Grade 6 Science

ADST Module: Extreme Environments

Blackline Masters

Prototype Recording Sheet

Problem / Challenge "Title" _____

Names _____

Identify the Problem _____

Prototype version _____

Constraints "It must do / use.... It can't do / use..."	Materials / Resources "I have.... I can use..."

Criteria for Success "I know my design is successful when..."

Concept Generation / Designing

(Brainstorm as many ideas as you can here.) Circle your two strongest ideas and name them.

Identify the steps to prototype your first idea. Name of design:	Identify the steps to prototype your second idea. Name of design:

Approved for Prototyping YES → Begin Prototyping

NO → I/we will improve this concept

Prototype Recording Sheet (continued)

Testing: Prototype Name _____

Did the prototype solve the problem within the constraints?

❑ NO → To qualify for manufacture I / we will:
- ❑ A) modify the design. Sketch/Explain in the box below.
- ❑ B) select a new concept to develop and prototype.

❑ YES → Sketch or explain how the design could be refined to increase efficiency, reduce cost, or make manufacture easier, then go on to Manufacturing on the next page.

Testing: Prototype Name _____

Did the prototype solve the problem within the constraints?

❑ NO → To qualify for manufacture I / we will:
- ❑ A) modify the design. Sketch/Explain in the box below.
- ❑ B) select a new concept to develop and prototype.

❑ YES → Sketch or explain how the design could be refined to increase efficiency, reduce cost, or make manufacture easier, then go on to Manufacturing on the next page.

Prototype Recording Sheet (continued)

Manufacturing: Include any special manufacturing instructions below.

The best technology to solve the problem/challenge is _____.
Explain your choice in the box below. Think about cost, ease of use, and recycling, if applicable.

What I know and learned about designing

Name _____

Before you begin designing	**What I know about being a designer:**
	What I know about the steps needed to design and create something new:
After you test your prototype	**What I learned about being a designer:**
	What I learned about the design process:
	What technologists / trades would be needed to mass produce my design?