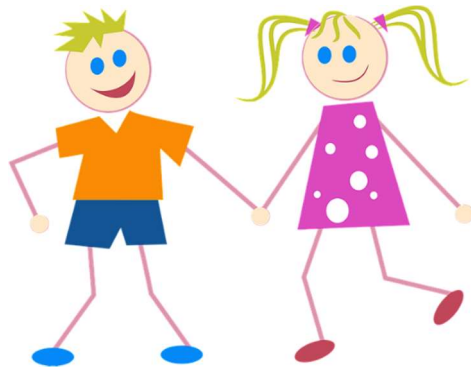


STEM CHALLENGE

APPLES A-HEAD



Name: _____ Section: _____

STEM CHALLENGE APPLE A-HEAD

Student Directions: Read the entire scenario provided below.

Imagine you live in an apartment complex very far from the city. You are watching a movie and your mom is asking you to please go to the city and get a red apple for your sister because she likes red apples, but we only have green apples. You don't want to go to the city because it is a long way, and you will miss your movie! You would rather your sister eat a green apple. You want to go running so you come back fast and not miss the movie. You decide to go quickly but how do you hold the apple so that it does not fall on the floor. There must be something that can hold the apple on your head, so that when you're running back home to watch your movie, it does not fall on the ground.



APPLE A-HEAD Materials

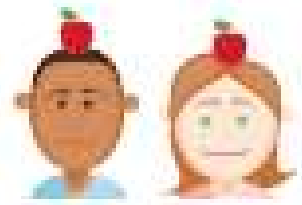
- **For each student or group:**
 - Apple (1)
 - Pencils (12 – 16)
 - Rubber bands (10 – 20)
 - Pocket folder with prongs (1)
 - File folder or pocket folder without prongs may be substituted
 - Pipe cleaners (10 - 12)
 - Paper lunch bags (2 – 3)
 - Tape (24 – 36 in.)
 - String or yarn (24 – 36 in.)
 - Stopwatch or second timer
 - Scissors
 - Design analysis handouts (included)
 - **Optional**
 - Craft sticks
 - Cardboard scraps
 - Paperclips
 - Foil

Not pictured:

- stopwatch

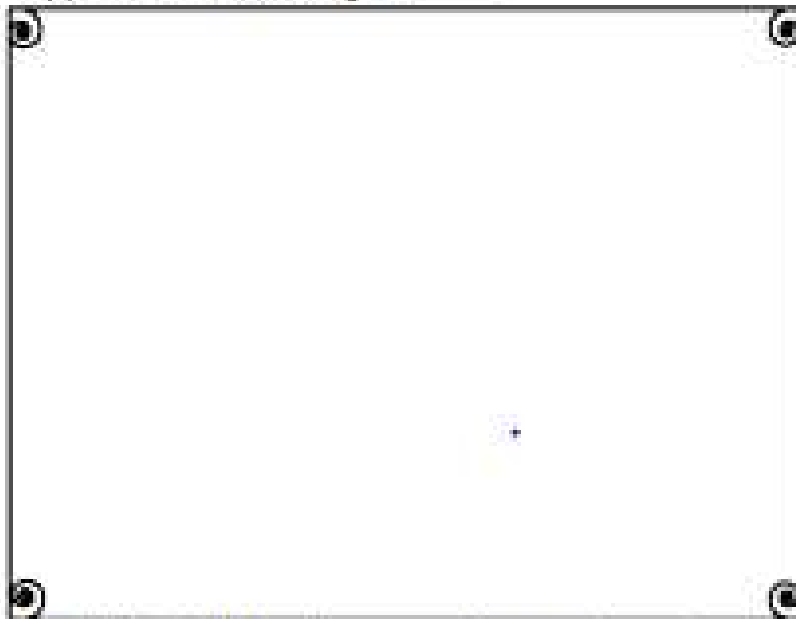


APPLES A-HEAD CHALLENGE



Name _____

Apples A-head Design # _____



Materials & construction notes:

Time to Complete/Retry: _____

Sketch & label a diagram of your design above.

Analysis & Next Steps:

What was successful about your design?

If you were to create another apples a-head device, what would you change and why?

What information might help you improve your design?

EXIT TICKET

Why does an object fall to the ground?