**Design Criteria Worksheet: MP3 Amplifier**

In this design challenge, students must apply their understanding of design and the technical skills required to use Autodesk® Inventor® to develop a case for a portable amplifier or speaker used with an mp3 player or smartphone. Encourage students to supplement the resources provided in this project with other sources of knowledge that can include their texts, teachers, and the wide array of online resources.

To develop innovative project solutions, it is critical that you develop a clear understanding of all relevant design criteria. This worksheet is intended to help you identify important factors that shape this project by prompting a response to questions in four key categories: Who, Where, What, and Why.

**WHO**

* Who will use the amplifier or speaker?
* Who will produce the ideation sketches?

**WHERE**

* Where will the amplifier or speaker be used?
* Where will the amplifier or speaker be designed and where will it be manufactured?
* Where will the amplifier or speaker be shipped to

**WHAT**

* What are the specific environmental factors that will impact the design of the Amplifier or speaker?
* What are the functional requirements for the amplifier or speaker?
* What are the aesthetic requirements for the amplifier or speaker?
* What materials are best suited for the amplifier or speaker design?
* What are the optimal wholesale and retail prices for the amplifier or speaker?

**WHY**

* Why is the product needed?
* Why is there a need for the amplifier or speaker when multiple types and brands already exist in the market?
* Why would an individual or institution purchase this amplifier or speaker?