimate)

13h 45min



Model name

Right patella

Printer

Form 3L

Printing material

Resin

Printing volume (estimate)

8.49 mL

Printing time (estimate)

2h 8min

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

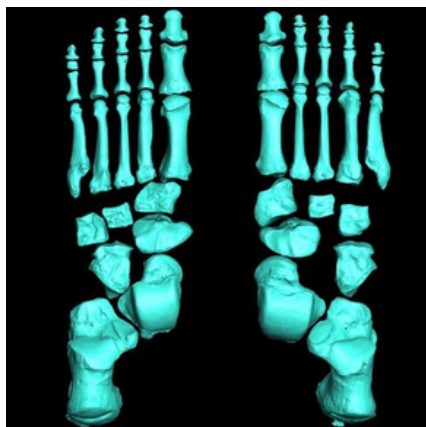
Model name
Right tibia and fibula

Printer
Form 3L

Printing material
Resin

Printing volume (estimate)
196.95 mL

Printing time (estimate)
30h 00min



Model name
Feet

Printer
Form 3L

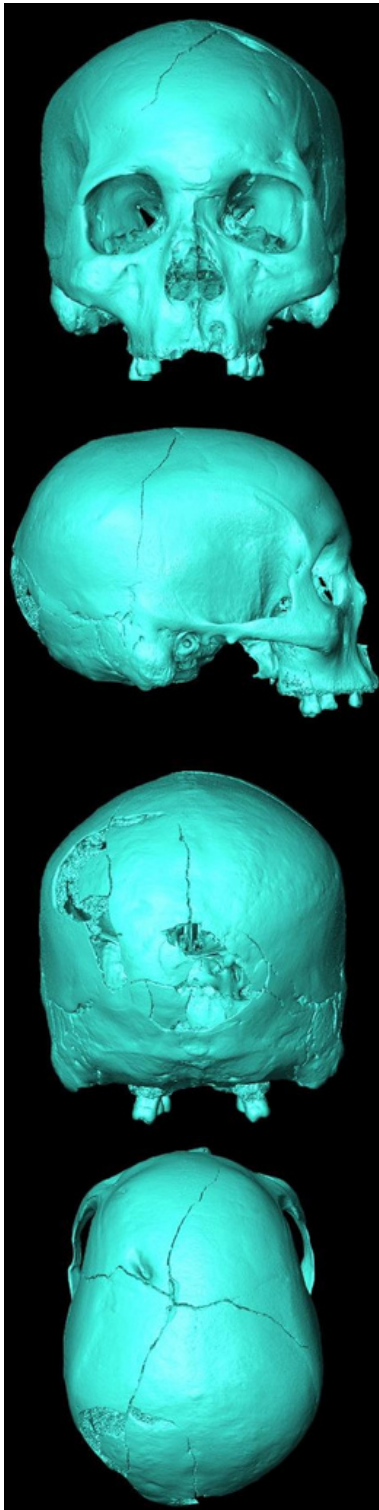
Printing material
Resin

Printing volume (estimate)
265.21 mL

Printing time (estimate)
22h 39min

Blunt-force trauma

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name

BFT Skull 1

Printer

Form 3L

Printing material

Resin

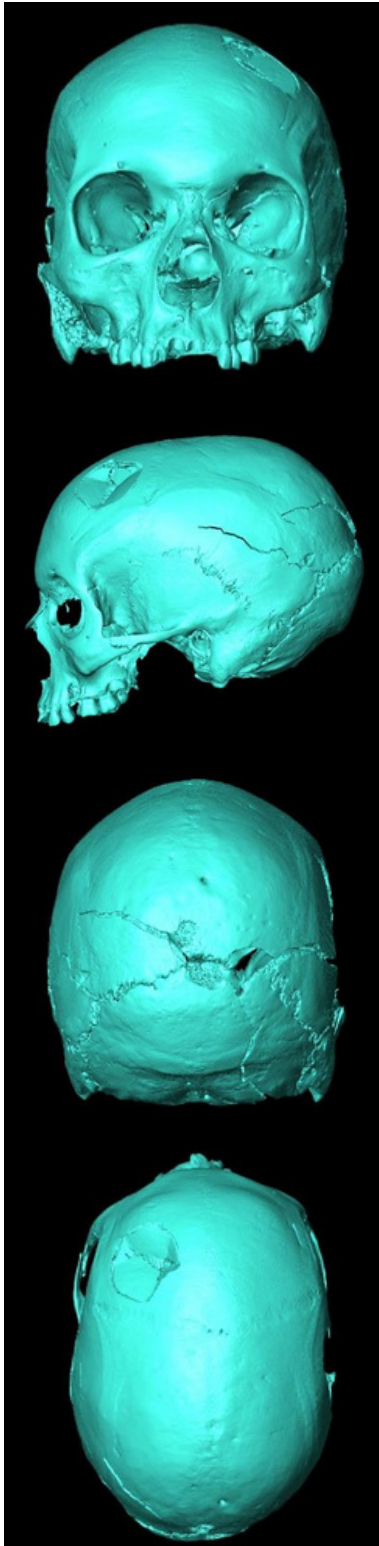
Printing volume (estimate)

659.43 mL

Printing time (estimate)

29h 5min

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name
BFT Skull 2

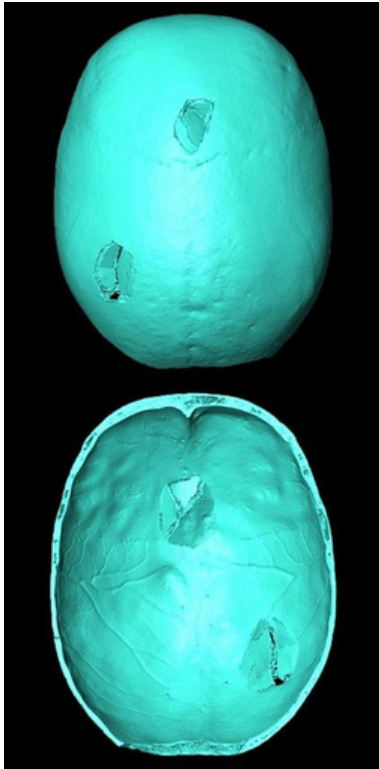
Printer
Form 3L

Printing material
Resin

Printing volume (estimate)
545.74 mL

Printing time (estimate)
24h 4min

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name
BFT Calotte

Printer
Form 3+

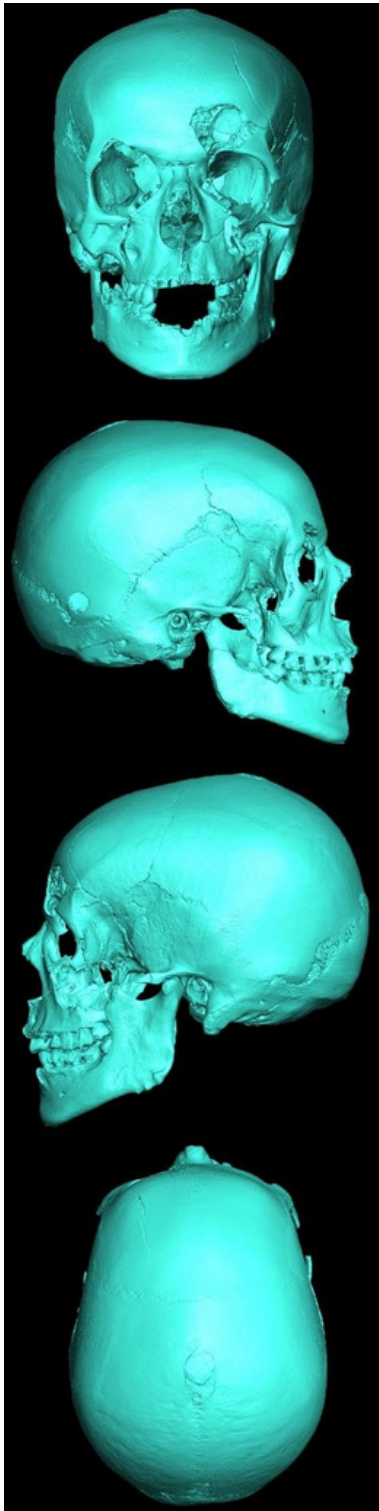
Printing material
Resin

Printing volume (estimate)
181.84 mL

Printing time (estimate)
13h 29min

Ballistic trauma (gunshot trauma)

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name

GST Skull 1

Printer

Form 3L

Printing material

Resin

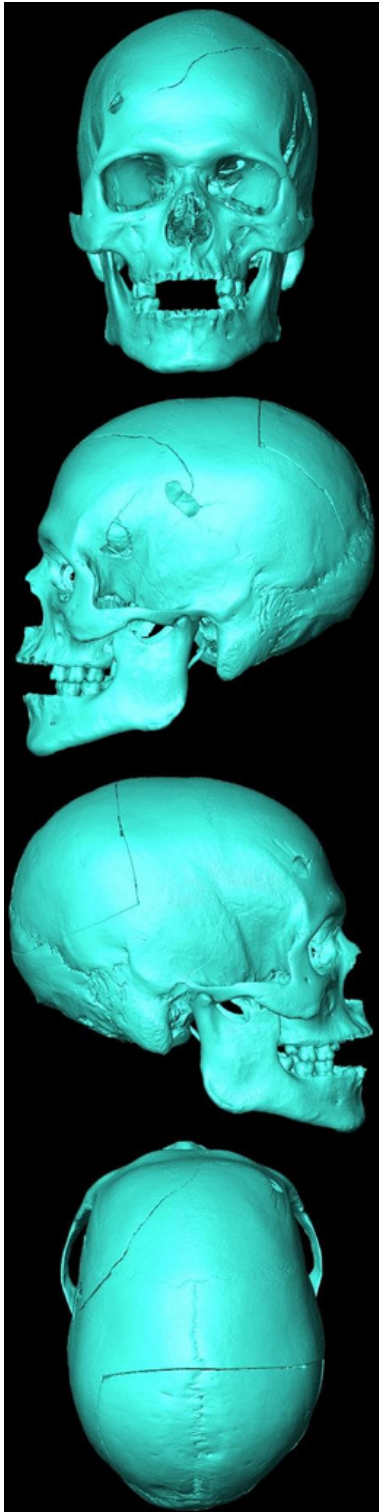
Printing volume (estimate)

814.79 mL

Printing time (estimate)

32h 1min

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name

GST Skull 2

Printer

Form 3L

Printing material

Resin

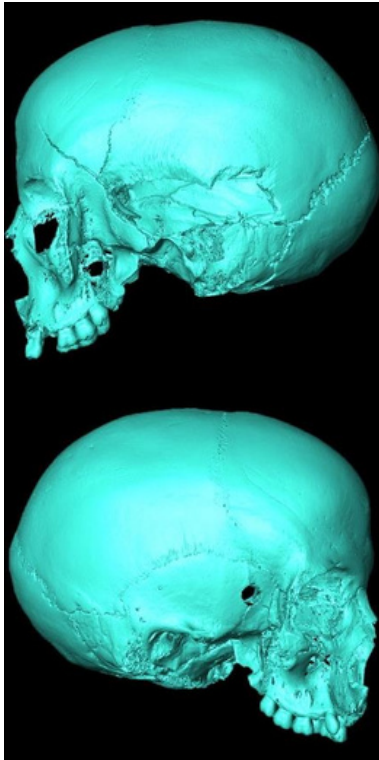
Printing volume (estimate)

466.21 mL

Printing time (estimate)

23h 18min

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name
GST Skull 3

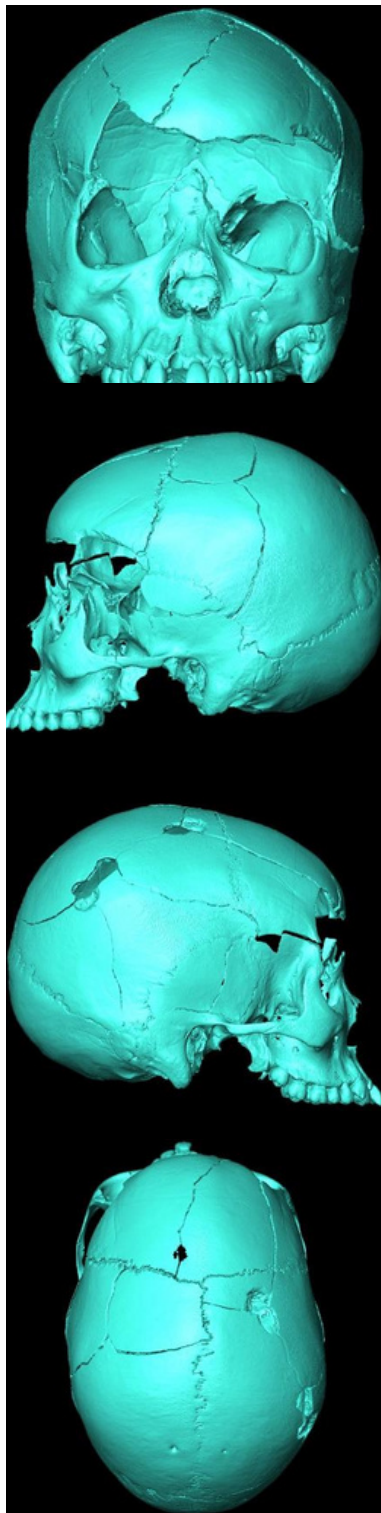
Printer
Form 3L

Printing material
Resin

Printing volume (estimate)
432.05 mL

Printing time (estimate)
21h 5min

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name

GST Skull 4

Printer

Form 3L

Printing material

Resin

Printing volume (estimate)

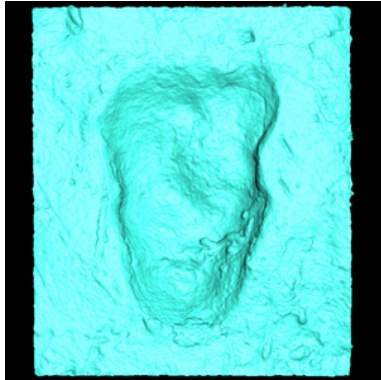
453.5 mL

Printing time (estimate)

21h 36min

Hominins – *Australopithecus afarensis*

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name
Laetoli footprint

Printer
Ender 6

Printing material
PLA Filament

Printing mass (estimate)
232g

Printing time (estimate)
52h 47min

Hominins – *Australopithecus sediba*

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name

Sediba hand

Printer

Ender 3

Printing material

PLA Filament

Printing mass (estimate)

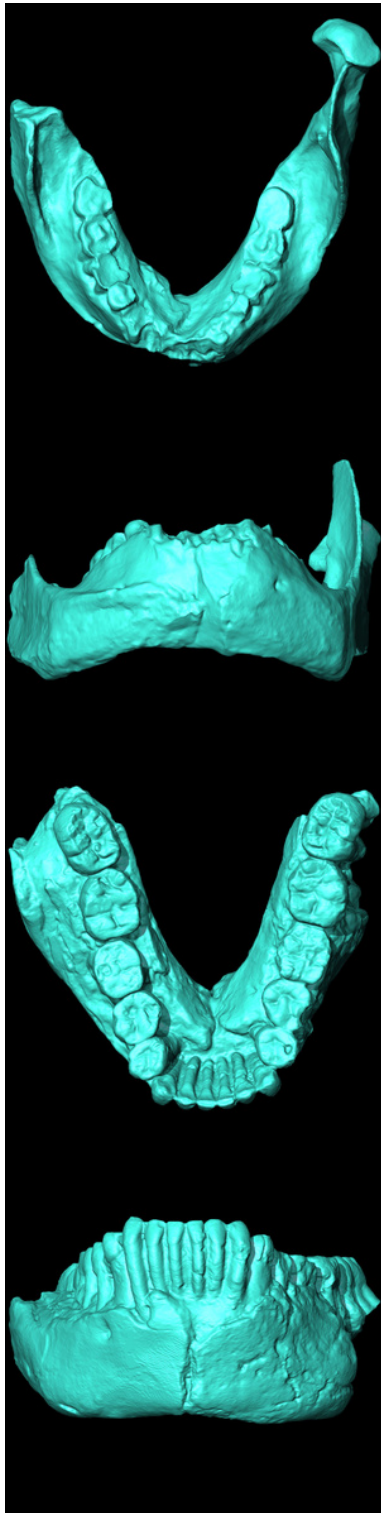
31g

Printing time (estimate)

6h 50min

Hominins – *Paranthropus boisei*

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name

Boisei mandible
(x2)

Printer

Bambu

Printing material

PLA filament

Printing volume (estimate)

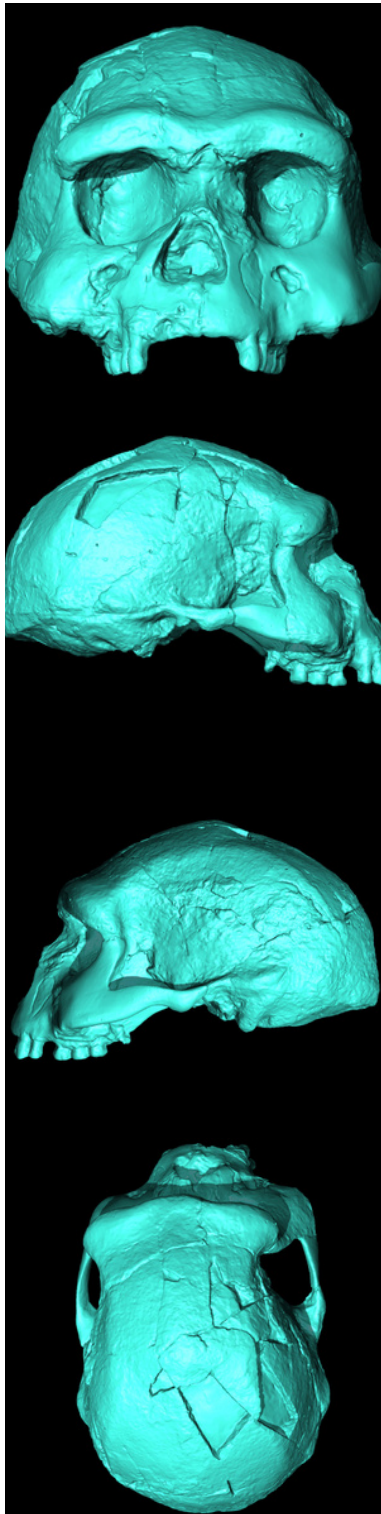
105.74g

Printing time (estimate)

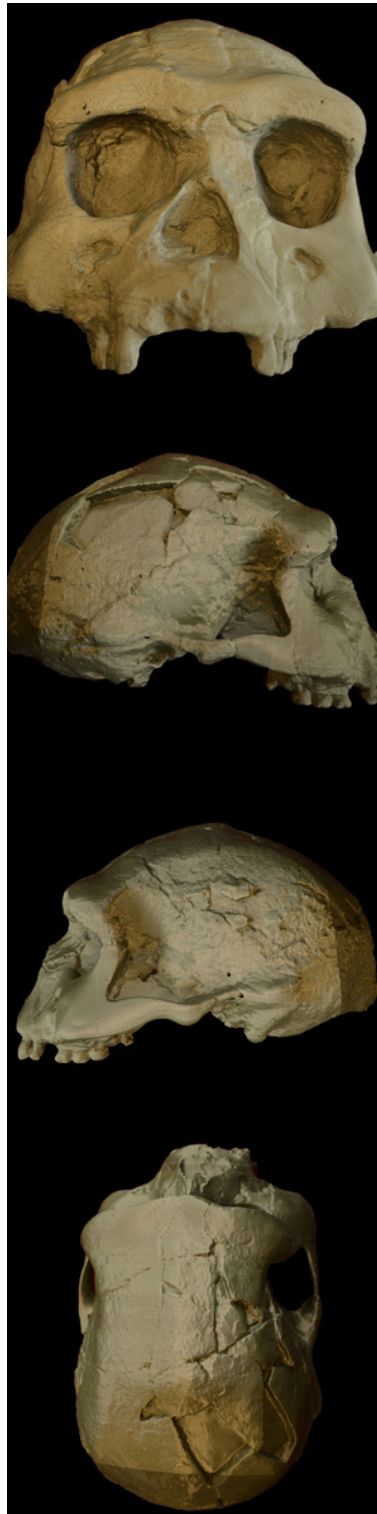
4h 54min

Hominins – Homo erectus

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name
Sangiran cranium

Printer
Bambu

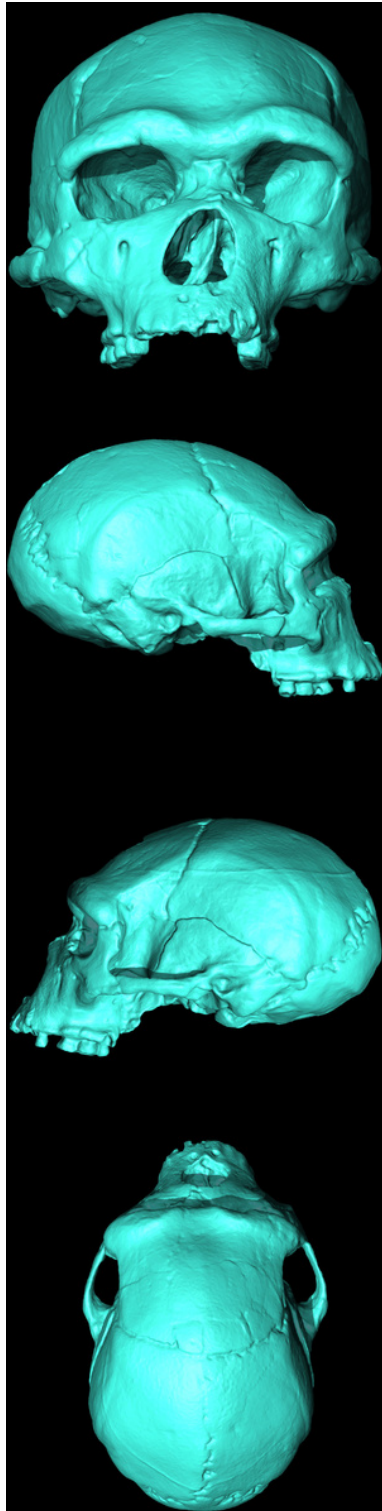
Printing material
PLA filament

Printing mass (estimate)
532.55g

Printing time (estimate)
30h 46min

Hominins – Homo heidelbergensis

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name

Arago, France, cranium

Printer

Bambu

Printing material

PLA filament

Printing mass (estimate)

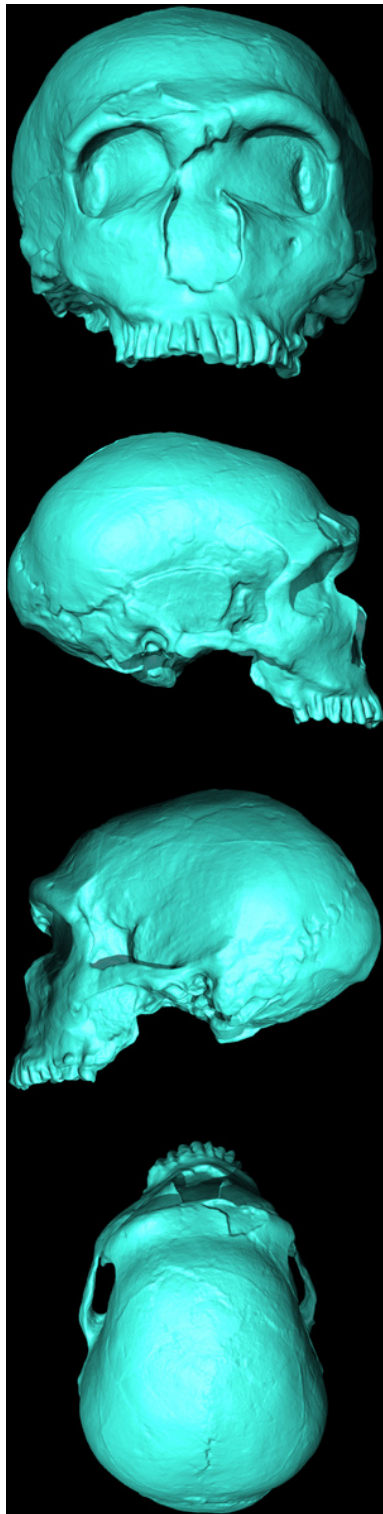
558.40g

Printing time (estimate)

28h 26min

Hominins – *Homo neanderthalensis*

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name

La Ferrassie, France, cranium

Printer

Ender 3

Printing material

PLA filament

Printing mass (estimate)

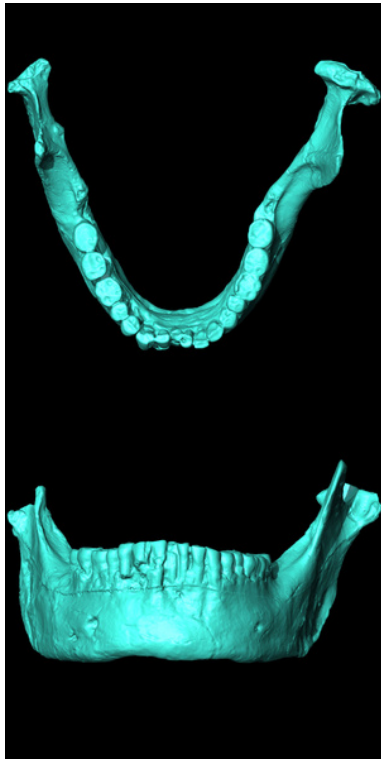
418g

Printing time (estimate)

51h 8min

Hominins – *Homo neanderthalensis*

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name

Neanderthal mandible

Printer

Ender 3

Printing material

PLA filament

Printing mass (estimate)

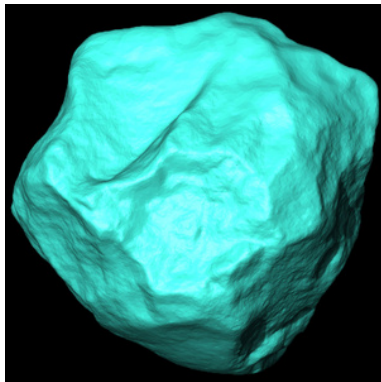
43g

Printing time (estimate)

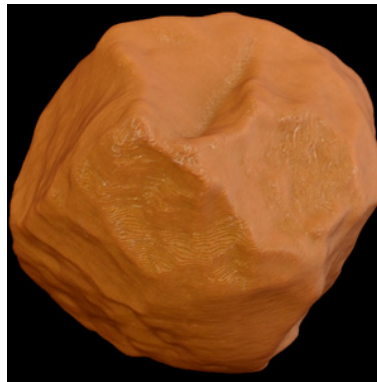
8h 11min

Stone Tool

3D MODEL



3D PRINT



PRINTING SPECIFICATIONS

Model name

La Ilabanere

Printer

Bambu

Printing material

PLA filament

Printing mass (estimate)

27.66g

Printing time (estimate)

1h 11min

Osteology

Mandible - UltiMaker S3



Occlusal view



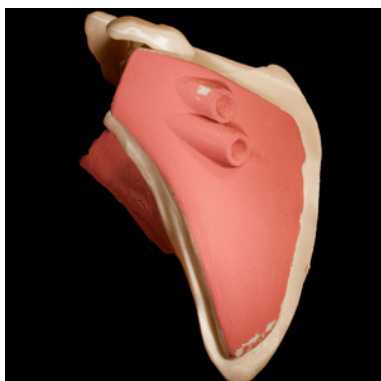
Anterior view

Scapula - UltiMaker S3



Anterior view

Scapula with muscle painted - UltiMaker S3



Anterior view with
subscapularis muscle



Posterior view with
infraspinatus muscle

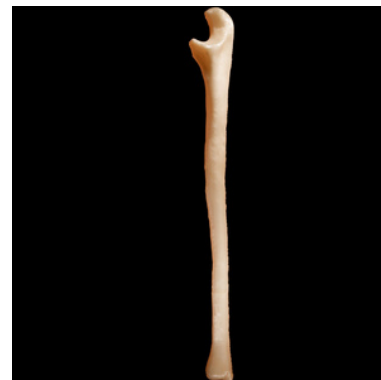
Upper limb - UltiMaker S3



Humerus



Radius



Ulna

Vertebrae - Form 3+



Cervical



Thoracic



Lumbar

Joints of the lower limb



Knee joint - UltiMaker S3



Subtalar joint - Form 3+

Anatomical Structures and Organs

Brain



Ventricles - Form 3+

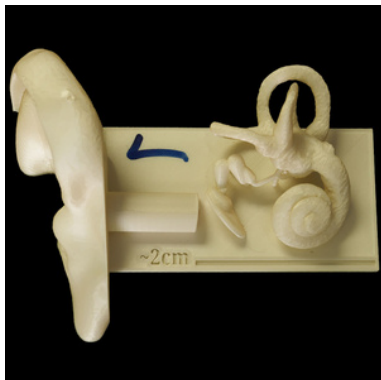


Cerebellum - UltiMaker S3



Medulla oblongata -
UltiMaker S3

Ear - UltiMaker S3



Pinna and cochlea

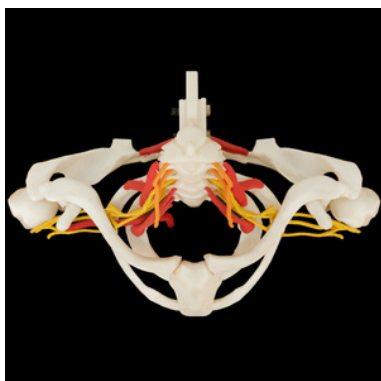


Middle ear canal



Cochlea

Brachial plexus - Form 3+



Thoracic cavity organs - UltiMaker S3



Heart



Lung

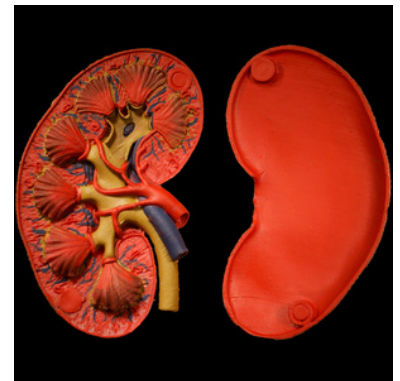
Abdominal cavity organs



Stomach - Form 3+



Duodenum, pancreas, and
spleen - UltiMaker S3



Kidney painted - UltiMaker
S3

Reproductive systems - UltiMaker S3



Female

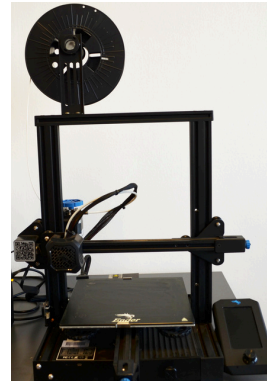


Male

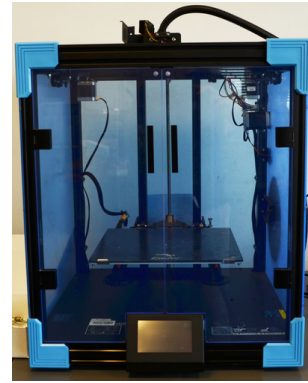
Bambu X1



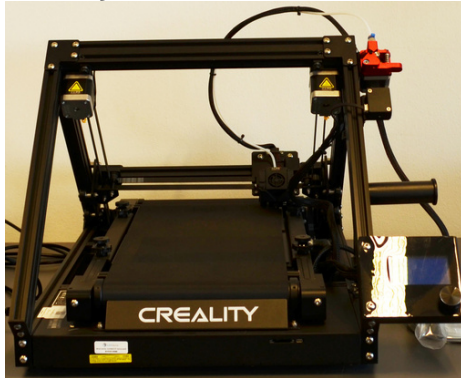
Ender 3



Ender 6



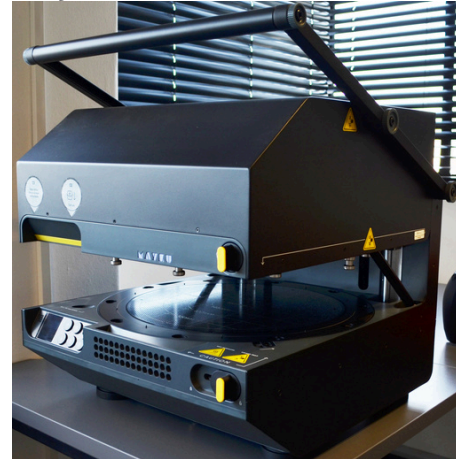
Creality 3D PrintMill



Form 3L



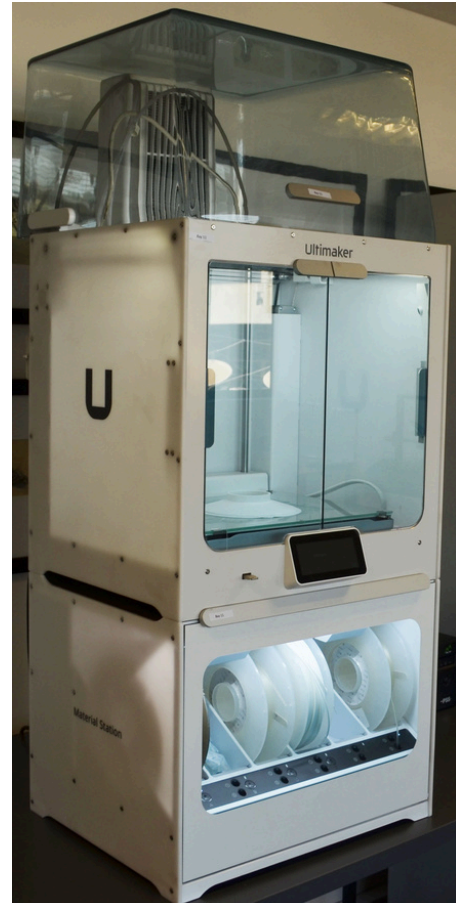
Mayku Multplier



Form 3+



UltiMaker S5



Sinterit Lisa Pro



Thank you!

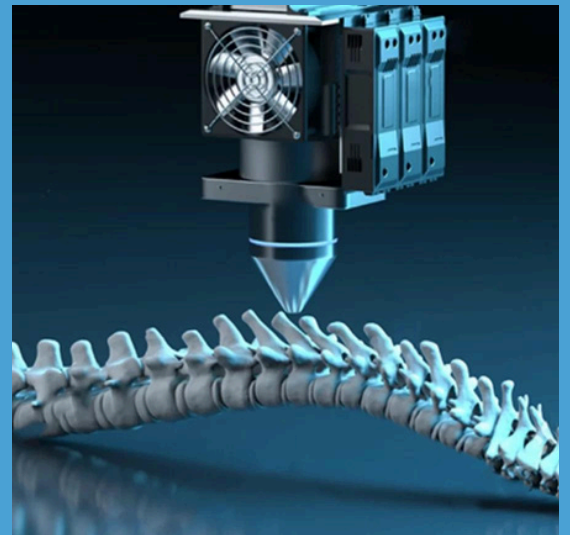
Thank you for exploring our catalogue of 3D prints! We're deeply grateful for your interest in our products. Should you have any questions or need further assistance, feel free to reach out to us. Happy learning and creating!

Co-funded by the
Erasmus+ Programme
of the European Union



We would like to thank and acknowledge the EU for their support and funding to the Dirisana+ project which led to the development of this catalogue.

Dirisana+ Team



Get in Touch!

Email

forensicanthro@up.ac.za

Website

<https://3dbioanthro.co.za/>

Let's Socialize!

Follow us on social media and don't forget to tag us in your photos! **@upforensicanthro**