PUZZLERS

#50 CAREERS IN WASTE MANAGEMENT

1 HOUR

Puzzle

Create a board game or card game that explores the careers associated with waste management. Find a creative way to display their responsibilities, including images if possible.

Standards & Connections

CCSS.ELA-LITERACY.CCRA.W.4, CCSS.ELA-LITERACY.CCRA.W.6, CCSS.ELA-LITERACY.CCRA.L.2

Background:

Approximately 220,000 people were employed in waste management careers in the United States in 2018, according to the Bureau of Labor Statistics.[i] Roles include hazardous materials removal, laborers, freight and material movers, refuse and recycling collection, septic servicing professionals, and truck drivers. There are also many other jobs not included in the numbers provided by BLS, such as administrative roles, supervisory roles, and those associated with solid waste management.

Suggested Materials:

Computer with internet access, cardboard/foamboard, coloring supplies, index cards, small objects (for game pieces), tape, glue, scissors

IDENTIFY

Share the background information with the students, then share the puzzle to be solved. Determine constraints (e.g., time alotted, space, materials provided, etc.) and divide students into small groups.

IMAGINE

Ask a series of questions to help students brainstorm solutions to the puzzle. Encourage students to list all ideas – don't hold back! Before moving on, make sure each group selects a solution that fits within the contraints.

Ask: How can you can solve this puzzle? Which of your ideas can you build a prototype for given the constraints?

DESIGN

Students diagram the prototype, identify the materials needed to build the prototype, and write out the steps to take. Students describe the expected outcomes.

Ask: What steps will you take to create your solution? What do you expect your solution to look like and be able to do?

CREATE

Students follow their design plan and build their prototypes. Monitor their progress and remind them about how much time they have.

TEST & IMPROVE

Students evaluate their creation and compare it with the expected outcomes. Students seek areas of improvement and make changes where needed.

SHARE

Students share their solution to the puzzle and communicate lessons learned.

Ask: What was your biggest takeaway? What would you do differently?

Additional Resources:

For more background information on this topic, please visit www.purpleplow.org.

Go on a field trip to a waste management facility. If you aren't near one or can't take the time, check out https://recyclingsimplified.com/for-educators/virtualfield-trips/ to visit one virtually.

Complete an interview of a professional in the waste management industry.

[i] https://www.bls.gov/iag/tgs/iag562.htm#workforce

https://careers.wm.com/us/en

https://www.bls.gov/green/recycling/

https://www.bls.gov/iag/tgs/iag562.htm

https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials