



Stephanie Kwolek Investigation

To choose materials for jobs based on their properties.



Fill in the table below and explain how hard each material is, by trying to scratch it with a nail or pin.

Material	Can it be scratched with a nail?	Can it be torn or cut through with a nail?	Give it a star rating out of 5 for 'hardness'
			★ ★ ★ ★ ★
			★ ★ ★ ★ ★
			★ ★ ★ ★ ★
			★ ★ ★ ★ ★
			★ ★ ★ ★ ★
			★ ★ ★ ★ ★

Rank the Materials		Which of the materials could be used to make these objects?
Lightest to Heaviest	Weakest to Strongest	
		a table _____
		a suitcase _____
		shoes _____

Think about what Stephanie was trying to create - which material would be best suited to Stephanie's job? It must be strong but light.



Stephanie Kwolek Investigation

To choose materials for jobs based on their properties.



Fill in the table below and explain how hard each material is, by trying to scratch it with a nail or pin.

Material	Can it be scratched, torn or cut with a nail? What damage is done?	Give it a star rating out of 5 for 'hardness'
		★ ★ ★ ★ ★
		★ ★ ★ ★ ★
		★ ★ ★ ★ ★
		★ ★ ★ ★ ★
		★ ★ ★ ★ ★
		★ ★ ★ ★ ★

Rank the Materials		Which of the materials could be used to make these objects?
Lightest to Heaviest	Weakest to Strongest	
		a table _____
		a suitcase _____
		shoes _____



1. Explain why, even though wood is very strong, metal (which is just as heavy) is used for protective clothing instead, think about how the clothing is made.
-

2. Think about what Stephanie was trying to create - which material would be best suited to Stephanie's job? It must be strong but light.
-



Stephanie Kwolek Investigation

To choose materials for jobs based on their properties.



Describe how hard each material is, by trying to scratch it with a nail or pin.

Material	Rate your material for hardness out of 5 and explain why you gave it that score	
	_____	___ /5
	_____	___ /5
	_____	___ /5
	_____	___ /5
	_____	___ /5
	_____	___ /5

Rank the Materials		Which of the materials could be used to make these objects?
Lightest to Heaviest	Weakest to Strongest	
		a table

		a suitcase

		shoes



1. In the materials you have tested, how does the weight affect the strength? Are the strongest materials heavier?
-

2. What are the common uses of the materials you tested? Explain how the property of each material makes it suitable for the products it makes.
-

Material	Product	Why the Material is Suitable for the Product