



# Advanced Materials Selection

## Student Notes

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## Lesson 1: Conflicts in Design

What are some ways to display performance indices on a selection chart?

Why can't we compare a performance index with a single property on the same selection chart?

## Lesson 2: Applying Multiple Performance Indices during Ranking

What are the two main criteria for setting up a selection chart when comparing two objectives during the ranking stage?

What is a dominated solution and how does it differ from a non-dominated solution? Which is superior?

What are the three trade-off strategies talked about in the video?

### Lesson 3: Case Study: Materials Selection for a Car Door Panel

Write out the results of the translation step for the car door panel here:

What are the two performance indices used during the ranking stage?

After calculating the results for the eco-friendly composite option, which material would you choose for the car door panel? Why?