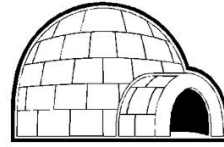


Save the Penguins Storyboard Requirements and Grading Sheet

Name _____ Date _____ Per. _____



A storyboard is like a comic strip that tells a story through drawings and words divided up into sections that flow into one another. Each time you learn a new concept, do an experiment, create a design, or test a design, it should be recorded on the storyboard.

Divide your storyboard into 25 sections. Each section will be worth four points. As we progress through this unit, the topics and requirements for your storyboard are below.

- ___ 1. **Team Logo** – your name, period, team name in BIG BOLD letters, creative team design, and team name and design colored nicely
- ___ 2. **Article** – Title, work cited, main idea, 2 supporting details, learned/liked
- ___ 3. **Data Table** - Results from “The Can Demo”- Materials, Predictions (coldest to warmest), Temperatures ($^{\circ}\text{C}$) Actual Materials and Temperatures (coldest to warmest)
- ___ 4. **Bar Graph** -“The Can Demo”– X and Y Labels, Title, bars least to greatest and colored
- ___ 5. **Heat vs. Temperature Definitions**-T-Chart highlighting differences; minimum of 4 each
- ___ 6. **Conduction and the Spoons** – definition of conduction, draw and label plastic and metal spoons, draw hands and arrows showing direction of heat transfer for each spoon, color picture
- ___ 7. **Convection and the Upside-down House** – definition of convection, black roof, red and blue arrows showing temperature and direction of air movement, color picture
- ___ 8. **Radiation and the House** – definition of radiation, light heat source, radiation arrows from heat source and reflected away from the silver Mylar roof, color picture
- ___ 9. **Exit Cards** – conduction, convection, or radiation – completed and glued
- ___ 10. **Exit Cards** - conduction, convection, or radiation – completed and glued
- ___ 11. **Testing Materials** – list at least 5 tests, Materials Used, Beginning Temp., Ending Temp., and Change in Temp. ($^{\circ}\text{C}$) for each test

- ___ 12. **Purchase Order** - circle 1st, 2nd, or 3rd design, add up the total cost at the bottom
- ___ 13. **First Shelter Design** – Diagram and label all parts of the shelter. Next to each material describe its purpose (supports structure, helps prevent conduction, reduces convection, reflects radiation, heat insulator) color background
- ___ 14. **First Shelter Design Procedure** – (Use 2 sections) Describe in steps how the first shelter was constructed
- ___ 15. **Cooker Procedure** - Describe in steps the cooker procedure. Include how to find starting mass, how the igloo was heated, the time heated, and how you calculated percent of mass loss. Write out the equation.
- ___ 16. **Data Table** – Results of First Shelter Designs - copy all team results
- ___ 17. **Purchase Order** - circle 1st, 2nd, or 3rd design, add up the total cost at the bottom
- ___ 18. **Redesign: 2nd Shelter Design** - Diagram and label all parts of the shelter. Next to each material describe its purpose (supports structure, helps prevent conduction, reduces convection, reflects radiation, heat insulator) color background
- ___ 19. **Data Table** - Results of 2nd Shelters Designs - copy all team results
- ___ 20. **Purchase Order** - circle 1st, 2nd, or 3rd design, add up the total cost at the bottom
- ___ 21. **Redesign: 3rd Shelter Design** - Diagram and label all parts of the shelter. Next to each material describe its purpose (supports structure, helps prevent conduction, reduces convection, reflects radiation, heat insulator) color background
- ___ 22. **Data Table** - Results of 3rd Shelter Designs - copy all team results
- ___ 23. **Triple Bar Graph** - data from all cooker tests, X and Y Labels, title, three bars for each team, color key for 1st, 2nd, and 3rd design
- ___ 24. **Results** – Make a data table with the cost and % of mass lost in your 1st, 2nd, and 3rd designs. Star or circle your best design.
- ___ 25. **Best Design** - Which class design you would use to “Save the Penguins?” Include cost and % of mass lost of the design you choose. Make sure you identify the team name and whether it was the 1st, 2nd, or 3rd design.

___ Total Points Received