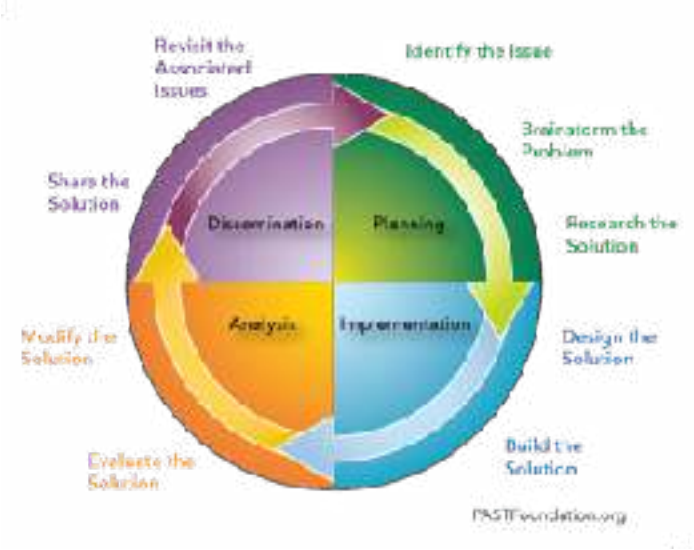
Name:_____

Date:_____

Build a Glider
Mini Challenge



Problem Scenario:

Not all aircraft* use propulsion to achieve sustained flight. Gliders rely on design and weather to achieve lasting flight. Build your own glider.

Challenge:

Tailor and create a glider from a kit or household items. Test flight path capabilities, modifying rudder, and weight to achieve greatest glide path.

Criteria:

Glider kit (wing, stabilizer assembly, balsa fuselage stick), metric stick, rubber bands, clay, hot glue gun and glue, masking tape

- Be able to document the distance flown
- Be able to modify and document weight of the glider

1. Brainstorm: Use the space below to brainstorm the design and approach to building a glider.

• Discuss the terminology of a glider. Wings, fuselage, stabilizer, rudder • Discuss glide path and the variables that make gliders work

• Discuss things that can be changed and/or modified

2. Design:
(see attached page)
• Where will you place your wings along the fuselage?
• Where will you place your stabilizer assembly along the fuselage?

6. Evaluate:
Test Flight #1: Load glider on meter s9ck and launch. • Results: Distance
Test Flight #2: Load glider on meter s9ck and launch. • Results: Distance
Test Flight #3: Load glider on meter s9ck and launch. • Results: Distance

What changes need to be made?

5. Modify:

Test Flight #1 Modifications:

Test Flight #2 Modifications:

Test Flight # 3 Modifications:

3. Build:
(see attached)
If a kit is not available straws and paper can be substituted.

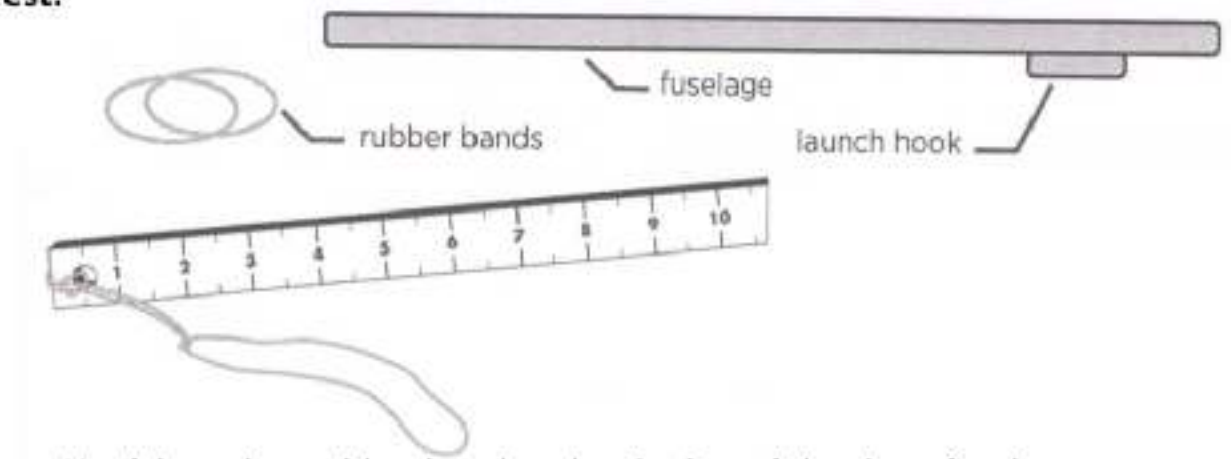
7. Share:

Share your creation on Social Media!

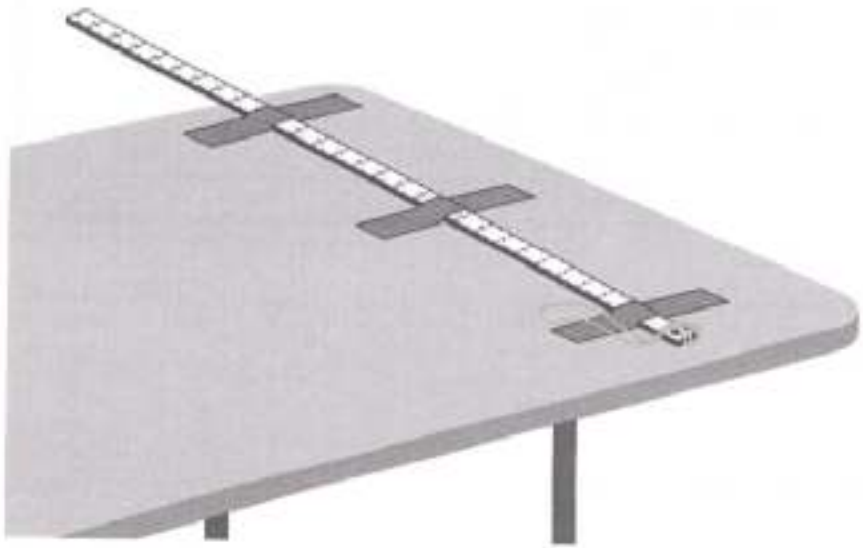
Tag us on Facebook, Twitter or Instagram @pastfoundation

Use the hashtag #ThisIsPAST or #DesignThinking

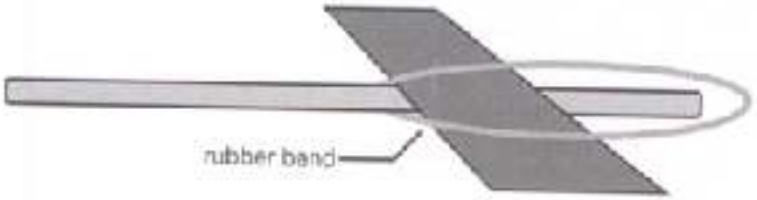
Test:

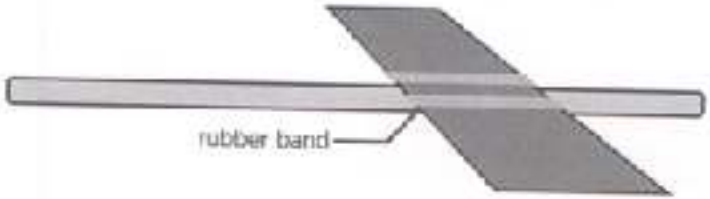


- Hook launcher rubber band under the launch hook on fuselage
- Hold glider at tail and pull gently back to a maximum of 50 centimeters
- Launch
- Record your flight results



Design/Build:





- Hot glue rudder to stabilizer assembly. Use rubber band to position on fuselage.

- Use clay to modify weight on glider