

Strand: 8.1	Standard: 8.1.2	Episode 3 (optional)	Big Idea: The Property of a Material Determines its Uses
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Title: Periodic Table Patterns	Time: 20-25 minutes	CCCs: <u>Structure and Function</u>	Practices: Obtain, Evaluate and Communicate Information
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Episode Snapshot

Students will be involved in a modeling activity using stick figure “aliens” that will help them **obtain the information** that the periodic table of the elements is set up based on the properties of the matter and that the atoms structure affects its properties.

Gather: Put students in groups. Make a copy of the alien set A for each group. Copy the set of alien cards on different colors of cardstock for each group, so that they are easier to keep track of. Have a large envelope with each group’s aliens. Then have a small envelope where you can take two aliens out, put them in the envelope and keep it away from the students. Start by telling the students that they need to arrange these cards on the table in predictable patterns. You will need to study the key to notice the various patterns. Have students raise their hands as they believe they have their tables put together. A common reminder is that you will need to remind them that, “I see predictable patterns going horizontally but not vertically.” “I should be able to ‘read’ your patterns by going left to right and up to down”. When a group is completely finished, I have them describe what is happening, for instance, as you go down a vertical column, each of these has something that increases.

Reason: Have the students predict what 2 aliens are missing in their table and an explanation why. Let them see if they were correct. Have the students watch the following [video](#)

Communicate: Ask the students to write 2 statements explaining how this is similar with their experience with the aliens.

Assessment: Use the 2 statements on the reflection sheet to help you see if they made the connections on how the periodic table is created based on the structure and properties of the atoms. Student reflection sheet	Materials, resources, handouts, etc: • Video (about 5 minutes long) • Student reflection sheet for episode 3 & 4 • Alien Card Set Each group of students will need to have a set of alien cards. • You will also need a small envelope to put the two random cards in.
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