

# Modifying Packaging to be Eco-Friendly

Much of the waste we throw away is just empty packaging. Of course, some packaging is useful; it protects products from damage or spoiling, allows them to be stacked, and makes them easier or safer to handle. Eco-friendly packaging is designed to achieve product protection using minimal materials. In addition, materials are chosen that are biodegradable or that are not harmful as wastes.

Many product packages are not eco-friendly. Some items come in boxes that are unnecessarily large or are made of materials that are difficult to dispose of in an environmentally friendly manner.

Why are some products overpackaged? After all, sometimes the extra packaging adds to the cost of manufacturing the product. Some manufacturers overpackage because packaging helps sell products. The right package can make a product more attractive to a consumer. People also tend to prefer large packages over small ones.

In this activity, you will redesign a package for a chosen product. Your design must be eco-friendly and attractive to customers, and it must protect the product.

## OBJECTIVES

**Construct** a model of eco-friendly packaging for an existing commercial product.

**Compare** your new design with the original packaging design and with the criteria for eco-friendly packaging.

## MATERIALS

- packaged products, various
- pencils, colored



## Procedure

1. Bring one packaged product to class. Place the product in the area designated by your teacher.
2. Examine all of the packaged products brought by students. Identify at least two that are not eco-friendly. Use the criteria in the box on the next page to determine whether it is eco-friendly. In the spaces below, write the features that are not eco-friendly.

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## Modifying Packaging to be Eco-Friendly *continued*

### ECO-FRIENDLY PACKAGING CRITERIA

#### Use of Packaging Space

**Preferred:** No empty space inside or outside, so it stacks without leaving gaps

**Acceptable:** No empty space inside, though the outside may be odd-shaped such that it does not stack without leaving gaps

#### Packaging Material

**Preferred:** Biodegradable packaging

**Acceptable:** Recyclable packaging (look for a recycle symbol)

#### Layers of Packaging

**Preferred:** One layer

**Acceptable:** Layers only as necessary to sustain product

**3. a.** Describe one of the products you selected that is not eco-friendly.

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**b.** In what way is the packaging not eco-friendly?

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**c.** How might the packaging be changed to be more eco-friendly?

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**4. a.** Describe the second product you selected.

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**b.** In what way is the packaging not eco-friendly?

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**c.** How might the packaging be made more eco-friendly?

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**Modifying Packaging to be Eco-Friendly** *continued*

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5. Select one of the products you described on the previous page. Design alternative packaging for it. The packaging you design should protect the product from harm and decomposition during shipping and while on display. It should be attractive to potential customers and meet the eco-friendly criteria. On a sheet of paper, make sketches of your alternative packaging using colored pencils. Use the illustrations that are on the current package, but rearrange them so that all of them will still fit on your new package design.
6. Work with a small group of students to critique each other's designs. Make recommendations to each other for ways to improve the designs. Record the recommendations that your design received.

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7. Make changes or redraw your design, using your group's recommendations.
8. Once you are happy with your design, make a final drawing of it below. Include your new arrangement of the illustrations. Provide side views and front views. Include dimensions. Identify the layers of packaging and the material that each layer is made of.

## Analysis

- 1. Analyzing Results** Compare your design with the design of the original packaging that held the product. In what ways is your design an improvement? In what ways, if any, is your design not as practical as the original design?

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## **Modifying Packaging to be Eco-Friendly** *continued*

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- 2. Analyzing Results** Compare your design with the eco-friendly design criteria. Did you meet all of the preferred or acceptable criteria? Which ones did you miss? Explain why you missed them.

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## **Conclusions**

- 3. Evaluating Methods** What was the biggest challenge you faced in creating your new package design?

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- 4. Evaluating Results** How easy do you think it is to design eco-friendly packaging? Explain.

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## **Extension**

- 1. Designing Experiments** How important is packaging to consumers? What kinds of things do consumers look for in a package? Design an experiment to answer these questions. Use both eco-friendly packaging and packaging that does not meet eco-friendly criteria.