**Project Brief: MP3 Amplifier**

**It’s all about the tools and the process!**

“Design thinking” linked to the development of a customized MP3 amplifier starts by formulating and answering some key questions:

* Where will the amplifier or speaker case be used?
* What type of activities will people be engaged in while using the amplifier or speaker case?
* How much time in a day would a person be using the amplifier or speaker case?
* Will this accessory accommodate multiple types of audio devices?
* Will this accessory be sold as an after-market product or comes as part of the original packaging?
* Where will the amplifier or speaker case be stored when not in use?
* What are the potential problems related to damage to the amplifier or speaker case?
* What materials should be used to make the amplifier or speaker case?
* What is your budget for the entire project?
* What is your schedule for completion?
* What inspires you most about this project?

**Process**:

For the amplifier or speaker case project the first task is to develop basic skills in using Autodesk® Inventor® software to develop concepts as part of the Design Thinking ideation stage. After completing the sample amplifier or speaker case students are encouraged to develop their own designs and apply their knowledge of the software to generate multiple concepts for alternative designs. The bottom line is this: If students can expand and enhance their ability to combine the innovation capabilities of the software and the power of the design thinking process, then the goals of this curriculum have been achieved.

**Design considerations used in the example project are as follows**:

* Purpose: To design an amplifier or speaker case
* Target audience: Multiple
* Size limitations: to maximize portability
* Materials to be used: Varied
* Scheduling requirements: 11 to 15 hours to complete the sample project