Chair Lift Challenge

Standards:

Performance Standard 4-ET1-1	**Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.**
Performance Standard 4-ET1-3	**Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.**

Objectives:

By the end of the lesson, students will create a model of a chair that can go on a chair lift and then carry out fair tests to see if their model would work.

By the end of the lesson, students will provide evidence of their model and what materials led them to success and how it can be improved by writing down their thoughts and findings as they conduct the chair lift test.

For this formative assessment, students will keep track of their findings by first creating a hypothesis on what they think will happen or how their chair will turn out. They can then write what is going well and what is not going well. To help differentiate the formative assessment, I put a section for students to draw a picture and label their chair design. Students are also able to add their own information, so some students can add more if they need to. This assessment would be turned in during the middle of the lesson, as this could be made into a two-day activity. I would give them an extra day to decide if they need to change anything and read over their information to see what they found the day before. This would show me if they are understanding the lesson and what is being asked of them. Then I would give them a similar assessment for the summative assessment to assess the final work.

Chair Lift Challenge

Hypothesis: What do you think is going to happen when you put your chair on the lift?

What is going well: What is working for your chair?

What is not going well: What is not working for your chair?

What changes are you making to make your chair better?

Chair Lift Challenge

Create a sketch of what you want your chair to look like and label what you will use.

Create a sketch of what your chair looks like now and label the parts of the chair.