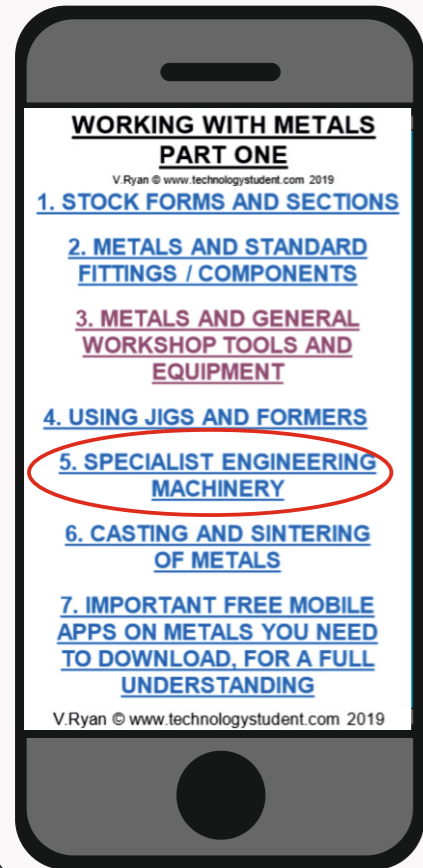


SECOND SET OF SHEETS



**THE CENTRE LATHE**

TO ANSWER ALL THE QUESTIONS YOU WILL NEED TO DOWNLOAD THE 'WORKING WITH METALS - PART ONE' APP, FROM THE INTERACTIVE MOBILE APP SECTION OF [www.technologystudent.com](http://www.technologystudent.com)

LINK

[https://www.technologystudent.com/mobapps/processing\\_metals1.pdf](https://www.technologystudent.com/mobapps/processing_metals1.pdf)

Once you have downloaded the App, you can use it to navigate the website. You may need to follow the links on each page of the App, to research / complete answers to all the questions.

**ARE YOU READY?  
USE THE MOBILE App!!**

**1** WHAT ARE THE BASIC FUNCTIONS OF A CENTRE LATHE?

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**2** THE HEADSTOCK OF A CENTRE CAN BE OPENED. WHAT IS INSIDE?

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WHAT CAN BE CHANGED, INSIDE THE HEADSTOCK?

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**3** THE DIAGRAM BELOW REPRESENTS 'FACING OFF'. WHAT IS THIS PROCESS?

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**4** EXPLAIN THE PROCESS OF TURNING A SHORT TAPER.  
Support your answer with a sketch in the box opposite

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YOUR SKETCH OF PRODUCING A SHORT TAPER.

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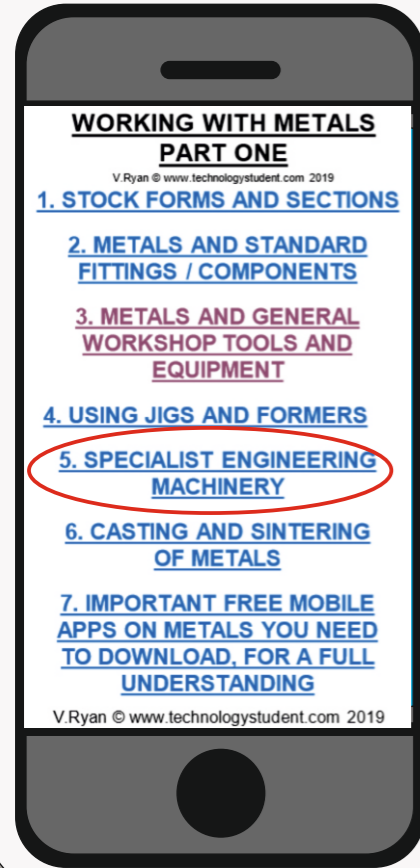
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HELPFUL LINK: [https://www.technologystudent.com/mobapps/processing\\_metals1.pdf](https://www.technologystudent.com/mobapps/processing_metals1.pdf)

SECOND SET OF SHEETS



**THE CENTRE LATHE**

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**ARE YOU READY?  
USE THE MOBILE App!!**

**1**

**WHAT IS KNURLING?**

Support your answer with a sketch in the box opposite

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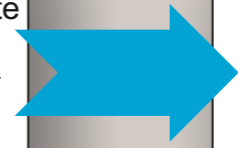
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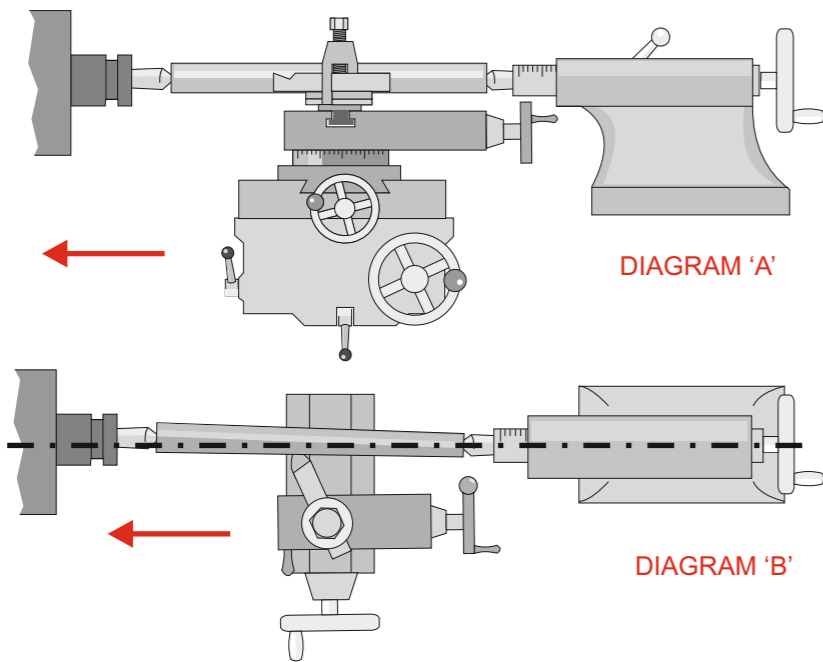
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**YOUR SKETCH SUPPORTING KNURLING**



**2**

THE DIAGRAM BELOW SHOWS TURNING A LONG TAPER. DESCRIBE THIS PROCESS IN THE NEXT BOX.



YOUR DESCRIPTION OF TURNING A LONG TAPER.

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**3**

WHEN USING A CENTRE LATHE, LIST FOUR SAFETY FACTORS MUST BE FOLLOWED.

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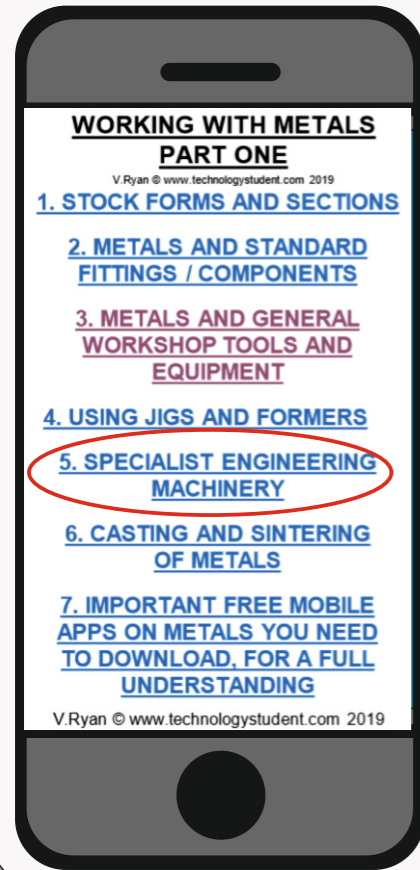
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HELPFUL LINK: [https://www.technologystudent.com/mobapps/processing\\_metals1.pdf](https://www.technologystudent.com/mobapps/processing_metals1.pdf)

SECOND SET OF SHEETS



**THE SHAPING MACHINE AND HORIZONTAL MILLER**

TO ANSWER ALL THE QUESTIONS YOU WILL NEED TO DOWNLOAD THE 'WORKING WITH METALS - PART ONE' APP, FROM THE INTERACTIVE MOBILE APP SECTION OF [www.technologystudent.com](http://www.technologystudent.com)

**LINK**

[https://www.technologystudent.com/mobapps/processing\\_metals1.pdf](https://www.technologystudent.com/mobapps/processing_metals1.pdf)

Once you have downloaded the App, you can use it to navigate the website. You may need to follow the links on each page of the App, to research / complete answers to all the questions.

**ARE YOU READY?  
USE THE MOBILE App!!**

**1** WHAT PROCESSES CAN BE CARRIED OUT WITH A SHAPING MACHINE?

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**2** PRODUCE A SKETCH, SHOWING 'ONE' OF THE PROCESSES YOU DESCRIBED IN QUESTION 1.

PROCESS: \_\_\_\_\_

**2** COMPLETE THE DIAGRAM OF THE SHAPING MACHINE, BY ADDING THE MISSING LABELS.

GRADUATED COLLAR  
RAM CLAMPING NUT  
VICE  
TABLE  
CROSS TRAVERSE HANDLE

V.Ryan © 2017

**3** A HORIZONTAL MILLER IS SHOWN BELOW. DESCRIBE SOME OF THE PROCESSES CARRIED OUT WITH THIS MACHINE.

Answer in the next box.

**ANSWER HERE.**

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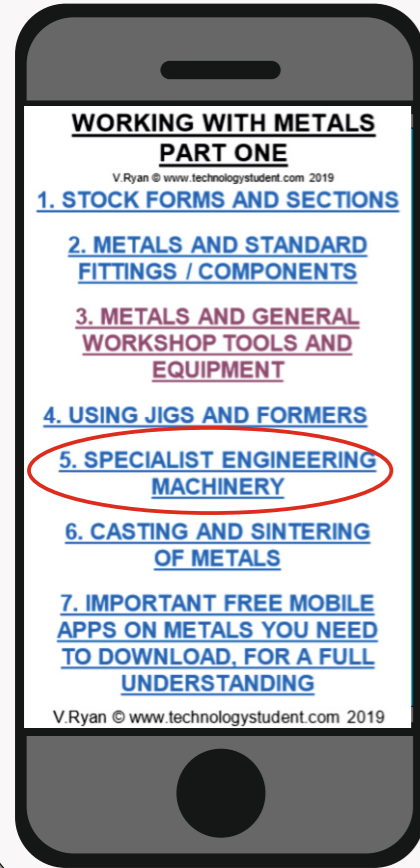
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**HELPFUL LINK:** [https://www.technologystudent.com/mobapps/processing\\_metals1.pdf](https://www.technologystudent.com/mobapps/processing_metals1.pdf)

SECOND SET OF SHEETS



**THE VERTICAL MILLER AND COMPRESSION MOULDING**

TO ANSWER ALL THE QUESTIONS YOU WILL NEED TO DOWNLOAD THE 'WORKING WITH METALS - PART ONE' APP, FROM THE INTERACTIVE MOBILE APP SECTION OF [www.technologystudent.com](http://www.technologystudent.com)

LINK

[https://www.technologystudent.com/mobapps/processing\\_metals1.pdf](https://www.technologystudent.com/mobapps/processing_metals1.pdf)

Once you have downloaded the App, you can use it to navigate the website. You may need to follow the links on each page of the App, to research / complete answers to all the questions.

**ARE YOU READY?  
USE THE MOBILE App!!**

**1** WHAT PROCESSES CAN BE CARRIED OUT WITH A VERTICAL MILLER?

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**2** PRODUCE A SKETCH, SHOWING 'ONE' OF THE PROCESSES YOU DESCRIBED IN QUESTION 1.

PROCESS: \_\_\_\_\_

**3** COMPLETE THE DIAGRAM OF THE VERTICAL MILLER, BY ADDING THE MISSING LABELS.

**4** AN HYDRAULIC PRESS IS SEEN BELOW. WHAT IS COMPRESSION MOULDING?  
Answer in the next box.

ANSWER HERE.

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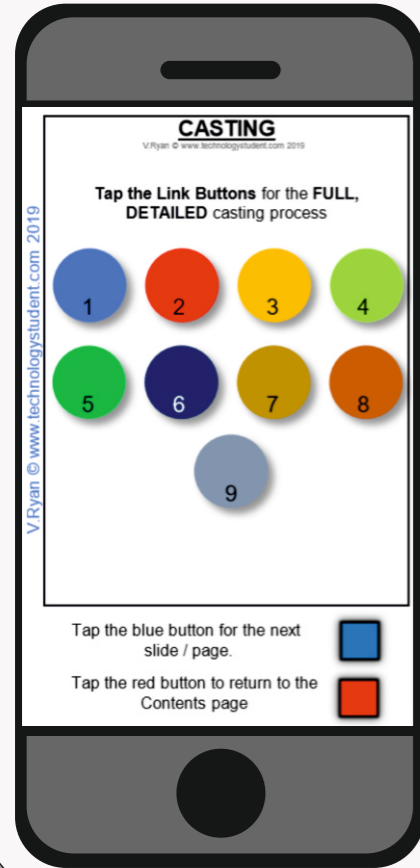
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HELPFUL LINK: [https://www.technologystudent.com/mobapps/processing\\_metals1.pdf](https://www.technologystudent.com/mobapps/processing_metals1.pdf)



SECOND SET OF SHEETS



**ALUMINIUM CASTING**

TO ANSWER ALL THE QUESTIONS YOU WILL NEED TO DOWNLOAD THE 'WORKING WITH METALS - PART ONE' APP, FROM THE INTERACTIVE MOBILE APP SECTION OF [www.technologystudent.com](http://www.technologystudent.com)

LINK

[https://www.technologystudent.com/mobapps/processing\\_metals1.pdf](https://www.technologystudent.com/mobapps/processing_metals1.pdf)

Once you have downloaded the App, you can use it to navigate the website. You may need to follow the links on each page of the App, to research / complete answers to all the questions.

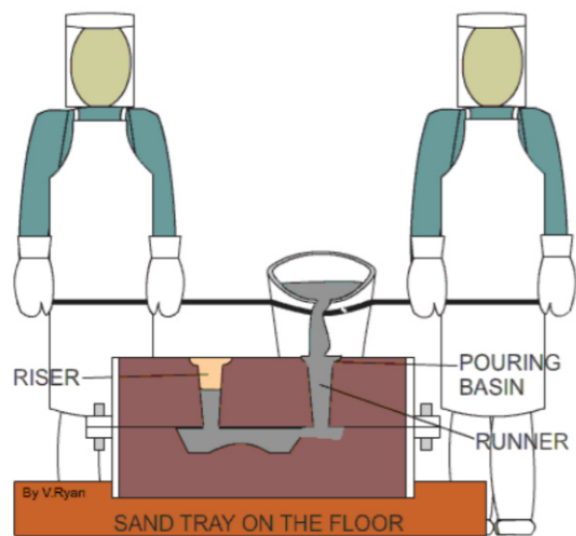
**ARE YOU READY?  
USE THE MOBILE App!!**

1

**BRIEFLY DESCRIBE PREPARING CASTING BOXES, READY FOR CASTING. Use notes and sketches.**

2

**BRIEFLY DESCRIBE POURING ALUMINIUM INTO THE MOULD / CASTING BOXES. Use notes and sketches.**



3

**WHY ARE THE POURING BASIN, RUNNER AND RISER - IMPORTANT?**

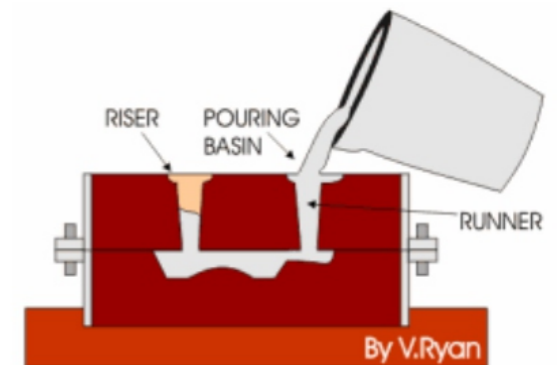
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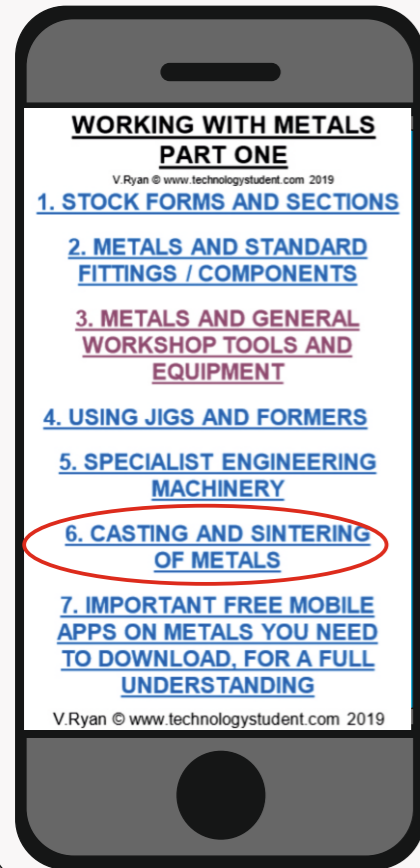


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HELPFUL LINK: [https://www.technologystudent.com/mobapps/processing\\_metals1.pdf](https://www.technologystudent.com/mobapps/processing_metals1.pdf)

SECOND SET OF SHEETS



**PEWTER CASTING**

TO ANSWER ALL THE QUESTIONS YOU WILL NEED TO DOWNLOAD THE 'WORKING WITH METALS - PART ONE' APP, FROM THE INTERACTIVE MOBILE APP SECTION OF [www.technologystudent.com](http://www.technologystudent.com)

LINK

[https://www.technologystudent.com/mobapps/processing\\_metals1.pdf](https://www.technologystudent.com/mobapps/processing_metals1.pdf)

Once you have downloaded the App, you can use it to navigate the website. You may need to follow the links on each page of the App, to research / complete answers to all the questions.

**ARE YOU READY?  
USE THE MOBILE App!!**

**1** WHAT IS PEWTER AND WHY IS IT IDEAL FOR SMALL SCALE CASTING?

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**2** NAME A MATERIAL SUITABLE FOR MAKING A PATTERN / MOULD, SUCH AS THE EXAMPLE SHOWN BELOW.

MATERIAL: \_\_\_\_\_

**3** DESCRIBE THE PEWTER CASTING PROCESS SHOWN HERE. Write your description in the next box.

**YOUR DESCRIPTION OF THE PEWTER CASTING PROCESS.**

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**4** SEARCH THE INTERNET FOR PRODUCTS MANUFACTURED FROM PEWTER. LIST SIX BELOW.

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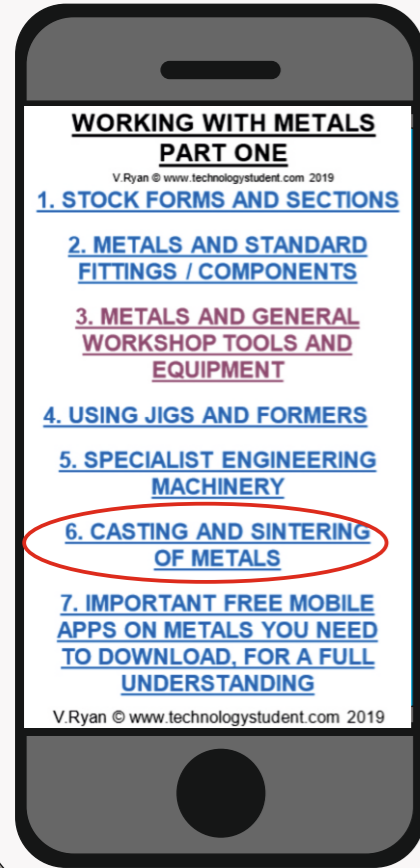
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SECOND SET OF SHEETS



**LOST WAX CASTING INVESTMENT METHOD**

TO ANSWER ALL THE QUESTIONS YOU WILL NEED TO DOWNLOAD THE 'WORKING WITH METALS - PART ONE' APP, FROM THE INTERACTIVE MOBILE APP SECTION OF [www.technologystudent.com](http://www.technologystudent.com)

LINK

[https://www.technologystudent.com/mobapps/processing\\_metals1.pdf](https://www.technologystudent.com/mobapps/processing_metals1.pdf)

Once you have downloaded the App, you can use it to navigate the website. You may need to follow the links on each page of the App, to research / complete answers to all the questions.

**ARE YOU READY?  
USE THE MOBILE App!!**

**1 BRIEFLY, DESCRIBE LOST WAX CASTING.**

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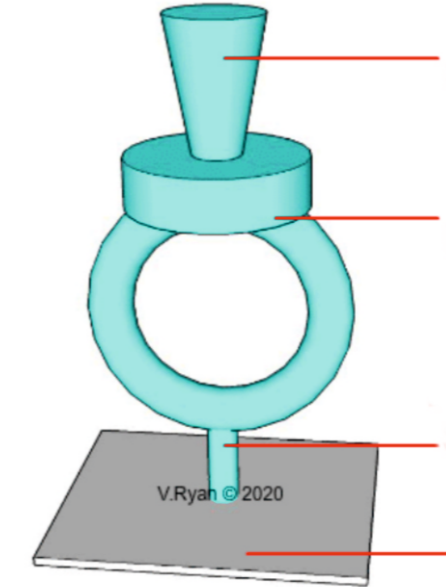
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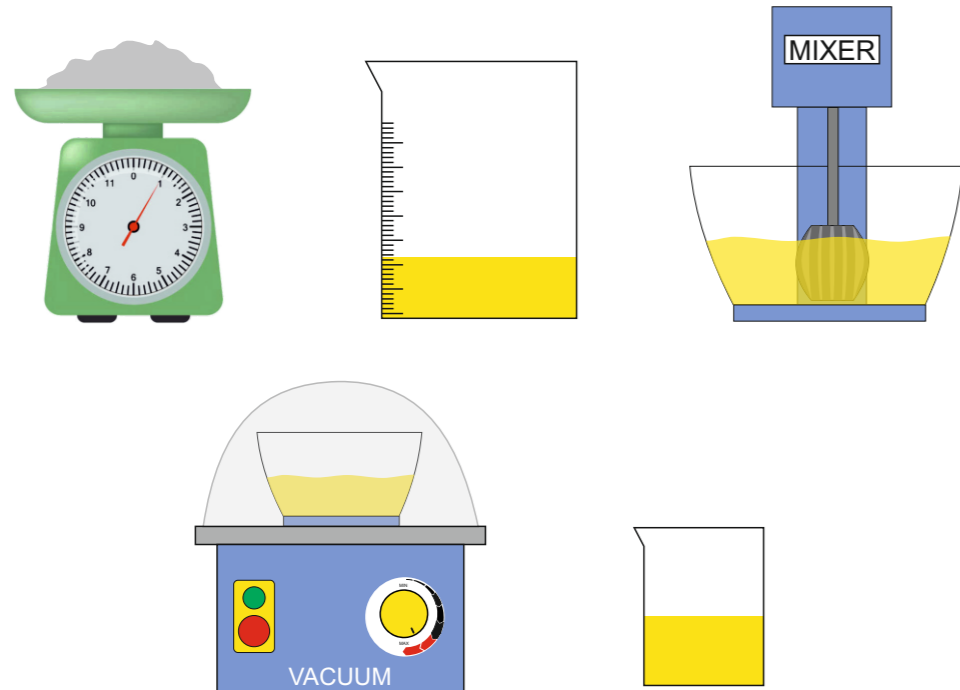
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**2 LABEL THE PARTS OF THE WAX MODEL. THE MODEL WILL BE USED TO FORM A MOULD, FOR LOST WAX CASTING.**



**3 DESCRIBE THE MIXING PROCESS FOR 'INVESTMENT', SHOWN BELOW. Write your description in the next box.**



**YOUR DESCRIPTION OF THE MIXING PROCESS.**

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**4 DESCRIBE PREPARING THE FLASK. READY FOR CASTING.**

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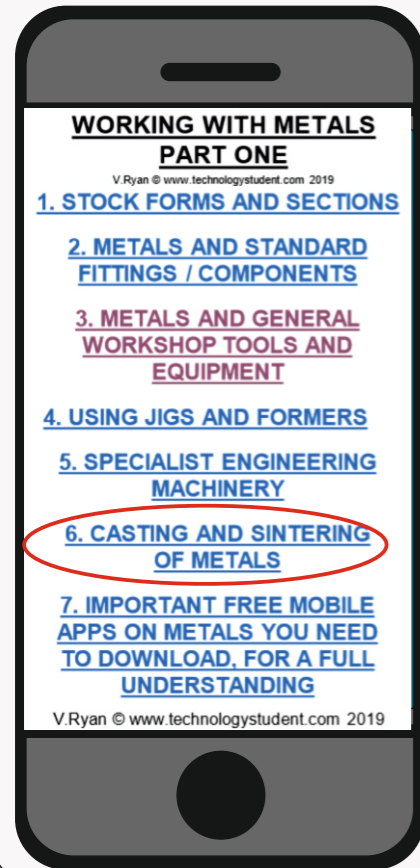
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HELPFUL LINK: [https://www.technologystudent.com/mobapps/processing\\_metals1.pdf](https://www.technologystudent.com/mobapps/processing_metals1.pdf)



SECOND SET OF SHEETS



### LOST WAX CASTING INVESTMENT METHOD

TO ANSWER ALL THE QUESTIONS YOU WILL NEED TO DOWNLOAD THE 'WORKING WITH METALS - PART ONE' APP, FROM THE INTERACTIVE MOBILE APP SECTION OF [www.technologystudent.com](http://www.technologystudent.com)

LINK

[https://www.technologystudent.com/mobapps/processing\\_metals1.pdf](https://www.technologystudent.com/mobapps/processing_metals1.pdf)

Once you have downloaded the App, you can use it to navigate the website. You may need to follow the links on each page of the App, to research / complete answers to all the questions.

**ARE YOU READY?  
USE THE MOBILE App!!**

**1** WHAT IS SILICONE RUBBER? Explain the different types.

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**2** HOW IS SILICONE RUBBER MIXED AND PREPARED FOR A MOULD?

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**3** USING NOTES AND SKETCHES, DESCRIBE HEATING AND POURING THE METAL INTO A MOULD, FOR LOST WAX CASTING. Write your description in the next box and sketch below.

SKETCHES

**YOUR EXPLANATION / DESCRIPTION**

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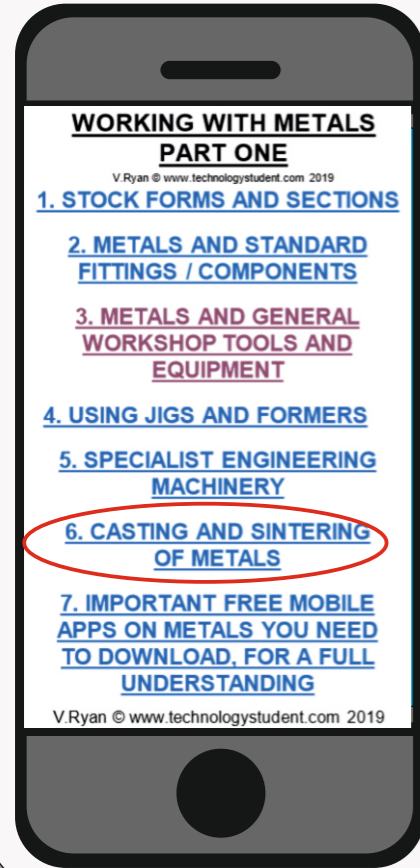
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HELPFUL LINK: [https://www.technologystudent.com/mobapps/processing\\_metals1.pdf](https://www.technologystudent.com/mobapps/processing_metals1.pdf)



SECOND SET OF SHEETS



**PRESSING AND SINTERING OF METALS**

TO ANSWER ALL THE QUESTIONS YOU WILL NEED TO DOWNLOAD THE 'WORKING WITH METALS - PART ONE' APP, FROM THE INTERACTIVE MOBILE APP SECTION OF [www.technologystudent.com](http://www.technologystudent.com)

LINK

[https://www.technologystudent.com/mobapps/processing\\_metals1.pdf](https://www.technologystudent.com/mobapps/processing_metals1.pdf)

Once you have downloaded the App, you can use it to navigate the website. You may need to follow the links on each page of the App, to research / complete answers to all the questions.

**ARE YOU READY?  
USE THE MOBILE App!!**

**1** BRIEFLY, WHAT IS PRESSING AND SINTERING OF METALS?

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**2** LIST SOME ADVANTAGES OF PRESSED AND SINTERED COMPONENTS.

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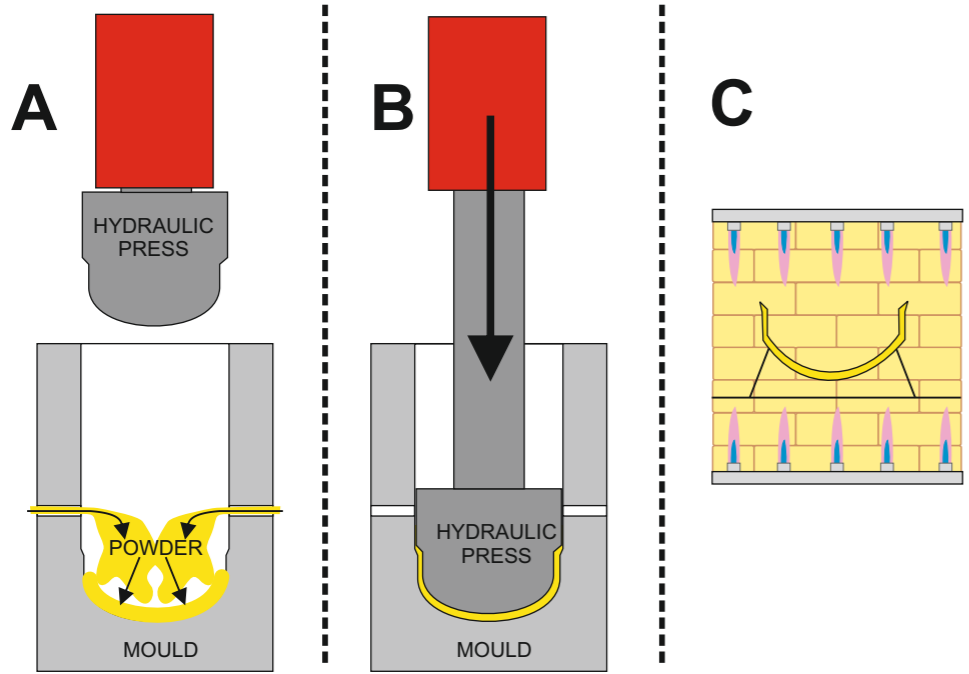
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**3** PRESSING AND SINTERING IS SHOWN BELOW. EXPLAIN STAGES A, B AND C IN THE BOX OPPOSITE.



**YOUR EXPLANATION.**

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**4** LIST SOME DISADVANTAGES OF PRESSED AND SINTERED COMPONENTS.

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HELPFUL LINK: [https://www.technologystudent.com/mobapps/processing\\_metals1.pdf](https://www.technologystudent.com/mobapps/processing_metals1.pdf)