

# HOW DO SYNTHETIC MATERIALS IMPACT SOCIETY?

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## Research Assistant Notebook

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Student Name	
Date	
Teacher	

### **ACKNOWLEDGEMENT**

*Before you begin we want to acknowledge the point of view presented in this investigation. The objects you will work with are presented to you here through one lens, the field of archaeology. This method of studying a place and the objects of the people who lived there is one used by scientists to understand the past. Still, it is important to recognize this is just one way in which we can learn about the people who use these objects. The descendants of these people have extensive knowledge of these places and their ancestors through stories, beliefs, traditions, and customs that have been passed down from generation to generation.*

SECTION 1: WARM-UP

Steps 1-4

Your Task: Identify and explain the difference between natural materials and synthetic materials.

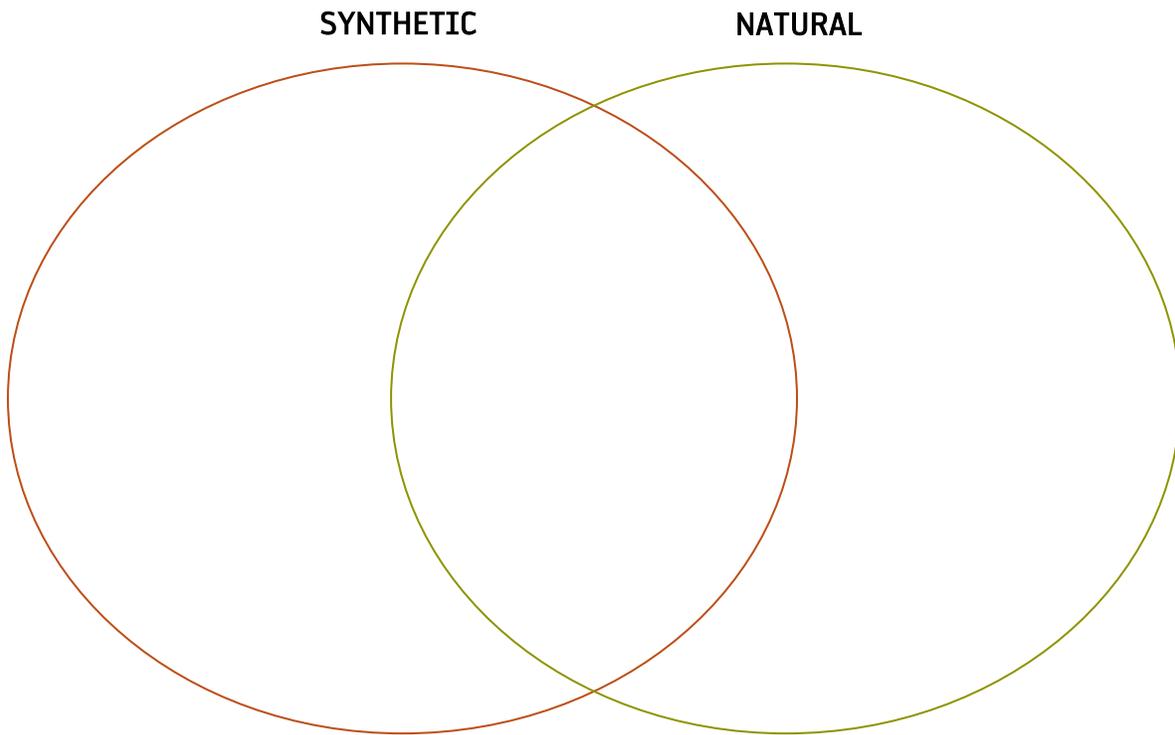
Step 2) **IDENTIFY:** Use the information in the infographic to note your observations of different material types.

1. Which materials are natural materials and which are synthetic materials? Classify them in this chart.

Then, discuss your reasoning with your research partner.

COTTON	NATURAL MATERIAL	SYNTHETIC MATERIAL
POLYESTER		
CERAMIC		
PLASTIC		

Step 3) **COMPARE:** Complete this Venn Diagram or download the completed PDF from the website.



Step 4) **ANALYZE:** Use your Venn Diagram to construct a definition of synthetic materials.

**SECTION 2: GATHER & ANALYZE**

Steps 5-6

Your Task: Gather and Analyze data from ceramic sherds (synthetic material). Make observations of sherd characteristics to determine its form and to make inferences about its function.

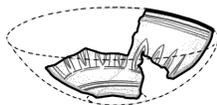
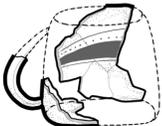
Step 6) **GATHER:** Make detailed observations of your sherd to determine its form and make inferences about its function.

*Take notes here or download your PDF from the website.*

<b>SELECTED SHERD</b>			
<b>DOES YOUR SHERD HAVE EVIDENCE OF... ?</b> Use the space below to track your observations.			
<b>RIM</b>		<b>SLIP</b>	
<b>HANDLE</b>		<b>SURFACE TREATMENT</b>	
<b>CURVE</b>		<b>PAINT LOCATION</b>	
<b>TEMPER &amp; PASTE</b>		<b>DESIGN/PATTERN</b>	

**ANALYZE:** Use your observation data to make comparisons between the characteristics of your sherd and the characteristics of common objects found in the places your sherds were found. Place a "√" if they share the characteristic and a "X" if they don't.

*Take notes here or download the PDF from the website.*

WHAT FORM DOES YOUR EVIDENCE POINT TO?	BOWL	LADLE	MUG	JAR
				
	X No Yes √	X No Yes √	X No Yes √	X No Yes √
<b>RIM</b>				
<b>HANDLE</b>				
<b>CURVE</b>				
<b>TEMPER &amp; PASTE</b>				
<b>SLIP</b>				
<b>SURFACE TREATMENT</b>				
<b>PAINT LOCATION</b>				
<b>DESIGN/PATTERN</b>				

SECTION 2: GATHER & ANALYZE (Cont.)

Steps 5-6

Step 6) **SYNTHESIS:** Use your findings to determine your selected sherd's function and make an inference for what its function might have been. *Take notes here or download your PDF from the website.*

WHAT'S THIS SHERD'S FORM & FUNCTION?					
FORM			FUNCTION		
<i>This sherd came from a</i>			<i>Based on the evidence I can infer that it was used for</i>		
FORM EVIDENCE <i>Highlight or circle the type of evidence you are using.</i>			FUNCTION EVIDENCE		
strong	weak	disconfirming	strong	weak	disconfirming

SECTION 3: INTERPRET

Steps 7-10

Your Task: Interpret your findings to develop an evidence-based claim for why people would invest in developing ceramics.

Step 9) **INTERPRET:** Select several tasks. Compare their production and performance stats. Which material is best suited for the task: the natural or synthetic material? What makes you think that? *Take notes here or download your PDF from the website.*

TASK	PREFERRED MATERIAL TYPE	REASONING
1.		
2.		
3.		

**SECTION 4: COMMUNICATE**

Steps 11-13

Your Task: Generate an evidence-based argument that explains how ceramics impacted the societies who first invented them.

**STEP 12) REFLECT & COMMUNICATE:** Use your findings from this investigation to develop an evidence-based claim that explains why you think humans started using ceramic pottery. *Take notes here or download your PDF from the website.*

<b>WHY DID EARLY PEOPLE MAKE AND USE CERAMICS?</b>								
I think people make and use ceramics because								
<b>EVIDENCE 1</b> <i>Highlight or circle the type of evidence you are using.</i>			<b>EVIDENCE 2</b> <i>Highlight or circle the type of evidence you are using.</i>			<b>EVIDENCE 3</b> <i>Highlight or circle the type of evidence you are using.</i>		
strong	weak	disconfirming	strong	weak	disconfirming	strong	weak	disconfirming
<i>List the evidence that supports your claim for why people make and use ceramics:</i>			<i>List the evidence that supports your claim for why people make and use ceramics:</i>			<i>List the evidence that supports your claim for why people make and use ceramics:</i>		

**Step 13) DISCUSS:** Consider the following question and discuss your thinking with your partner. Record your thoughts below.

<b>HOW HAS THE INVENTION OF CERAMICS AFFECTED YOUR LIFE TODAY?</b>