

## Project Objectives and Video Scoring Checklist

### Objectives

**DESIGN:** To create a “looks like” or “works like” design that solves a problem presented by scientists, within given parameters

**VIDEO:** To create a 6-minute ( $\pm 2$ ) video showing the process of your group’s invention development to solve a particular problem, from idea inception to final product creation (Bloopers reel no longer than 20 seconds at the end, not included in  $6\pm 2$  time limit.)

**PAPER:** To collaboratively write a 2-3 (can be longer if needed) page group paper describing the process of each group’s design development to solve a particular problem, from idea inception to final product creation

### Video Scoring Checklist

#### The Set Up (8 points)

Images of UMaine, EPSCoR, and UBMS logos are present

Video title and date/year of video creation is present

The setting/location is established and described

The question/premise/problem/issue you are addressing is clearly stated/shown/demonstrated

Characters are introduced: group, group members, group facilitator, and faculty members/graduate students

Solutions (stated/written/shown) others developed for this problem are present; if none are available, tell the audience

Tone is set

Clear captions tell audience what they are seeing in pictures and videos

#### Rising Action (9 points)

Unfolding action is shown/described (clips or pictures from faculty presentations, group conversations/agreements or disagreements, model/prototype development)

Prompt curiosity – the cause for solving the problem

Physical materials used to create prototype are presented

Video builds towards the main plot (solution to the problem)

“Looks like” or “works like” prototype shown and described

Inform audience how your prototype solves the problem/how it works and how it is unique –

What are the effects/impacts of the design?

Tell/show the audience issues experienced in the development/creation/design of your prototype

Discuss further modifications or testing needed to further develop your prototype

Clear captions tell audience what they are seeing in pictures and videos

**The End (3 points)**

Wrap up: concluding remarks, pictures, or video clips included (with appropriate captions)

Recap – What was the main point of the story? What is the takeaway message you want to leave the audience?

Acknowledgements present

**Final Product/Video Analysis (10 points)**

If you were a grantee or potential supporter, does the video give you enough information about the model, and convince you that the model is creative and beneficial enough to inspire funding?

**Box 7. Group Paper Checklist**

**I. Abstract**

Section is present

Section has been proofread for grammar and spelling

Restates problem and solution

Summarizes impact of solution

**II. Introduction**

Section is present

Section has been proofread for grammar and spelling

Problem (and science surrounding problem) clearly stated/depicted

STEM-based solution to problem clearly stated/depicted

Objectives clearly stated/depicted

Importance and uniqueness of solution to problem is presented

### **III. Materials and Methods**

- Section is present
- Section has been proofread for grammar and spelling
- Development of your prototype showed/explained clearly
- Your “plan, do, study, act” process clearly stated/depicted
- Purpose of each essential instrument, measurement, part, etc... explained

### **IV. Results**

- Section is present
- Section has been proofread grammar and spelling
- Visual representation of final prototype included
- Description of prototype included: How does it work? What is the science behind it? Why is it important?

### **V. Discussion**

- Section is present
- Section has been proofread for grammar and spelling
- Discuss/depict usefulness of your prototype, and why your invention matters: (These could include: social, environmental or medical impacts of your design and should include your design’s importance to the scientific community of this field/discipline.)
- Compare results to previous developments in the field: ‘What was their problem and solution? How did you build on their ideas to create your prototype? Why? How was your project different and why is that difference important?’
- Discuss/depict any issues or roadblocks in the creation/design of your prototype: ‘Why did your prototype turn out the way it did? What would you do differently next time?’
- Discuss/depict further experiments needed to test your prototype or future adjustments that might make your product more sensitive, high-functioning, useful, etc...

### **VI. Conclusion**

- Section is present
- Section has been proofread for grammar and spelling
- Why should (or shouldn’t) your prototype be funded?
- Concluding remarks close paper

**VII. References**

\_\_\_ Section is present

\_\_\_ Section has been proofread for grammar and spelling

\_\_\_ Complete, correct citation for all sources