

Backpack Challenge

NOVA Activity **Battle of the X-Planes**

You are a designer for a backpack manufacturing company. Your company wants you to design an innovative backpack. They have asked your class to define three objects or elements that are essential to a backpack for students.

Your task is to work as a small group of designers to design a backpack that meets all the needs listed in *Backpack Design Requirements*. After you design your product, you will create an advertisement promoting its superior features. It must be convincing, because if your design is chosen for production, you all can look forward to big pay raises, or even promotions!

Backpack Design Requirements

Your backpack design must:

- incorporate the three objects or elements defined by the class.
- contain sufficient space for textbooks.
- feature a special place for pens and pencils.
- be as inexpensive as possible. (If they have time, teams should go to stores or online to see how much a typical backpack costs.)

You should also consider whether to add design features that were not part of the original specifications that may enhance your backpack for your market audience. But remember your costs!

Three Objects or Elements Defined by Class

- 1.
- 2.
- 3.

