Strand: **8.1**	Standard: **8.1.4**	Episode 5	**Big Idea**: How are natural resources used to make useful synthetic materials?

Title: Plastics All Around	Time: 45 - 90 min.	CCCs: Structure and Function patterns	Practices: **Obtaining, Evaluating and Communicating Information** **Analyze Data**

Episode Snapshot:
Students will **Obtaining, Evaluating and Communicating Information** about plastics by finding different types of plastics and recording data about them. They will **analyze the data** looking for patterns and create a summary about the properties and uses about the different types of plastics.

Gathering
In this episode, students will **obtain and evaluate information** comparing different types of plastics. Students will improve literacy skills by reading and gathering information from different resources. Students will also see just how much plastic is used in the materials around them.

Students start with enrichment activity that asks students to list all the things around them they think is made of plastic. The teacher would compile a list on the board with student help. Teacher would then ask why is plastic used so often, the teacher would again compile the list on the board with student help. Ask then, what is plastic and how is it made? Let the students answer what they think. Explain that plastic is a polymer, what is a polymer you ask? Perfect, at this point show the student the polymers science 101, link below. From here, explain that you want students to really see what plastics are around them. Hand out the Plastic Scavenger Hunt, explain that students will use part of class today and tonight as homework to do a scavenger hunt of plastic around the school and their home. (This can be done over the weekend to give more time.) Allow students to start searching the school for plastics and complete the survey worksheet.

Once students have had time to complete the survey, students would report back to their group and class about what they found; which type of plastic did they find most often, what was its most common use, etc.

Reasoning
In groups students will complete their plastics all around summary sheet using the information each of the students got from each of their surveys. They will look for patterns in the data as to properties that show up for particular types of plastics. Additional research for other uses of the plastics (that might not have been observed) can be completed at this point. They will research what oil is made of to answer the questions at the end of the summary.

Communicating
Have students compare their summaries with other groups and determine if they came to similar conclusions about the properties for each type of plastic.

Assessment: Questions at the end of the summary and their response for the conclusion will help the teacher see if they understand that plastic comes from the natural resource and that plastic is the synthetic	**Materials, resources, handouts, etc:** - **Student level video** polymeres science 101 - **(higher level video for teacher to watch and understand monomers)** Crash Course Video on Polymers

resource and it has specific uses in society.	- Plastic Scavenger Hunt - Plastic All Around Us Student Summary - (optional extension) Plastic All Around Us Research and Poster