

# The 6 Rs

## OF SUSTAINABLE DESIGN

You've probably heard of "Reduce, Reuse, Recycle," but when designing a product, we've found the "6 Rs" to be helpful. Use the questions below to develop more sustainable products. Keep the main themes<sup>1</sup> of sustainable design in mind:

- Think about the product's life cycle when designing.
- Maximize resource efficiency.
- Eliminate or minimize hazards and pollution.

### 1. Rethink

- Is the product really needed?
- Can you design it to be durable?
- Can you design the product so it's easier to reuse, repair, or recycle?
- Can the product materials come from recycled, renewable, or regenerative resources?

### 2. Refuse

- Can you refuse to design something that isn't really needed?
- Can you refuse to use materials that aren't biodegradable, compostable, or recyclable?
- Can you refuse to use materials that are known to be hazardous?

### 3. Reduce

- Can you reduce the amount of materials used or energy needed for manufacturing?
- Can you use less hazardous materials in the product?
- Can you reduce the waste and packaging without putting the product at risk?

### 4. Reuse

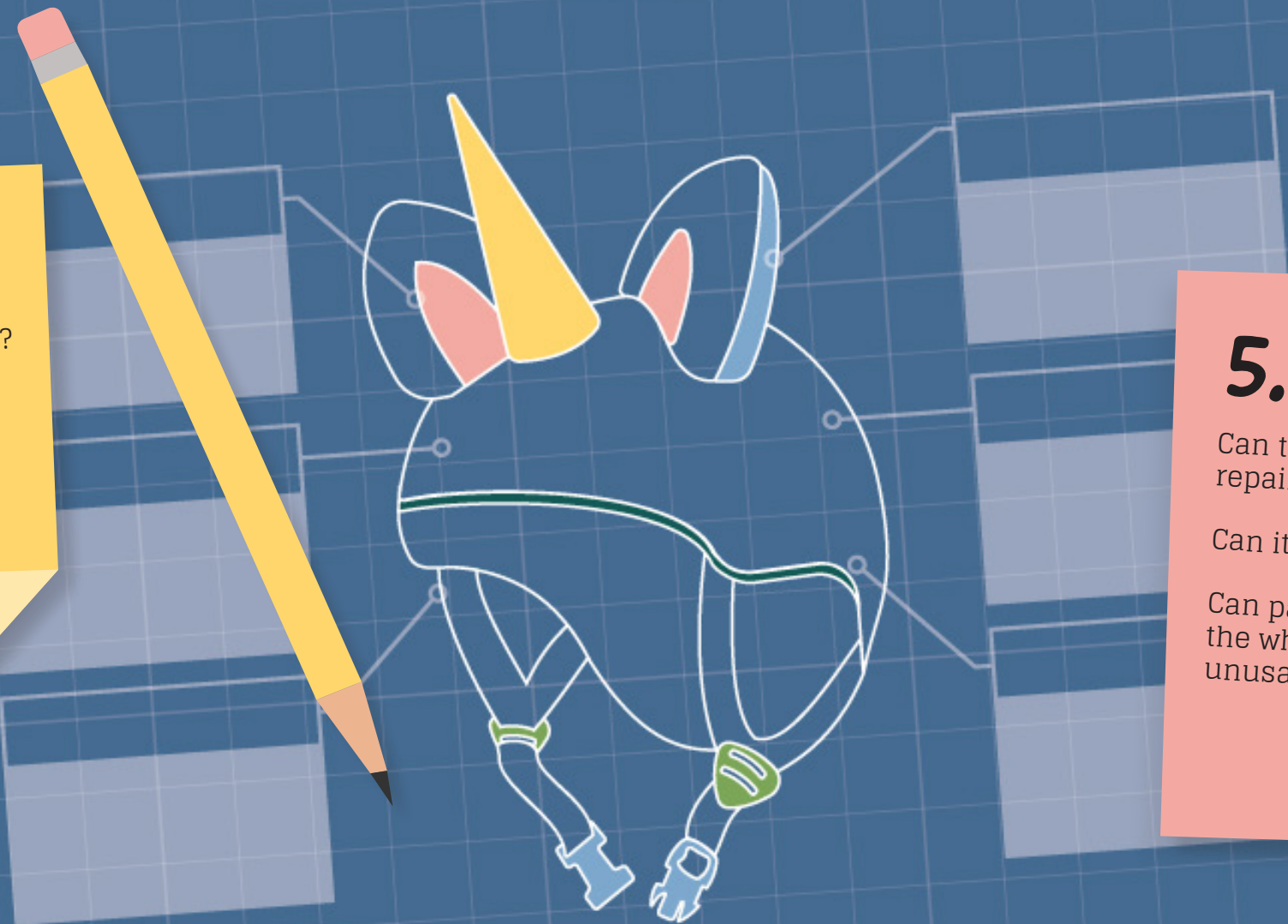
- Can the product be reused, perhaps in a new way, to extend its life?
- Can parts be reused?
- Is it easy to dismantle for reuse?

### 5. Repair

- Can the product be easily repaired?
- Can it be repaired cheaply?
- Can parts be replaced rather than the whole product becoming unusable?

### 6. Recycle

- Can you use materials that will be recycled after use?
- Can you design a product that is easy to recycle?
- Can you use recycled materials?



# Publication information

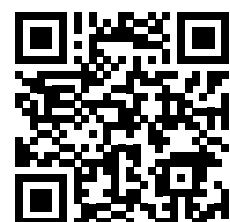
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1 <https://www.acs.org/content/acs/en/greenchemistry/principles/design-principles-booklet.html>

2 <https://www.ecology.wa.gov/GreenChemK12>



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