

READY-MADE RESOURCES

Bioproducts

Welcome, teachers, to the GrowNextGen Bioproducts Plug-and-Play Lesson. This lesson will take approximately one class period (40 minutes), and will allow students to enhance and expand their knowledge of bioproducts. These activities are meant to be flexible for you to use as needed. Before students begin this activity, they will need a computer with internet access, a copy of documents in the appendix and a writing utensil.

Activity 1: Background knowledge

Have students research the definitions of the following terms:

- biobased products
- bioproducts
- BioPreferred
- green product
- polymer

Once students have defined these terms, have them share with the class.

Activity 2: Career connection

Have students watch this video (grownextgen.org/career-videos/video/bioproducts/) to learn about careers related to this topic. Students should complete the worksheet individually in Appendix 1 while they watch. A key is also included for you in the appendix.

Activity 3: Industry information

Have students work in groups of 4–5 to explore modern ag companies that are engaged in bioproducts. You can allow students to choose which company to research, or you can assign a company to each group of students. Appendix 2 is a guide students can use to direct their research. Students can submit Appendix 2 as part of this assignment, or you could assign them to share their findings in class presentations.

The companies to research are: US Bioplastics (usbioplastics.com/about-us); Logos Industries (logostech.net); BioStripe (biostripe.com); Redwood Innovation Partners (redwdinnov.com/renewable-technologies); BioBag (biobagusa.com); Plastic Suppliers (plasticsuppliers.com); Independence Bio Products (independencebioproducts.com); Aloterra (aloterrallc.com).

NextGen Standards

Science and engineering practices

- Analyzing and interpreting data
- Obtaining, evaluating, and communicating information

Crosscutting concepts

- Cause and effect
- Systems and system models
- Stability and change

Disciplinary core ideas/content

- ESS3C Human impacts on Earth systems
- LS1D Information processing
- LS2D Social interactions and group behavior
- PS2B Types of interactions
- ETS2A Interdependence of science, engineering and technology