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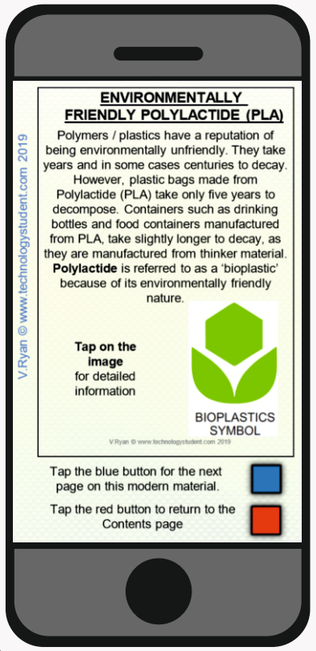
RENEWABLE AND ENVIRONMENTALLY FRIENDLY POLYLACTIDE (PLA)



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ARE YOU READY?
USE THE MOBILE App!!

1 WHAT IS POLYLACTIDE?

2 HOW IS POLYLACTIDE MANUFACTURED?

3 SKETCH A LABELLED DIAGRAM, THAT REPRESENTS THE LIFE CYCLE OF POLYLACTIDE.

4 LIST SIX PRODUCTS THAT CAN BE MANUFACTURED FROM PLA.

5 PLA IS A BIOPLASTIC. SKETCH THE BIOPLASTICS SYMBOL

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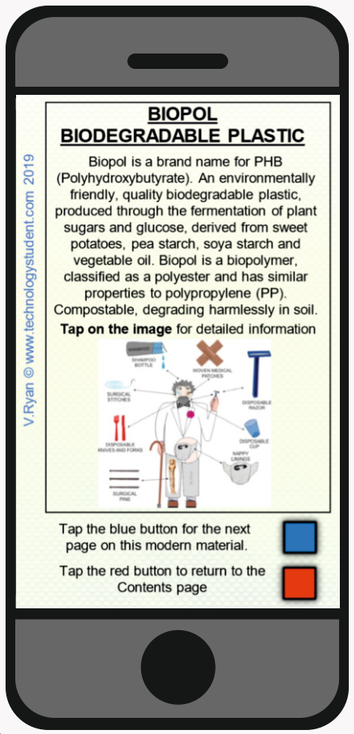

BIOPOL

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ARE YOU READY?
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1 **WHAT IS BIOPOL?**

2 **BIOPOL IS PRODUCED FROM CORN STARCH. DESCRIBE THE PROCESS.**

3 **DRAW A FLOW DIAGRAM, THAT REPRESENTS THE WAY BIOPOL BREAKS DOWN HARMLESSLY IN SOIL**

4 **LIST SIX PRODUCTS THAT CAN BE MANUFACTURED FROM BIOPOL.**

5 **DESCRIBE BIOPOLS LIFE CYCLE**

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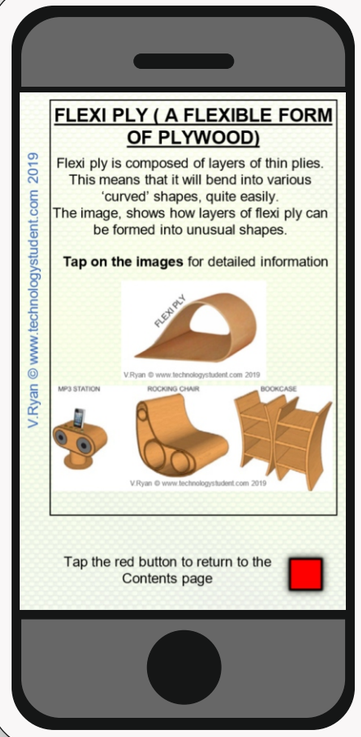

FLEXI PLY

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ARE YOU READY?
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1 **WHAT IS FLEXI PLY?**

2 **DESCRIBE THE TYPE OF PRODUCTS SOMETIMES MANUFACTURED FROM FLEXIPLY.**

3 **A JIG IS NORMALLY USED TO FORM FLEXI PLY INTO UNUSUAL SHAPES. PRODUCE A SKETCH SHOWING HOW THIS IS ACHIEVED.**
(do not include an explanation)

4 **DESCRIBE THE PROCESS YOU HAVE ILLUSTRATED IN Q3.**

5 **WHY IS MARINE PLYWOOD A POOR SUBSTITUTE FOR FLEXI PLY?**

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TITANIUM

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ARE YOU READY?
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1 **WHAT IS TITANIUM?**

2 **LIST SIX PROPERTIES OF TITANIUM.**

3 **SEARCH THE INTERNET FOR PRODUCTS / COMPONENTS MANUFACTURED FROM TITANIUM. PASTE TWO IN THE SPACE BELOW.**

4 **LIST SOME OTHER PRACTICAL APPLICATIONS OF TITANIUM. (do not us the examples from Q3)**

5 **NAME FIVE COUNTRIES THAT 'MINE' TITANIUM?**

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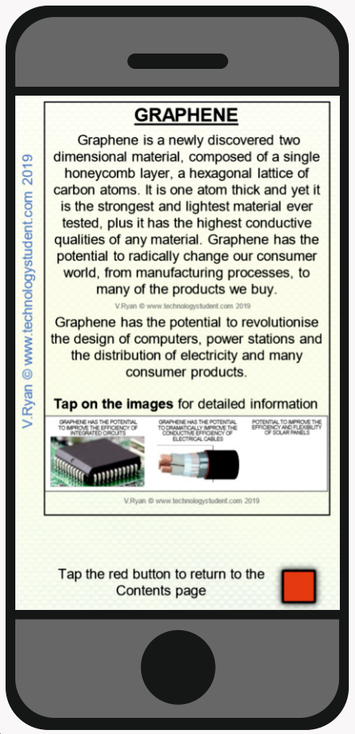

GRAPHENE

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ARE YOU READY?
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1 **WHAT IS GRAPHENE?**

2 **WHO DISCOVERED GRAPHENE? NAME THE UNIVERSITY AND INCLUDE THE DATE.**

3 **SKETCH THE SINGLE LAYER STRUCTURE OF GRAPHENE.**

4 **LIST FOUR PROPERTIES OF GRAPHENE.**

5 **GRAPHENE HAS AMAZING POTENTIAL FOR PRODUCTS AND COMPONENTS. DESCRIBE ITS POTENTIAL.**

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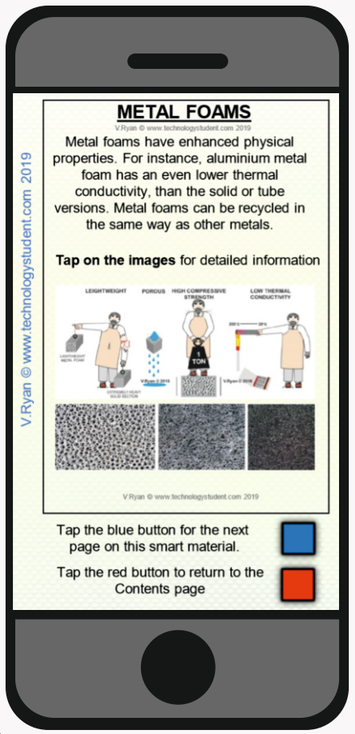

METAL FOAMS

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ARE YOU READY?
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1 **WHAT ARE METAL FOAMS?**

2 **METAL FOAMS ARE AVAILABLE IN A RANGE 'SECTIONS'. SKETCH THREE COMMON SECTIONS**

3 **DRAW A DIAGRAM THAT REPRESENTS THE MANUFACTURE OF METAL FOAMS. (do not include an explanation)**

4 **DESCRIBE THE PROCESS YOU SKETCHED IN Q3.**

5 **DESCRIBE ONE PRACTICAL APPLICATION OF METAL FOAM.**

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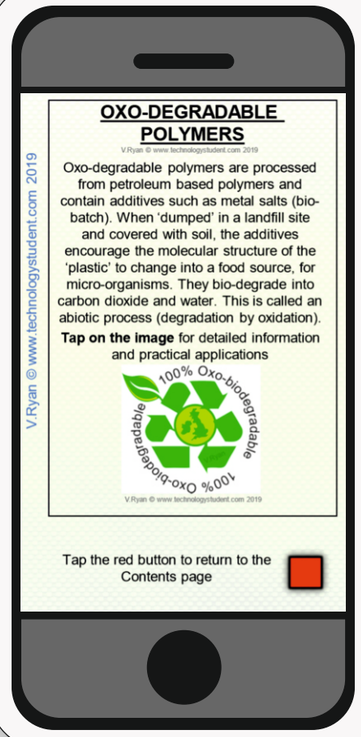

OXO-DEGRADABLE POLYMERS

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ARE YOU READY?
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1 **WHAT ARE OXO-DEGRADABLE POLYMERS?**

2 **OXO-DEGRADABLE POLYMERS INCLUDE BIO-BATCH. WHAT IS ITS PURPOSE?**

3 **SKETCH A SYMBOL THAT REPRESENTS OXO-DEGRADABLE POLYMERS.**

4 **LIST FIVE POLYMERS THAT CAN BE TRANSFORMED INTO BIODEGARDABLE POLYMERS, BY ADDING BIO-BATCH.**

5 **ARE THESE POLYMERS ENTIRELY ENVIRONMENTALLY FRIENDLY?**

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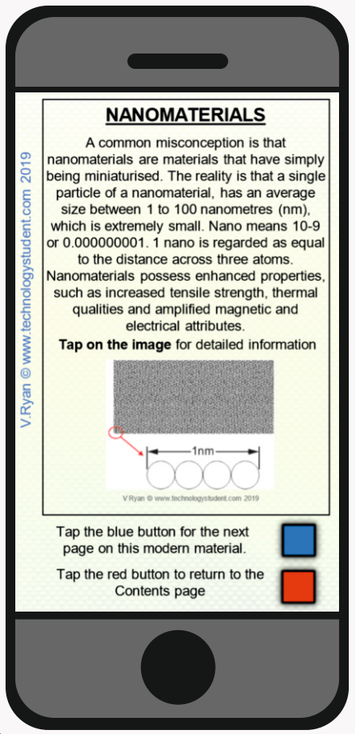

NANOMATERIALS

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ARE YOU READY?
USE THE MOBILE App!!

1 WHAT ARE NANOMATERIALS?

2 HOW CAN NANO-CRYSTALLINE MATERIALS BE USED?

3 WITH THE AID OF A SKETCH, DESCRIBE A PRACTICAL APPLICATION OF NANOPARTICLES.

4 WHAT IS A NANOCOMPOSITE?

5 QUANTUM DOTS HAVE GREAT POTENTIAL IN THE MEDICAL WORLD. HOW?

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