



National Science Foundation  
WHERE DISCOVERIES BEGIN

materials  
**isle**

INTERACTIVE simulated  
laboratory EXPERIENCE

LATTICE VOYAGE

START

materials  
**isle**

LATTICE VOYAGE | SUPER TECH | GLOSSARY | CALCULATOR |

00:07:51

Please search the lattice for the following and click on it:

- \* Vacancy
- \* Substitution atom
- \* Interstitial atom

Press:

R:  
Page Up/Page Down:  
Arrow Keys:  
Mouse:

Replay Animation.  
Move up and down in lattice exploration  
Move around inside lattice  
Rotate within lattice

#### TASK LIST

##### LATTICE VOYAGE

Pass Protocol Exam  
Pass ASTM Exam  
Pass Safety Exam

##### THE CELL

Crystal Structure,  
Coordinates,  
Direction Indices,  
Planes Indices.

##### LATTICE EXPLORATION

Identify vacancy atom.

materials  
**isle** LATTICE VOYAGE | SUPER TECH | GLOSSARY | CALCULATOR | 00:08:33

Please search the lattice for the following and click on it:  
 \* Vacancy  
 \* Substitution atom  
 \* Interstitial atom

Press:  
 R: Replay Animation.  
 Page Up/Page Down: Move up and down in lattice exploration  
 Arrow Keys: Move around inside lattice  
 Mouse: Rotate within lattice

**TASK LIST**

LATTICE VOYAGE

Pass Protocol Exam  
 Pass ASTM Exam  
 Pass Safety Exam

THE CELL

Crystal Structure, Coordinates, Direction Indices, Planes Indices.

LATTICE EXPLORATION

Identify vacancy atom.

materials  
**isle** LATTICE VOYAGE | SUPER TECH | GLOSSARY | CALCULATOR | 00:00:45

Callporter:  
 Callporter that teleports the player inside the material and experience a journey through the lattice

Press:  
 R: Replay Animation.  
 Page Up/Page Down: Move up and down in lattice exploration  
 Arrow Keys: Move around inside lattice  
 Mouse: Rotate within lattice

**TASK LIST**

LATTICE VOYAGE

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 Pass Safety Exam

THE CELL

Crystal Structure, Coordinates, Direction Indices, Planes Indices.

LATTICE EXPLORATION

Identify vacancy atom.

Familiarize yourself with the crystal structure and then click the origin to start the experience



Press:

R:

Page Up/Page Down:

Arrow Keys:

Mouse:

Replay Animation.

Move up and down in lattice exploration

Move around inside lattice

Rotate within lattice

**TASK LIST**

**LATTICE VOYAGE**

- Pass Protocol Exam
- Pass ASTM Exam
- Pass Safety Exam

**THE CELL**

- Crystal Structure.
- Coordinates.
- Direction Indices.
- Planes Indices.

**LATTICE EXPLORATION**

- Identify vacancy atom.