Visual Aids

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This class will discuss strategies for how to be successful in three critical areas of your presentations:

- **Content**
- **Visual Aids**
- **Delivery**
Before we start....

Reflections for your Journal Entry:

Take notes on today’s lecture. 
Keep in mind you are learning tools to use in your presentation.

Reflect on how you will use the material presented today. 
What are the main ideas you are bringing home, etc...
The goal of the assertion-evidence technique is to convey a message in each slide by first avoiding meaningless titles.

Introduction

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Conclusion

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Use of electronics in cars

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Atmosphere re-entry

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The first step is to write a sentence headline that states the main message of the slide

**Atmosphere re-entry**

- When an object in space re-enters Earth, friction from the atmosphere causes the object to heat to 3000°F
Research shows that there are fonts and font sizes that will increase audience comprehension

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RESEARCH SHOWS THAT THERE ARE FONTS AND FONT SIZES THAT WILL INCREASE AUDIENCE COMPREHENSION
Choosing the right assertion is essential for effective messaging

Newton’s third law is a fundamental principle

For every action, there is an equal and opposite reaction.

- The statement means that in every interaction, there is a pair of forces acting on the two interacting objects.
- The size of the forces on the first object equals the size of the force on the second object.

[www.grc.nasa.gov]
Exercise: how effective is the title in the following slide?

Trabeculae reduce a bone’s weight while giving it maximum strength against multiple forces
The second step is to find or create visual evidence that supports the sentence headline.

When an object in space re-enters Earth, friction from the atmosphere causes the object to heat to 3000°F.
The second step is to find or create visual evidence that supports the sentence headline.

Shuttles are designed to re-enter Earth with their blunt side facing down.

[www.airports-worldwide.com]
Choosing the right assertion and the right visual evidence is essential for effective messaging

Newton’s Third Law describes the fundamental principle behind how rocket engines work

Newton’s third law is a fundamental principle

For every action, there is an equal and opposite reaction.

- The statement means that in every interaction, there is a pair of forces acting on the two interacting objects.
- The size of the forces on the first object equals the size of the force on the second object.
Exercise: how effective is the visual evidence in the following slide?

The Law of Conservation of Mass is used to calculate the velocity inside of a nozzle.
Exercise: it is now your turn to practice and write a sentence headline with an effective assertion

1. Write a sentence headline with an effective assertion to explain “inertia”

2. If time, describe a visual evidence you would include on your slide, that would help and support the assertion you made

3. You have 5 minutes

**Inertia** is the resistance of any physical object to any change in its state of motion including changes to its speed and direction or the state of rest. Newton’s First Law of Motion (“principle of inertia”): an object not subject to any net external forces moves at a constant velocity. On Earth, inertia is masked by the effects of friction, air resistance and gravity. [www.wikipedia.org](http://www.wikipedia.org)
Research shows comprehension and retention is much higher with assertion-evidence slides

Trabeculae reduce a bone’s weight while giving it maximum strength against multiple forces

Gustav Eiffel, 1889
Trabeculae reduce a bone’s weight while giving it maximum strength against multiple forces

Gustav Eiffel, 1889
Materials used to reconstruct damaged bones must have similar structural characteristics as healthy bone.
Materials used to reconstruct damaged bones must have similar structural characteristics as healthy bone.
Research shows comprehension and retention is much higher with assertion-evidence slides

http://writing.engr.psu.edu/models.html

https://07-lvl3-pdl.vimeocdn.com/01/3910/4/119551633/336213024.mp4?expires=1445012455&token=0a19e53bbf6aa05edbada
Dr. Amos’ lectures have dramatically improved and led to better understanding from her students.

**Imaging and Sensing**

- Imaging is a relatively new field, even when ultrasound wasn’t common for personal use.
- Imaging has advanced to allow for high resolution images of organs (brain, heart, lungs).
- Sensing allows researchers to use physics to predict, model, and design medicine, and disease processes in the human body.
- Combined, they present an image of the future of imaging and sensing are low cost, point of care, and public health devices.

**Point of Care Diagnostics**

[www.grandchallenges.org](http://www.grandchallenges.org)

**Video:** Man sees with bionic eye

[http://www.youtube.com/watch?v=_QgPwC3SZ8](http://www.youtube.com/watch?v=_QgPwC3SZ8)
Dr. Brunet’s lectures have dramatically improved and led to better understanding from her students.

Today - Syllabus

- Class info
  - Mondays 4-4:50p
- Grading
  - Attendance: 70% (5% each lecture)
  - Quizzes: 30% (2 quizzes, after each lecture)

In ENG 101 you will learn about careers, dual degrees, minors, and transfer requirements

Course Objective

After completion of this course, students will be aware of all programs of study related to the College of Engineering. They will also be aware of career opportunities related to those programs and the requirements to transfer to each.

Each lecture: one speaker from one engineering major
References: Week9-1


7. Alley, Michael (2003). Rethinking the design of presentation slides: The assertion-evidence structure. [http://writing.engr.psu.edu/slides.html](http://writing.engr.psu.edu/slides.html).


11. [http://writing.engr.psu.edu/models.html](http://writing.engr.psu.edu/models.html) Nicole Gallegor (EA at PSU)’s presentation.

12. ENG 101 slides (Dr. Amos “Bioengineering” and Dr. Brunet “Engineering at Illinois”).