

Simple Glider Initial Observations

简易滑翔机初步观察报告

Class Period: _____

Name: _____

Introduction 介绍

The design of a plane's wings can vary quite a lot from one type of plane to another. Your challenge is to design, build, and test a new wing for a simple glider. However, before you start you will need to think about why different types of planes use different wing designs. You will then use what you already know about airplane designs to make informed design choices when creating a new airplane wing design for your simple glider.

飞机机翼的设计因机型的不同而有很大的不同。你要挑战的是为一个简单的滑翔机设计、建造和测试出一款新的机翼。然而，在开始之前，你需要考虑为什么不同类型的飞机使用不同的机翼。然后，当你为你的简单滑翔机设计一个新的机翼时，你将利用你已经掌握的关于飞机设计的知识来做出明智的选择。

Initial Observations 初步观察

1. Describe the shape of two different airplane wings in as much detail as you can. These can be planes that you have flown on when traveling, airplanes that you have seen in real-life, or planes that you might have seen in a movie (you must describe a real plane). 尽可能详细地描述两种不同机翼的形状。这些飞机，可以是你旅行时乘坐的飞机、你在现实生活中看到的飞机、或者你在电影中看到的飞机(你必须描述一架真实存在的飞机)。

Plane A: _____

Plane B: _____

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2. Think about the purpose of each plane that you have just described in “question 1”. Why do you think the wing of each plane was designed the way that it was?

思考你刚才在“问题 1”中描述的每架飞机的用途。你认为每架飞机的机翼被设计成对应的款式的原因是什么？

Plane A: _____

Plane B: _____

3. Try to think of at least 1 advantage to each wing that you described in “question 1”.

试着思考你在“问题 1”中描述的每个机翼各自的优点，至少 1 条。

Plane A: _____

Plane B: _____

4. Try to think of at least 1 disadvantage to each wing that you described in “question 1”.

试着思考你在“问题 1”中描述的每个机翼各自的缺点，至少 1 条。

Plane A: _____

Plane B: _____

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5. What design elements from the wings that you have just described do you think would be the most suitable for a wing design for a simple glider?

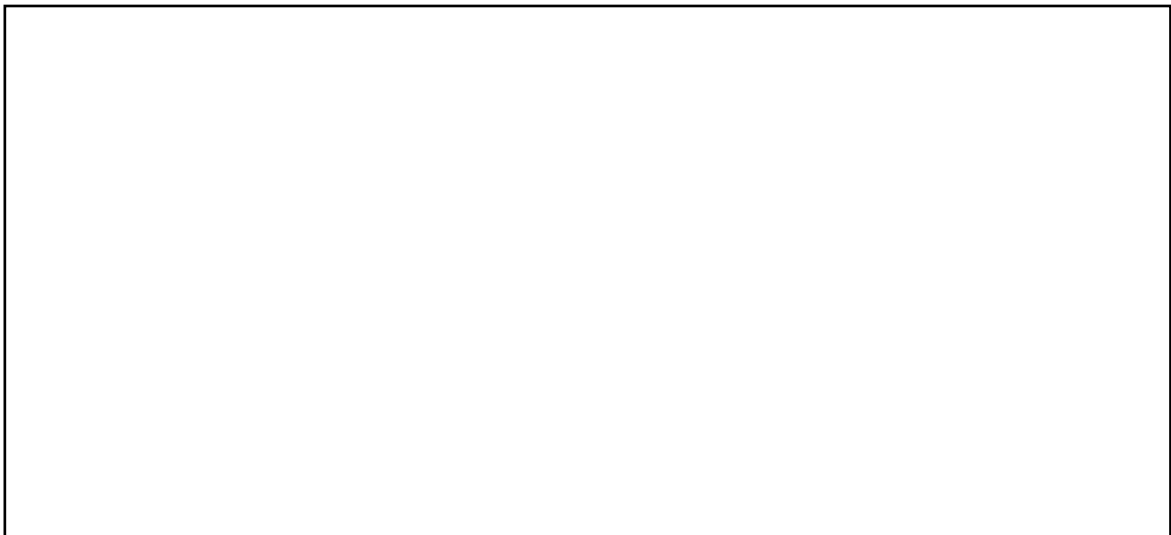
你刚才描述的机翼设计中，你认为哪些设计元素最适合简单滑翔机的机翼设计？

6. Based on your initial observations about airplanes that already exist - Describe how you would design a new airplane wing for a simple glider.

基于你对已经存在的飞机的初步观察，描述你将如何设计一个简单的滑翔机的新机翼。

7. Draw a quick sketch of your proposed airplane wing that you described in "question 6".

画一个你在“问题 6”中描述的飞机机翼的草图。



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CER Statement CER 声明:

Claim 猜想

Do you predict that your proposed wing design will fly well or poorly? Keep in mind that the goal of this design challenge is to design the best possible wing for your glider as possible. 你预测你设计的机翼设计会飞得好，还是不好?请记住，本次设计挑战的目标是为你的滑翔机设计出一个尽可能好的机翼。

Evidence 证据

What evidence do you have from your initial observations that would support your claim?

You can list your evidence as a list (i.e. bullet points).

从初步观察中你可以得到什么证据来支持你的猜想? 你可以把你的证据列成清单 (即各个要点)。

Reasoning 推理

How does the evidence from your initial observations support your claim? Do not simply restate the evidence – explain why the evidence supports your claim.

你初步观察到的证据如何支持你的猜想? 不要简单地重述证据，而是要解释为什么这些证据可以支持你的主张。
