

# Plastic Scavenger Hunt—Part 2

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## INTRODUCTION

In Part 2, students will sort the collected plastics similar to a Materials Recovery Facility (MRF).

## CONCEPTS

1. Students will understand the difficulties of sorting recyclable materials.
2. Students will know the definition of polymer, amorphous, and crystalline.

**PREPARATION:** Prepare seven boxes with recycling symbol and number on the front for sorting.

NOTE: Students will readily be able to find resin identification numbers (RIN) 1, 2, 4, 5, and 6. You may want to focus on numbers 3 and 7 or challenge students to find plastics with those RINs. Accept plastics without RINs, as well.

**MATERIALS:** Journals, boxes, recycling codes, found plastics

## PROCEDURE:

1. Deposit all plastics students have collected (in Part 1) in one or two large containers. NOTE: Students will readily be able to find resin identification numbers (RIN) 1, 2, 4, 5, and 6. You may want to focus on numbers 3 and 7 or challenge students to find plastics with those RINs. Accept plastics without RINs, as well.
2. Have students sort the plastics by RIN. Have 7 boxes with one recycling symbol and number on the front to indicate which box to deposit the plastic. Before the sorting process sneak in some metal, glass, or paper. These are contaminants in the recycling process.
3. Students answer these questions: Are there any plastics which do not have a number? Should tops be on or off the bottles? Are there any contaminants in the recycling pile—something that is not recyclable? What is the impact of contaminants at the sorting factory?
4. Discuss with students what types of materials normally have recycling codes, what plastic items are not coded for recycling, and what sorts of challenges the diversity of plastics might pose for the recycling process. (See *The Many Challenges of Plastic Recycling*).
5. Students read *Science of Plastics* and write a summary describing what they learned.

## Student Chart – Plastic Scavenger Hunt - Part 2

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**Physical Characteristics:** Rigid, Flexible, Flimsy, Hard, Thin, Bouncy, Durable, Colored, Stretchy, Bendy, Transparent, Thick, Brittle, etc.

RIN	Item	Item Use	Physical Characteristics
#1 Polyethylene Terephthalate (PET, PETE)			
#2 High Density Polyethylene (HDPE)			
#3 Polyvinyl Chloride (PVC, Vinyl)			
#4 Low Density Polyethylene (LDPE)			
#5 Polypropylene (PP)			
#6 Polystyrene (PS)			
#7 Other			
Unlabeled			