

Ship the Chip

Driving Question

What features of lightweight chip packaging minimize crushing during shipping?

What Students are Doing

What Students Figure Out

What are important features of chip packaging?

Students examine and research different aspects of chip packaging.

There are many different possible chip package designs, and packages must be durable yet lightweight and cost effective.

What causes chips to break?

Students investigate forces acting on a chip.

Chip packages are subjected to multiple forces throughout the shipping system.

What features of chip packaging could prevent breakage?

Students apply scientific ideas to design packaging for chips that prevents broken chips as much as possible.

There are many possible design solutions.

How effective was our design?

Students evaluate the effectiveness of their chip package designs given criteria.

Identifying the characteristics of the design that performed the best in each test can provide useful information for the redesign process.

How can we improve our design?

Students use their research and testing to iterate on their initial design.

An iterative design process that utilizes scientific information can lead to the refinement of solutions.