



Name _____

Jumping Frogs

Problem: To investigate potential and kinetic energy

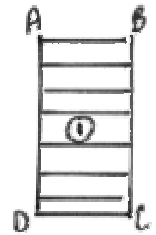
Materials:

3 X 5 Card	Map Colors or Markers
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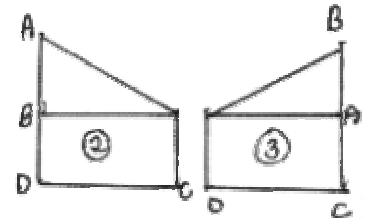
Procedure:

- Use the 3 X 5 card to make an origami frog:

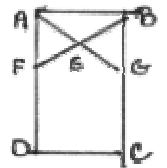
- Hold card so that the lined side is facing you.



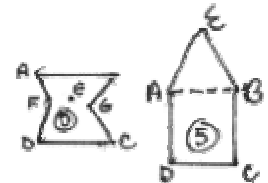
- Fold B to AD to form right triangle & unfold.
- Fold A to BC to form right triangle & unfold.



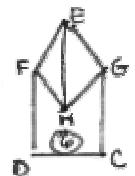
- Push in at E where folds intersect.



- Bring AB to coincide with FG while at the same time bending AF & BG. A pentagon will be formed.



- Fold B to E and A to E. Two small congruent triangles are now on the top of the pentagon and will be the front legs of the frog.

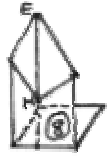


Jumping Frogs 2

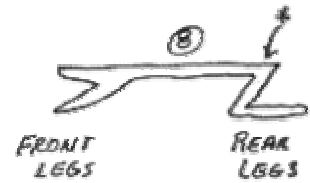
g. Fold GC so that G meets H. Fold FD so that F meets H.



h. Bend DC away from you and then IJ towards H the same amount.



i. You have made your Jumping Frog. Decorate it with eyes and mouth.



* PRESS TO MAKE FROG LEAP

Origami Frog Instructions: <http://www.ma.iup.edu/projects/SEQual/lessons/origami.html>

2. Have your teacher check your frog and initial here: _____
3. Investigate various ways to make your frog jump. Record your observations.

Data:

Questions:

1. What causes your frog to move?
2. Where does the energy come from to move your frog?
3. Can the amount of energy your frog has be changed to make it jump at different heights and distances? Explain.
4. When does your frog have potential energy?
5. When does your frog have kinetic energy?
6. When does your frog have the most energy? Explain your answer.
7. When does your frog have the least energy? Explain your answer.