

7.1.4 e1 Wrecking Yard Electromagnets Narrative

Time: 15 minutes	Anchor Phenomena: Wrecking Yard Electromagnets can be turned on and off as needed, allowing a huge amount of metal items to be transferred with little time and energy used.
Big Idea: Electromagnets are magnets that can be turned on and off.	
CCCs <u>Cause and Effect</u>	Practices Ask Questions, Construct an Explanation, Develop Models

EPISODE SNAPSHOT

Students watch video clips showing electromagnets in action, write down their observations, ask questions, and try to explain what they think is causing the items to be picked up, moved to another location, and dropped.

GATHERING

Students watch two video clips, Electromagnet Crane Car and Junkyard Electromagnet Moving Items From Truck. As they watch, they make observations about what is happening. To help them understand what they are seeing, students draw models of the phenomenon on their observation sheet. As they do this, they should record any questions they may have.

Teacher note: Even though students may not formally research their questions, it is good to have them record questions as they go along so they can process what they are thinking. Additionally, their questions may help them focus their attention throughout the storyline.

REASONING

Students should come up with explanations about what is happening in the videos and use evidence from their observations to support their explanations.

COMMUNICATE

Students participate in a class discussion to offer possible explanations of what is causing the phenomenon. Students should also be encouraged to share the questions they came up with. **Teacher note:** encourage students to write down questions other students ask if they find them intriguing. You may also consider asking your students about how strong these magnets must be to be able lift these items. Additionally, it is important to make sure students are understanding that there is a mechanism that allows the magnet to release the items it has attracted. Students do not need to understand this at this time, but they should be thinking about it.

Assessment: Students don't need to fully understand the phenomenon yet. They should be able to make observations, ask question, and formulate some type of explanation about what is happening.	Materials, resources, handouts, etc. - Electromagnet Crane Car: https://www.youtube.com/watch?v=nvyL5s6hLjk - Junkyard Electromagnet moving items from Truck: https://www.youtube.com/watch?v=XBWy9gzGGd4 7.1.4b e1 WreckingYardElectromagnets
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