
Graphic Organizer

NGSS Practice Identifier

[illegible]

Unit 1 Lesson 2

Graphic Organizer

DBL Characteristic Identifier

DBL Characteristic There isn't a set number, the goal is for you to develop an understand how how teacher would incorporate DBL	Example from one of the articles or videos Include link if helpful

Unit 1 Lesson 1+2

Communication Task

Persuasive Summary

Develop a persuasive summary for near-peers to justify the relevance of Design Based Learning and/or NGSS practices for 21st century learning

- ☐ Mention at least 4 relevant NGSS practices for your teaching context
- ☐ Mention at least 2 effective DBL characteristics for your teaching context
- ☐ Connect the pedagogical theories you chose to real world skills, industry, or post-secondary learning

Use the space to draft a formal or informal letter, for example an email

Unit 2 Lesson 1

Graphic Organizer

DBS Task Sample 1

Overview of DBS Task		
Link/Website:	Topic:	Content Standards addressed:
Evaluation of NGSS Practices		
NGSS Practice(s)	How will the teacher know students are demonstrating the practice(s)?	Modifications you'd make if you implemented this lesson
Evaluation of DBL Characteristics		
Design Research Actions:	What research will students do to understand the design needs?	Modifications you'd make if you implemented this lesson
Design Build Actions:	What artifacts will students create and modify?	Modifications you'd make if you implemented this lesson
Design Review Actions:	What ways will students seek feedback and/or revision on their designs?	Modifications you'd make if you implemented this lesson

DBS Task Sample 2

Overview of DBS Task		
Link/Website:	Topic:	Content Standards addressed:
Evaluation of NGSS Practices		
NGSS Practice(s)	How will the teacher know students are demonstrating the practice(s)?	Modifications you'd make if you implemented this lesson
Evaluation of DBL Characteristics		
Design Research Actions:	What research will students do to understand the design needs?	Modifications you'd make if you implemented this lesson
Design Build Actions:	What artifacts will students create and modify?	Modifications you'd make if you implemented this lesson
Design Review Actions:	What ways will students seek feedback and/or revision on their designs?	Modifications you'd make if you implemented this lesson

Unit 2 Lesson 2

Design Task

Teacher Plan

Overview of DBS Task		
Link/Website (if modifying an existing task):	Topic:	Content Standards addressed:
NGSS Practices		
NGSS Practice(s)	How will the teacher know students are demonstrating the practice(s)?	
DBL Characteristics		
Design Research Actions:	What research will students do to understand the design needs?	
Design Build Actions:	What artifacts will students create and modify?	
Design Review Actions:	What ways will students seek feedback and/or revision on their designs?	

Implementation Scaffold

Examples provided are for the Design Based Science Task: “Design a wearable item that will support a human or animal to maintain temperature homeostasis in a variety of conditions”.

Pre-DBS Task	Introduce Background Information: Consider background information and content that students will need to succeed in the task. Follow the way you typically teach here: slideshow, notes, content exploration tasks, video lessons. <i>For example: A slide show/notes on what homeostasis and feedback loops are, a reading task or jigsaw task about temperature maintenance mechanisms in humans and animals.</i>
Design Research Phase	Support students through researching the problem and solutions: Create prompts or leveled questions on a student worksheet that help students understand the problem. Provide selected materials (maybe an article about the issue) or allow more open research (on a computer) for them to narrow their research <i>For example: A research task about how humans need to maintain homeostasis (potentially teacher selected sources ex. Heat loss body maps, locations of sweat glands etc.) paired with a student worksheet to help brainstorm how these natural mechanisms can be supported by wearable technology. For example, sweating might be paired with fans or vents built into the jacket or heat loss map might be paired with additional layers in those areas.</i>
Design Creation Phase	Support students through creating the artifacts related to their design: Create a checklist for what you expect students to include in their design plan and/or actual design. Include specific criteria such as any need for labels on a sketch, scale measurements on a model, materials lists etc. Remember that the design task may not necessarily involve a full 3-D design as awesome artifacts are only computer based. <i>For example: A teacher-created checklist that asks for a labeled sketch and a written rationale for major temperature maintenance components in the design. May include a creative component such as pricing or marketing plans. May or may not involve building a 3-D prototype. Just a labeled plan is still a design!</i>
Design Review Phase	Support students through a feedback and/or review phase: Create an opportunity for students to get feedback from testing, each other, you, or other sources. The student worksheet or assessment sheet needs a space to record/reflect how the review will change the next design iteration. <i>For example: A pair-share where students critique the design sketch of a classmate. Students independently write if/how they would incorporate the peer feedback they received in an iterative design as part of a self evaluation assessment about their work in the design task.</i>

Unit 2 Lesson 1+2

Communication Task

Persuasive Summary

Prepare a presentation for near-peers about the implementation or implementation plan of the newly developed Design Based Science Task. Consider using a slide-show or poster instead of only a written presentation.

- ☐ Select an appropriate way to showcase your DBS lesson plan or lesson results (slide show, pass around student examples, fish-bowl presentation)
- ☐ Highlight the NGSS practices in your lesson
- ☐ Highlight the DBS characteristics in your lesson
- ☐ Connect the pedagogical theories in your lesson to real world skills, industry, or post-secondary learning

Use this space to draft the presentation to plan out your slides/agenda