## CRAZY TAPE LAB

Names of people in the group:

PART A --- Directions: Read the steps below and make sure you are able to explain what you are going to do to the teacher.

1. When you get your 4 strips of tape, make a tab at the end of each strip. (Bend each end down so you have something unsticky to hold onto).
2. Stick two pieces of tape flat on the table. Write a "B" on each tab. ("B" for bottom tape).
3. Stick one piece of tape on top of each "bottom" tape. Write a "T" on each tab.
("T" for top tape).
4. Pick one person in your group to raise their hand quietly to get lab materials. Then follow the steps above.

PART B --- Directions: Each experiment below has three steps. Read them, do them, and then draw what happens.

## EXPERIMENT ONE:

Peel off one of the "T" pieces of tape and peel off one of the "B" pieces of tape. Do it slowly so they don't curl. Then:
a) Hold the "top" and the "bottom" piece 22 centimeters away from each other (width of this paper).
b) Bring the "top" and "bottom" pieces closer together so they are 10 cm away from each other (about half the width of this paper).
c) Then hold the "top" and "bottom" pieces 2 cm away from each other (really close together).

| a) 22 cm away from each | b) 10 cm away from each <br> other | c) 2 cm away from each other |
| :--- | :--- | :--- |
| other |  |  |

d) Fill in the blanks below to describe what you noticed about the pieces of tape as they got closer together:

As the "top" and "bottom" pieces of tape got closer together
e) Put "B" pieces back on the table and "T" pieces on top of them

## EXPERIMENT TWO:

Peel off two of the "T" pieces of tape. Then draw what happens when the pieces of tape are at each of the distances below:

| a) 22 cm away from each | b) 10 cm away from each <br> other | c) 2 cm away from each other |
| :--- | :--- | :--- |
| other |  |  |

d) Fill in the blanks below to describe what you noticed about the pieces of tape as they got closer together:

As the "top" and "top" pieces of tape got closer together
$\qquad$
$\qquad$ .
e) Put " $B$ " pieces back on the table and " $T$ " pieces on top of them.

## EXPERIMENT THREE:

Peel off two of the "B" pieces of tape. Then draw what happens when the pieces of tape are at each of the distances below:

| a) 22 cm away from each | b) 10 cm away from each <br> other | c) 2 cm away from each other |
| :--- | :--- | :--- |
| other |  |  |

d) Fill in the blanks below to describe what you noticed about the pieces of tape as they got closer together:

As the "bottom" and "bottom" pieces of tape got closer together
$\qquad$
e) Remove tape from desk and throw away in the trash bin.

## Crazy Tape Analysis

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PART A:
Use what you learned from your Lab to fill in the blanks below. Use the words attracted, repulsed, closer, farther, stronger, or weaker.

- The "top" piece of tape is $\qquad$ to the "bottom" piece of tape.
- The "top" piece of tape is $\qquad$ by the "top" piece of tape.
- The "top" tape has a $\qquad$ attraction to the "bottom" tape when it gets closer to it.
- The "bottom" piece of tape is $\qquad$ by the "bottom" piece of tape.
- The "top" tape has a weaker attraction to the "bottom" tape when it gets
$\qquad$ away.

PART B:
Follow the directions below. Answer all questions in COMPLETE sentences.

1. Does the top strip have a positive or negative charge? Why?
$\qquad$
$\qquad$
$\qquad$
$\qquad$
2. Does the bottom strip have a positive or negative charge? Why?
3. Is the force between the two positive strips of tape repulsive or attractive?

Describe what you did in your lab that answers this question.
$\qquad$
$\qquad$
$\qquad$
4. Is the force between the two negative strips of tape repulsive or attractive? Why do they act like this?
$\qquad$
$\qquad$
$\qquad$
$\qquad$
5. When a positive strip of tape gets near a negative strip of tape, is the force attractive or repulsive? Describe what you did in your lab that answers this question.
$\qquad$
$\qquad$
$\qquad$

PART C --- Directions: Think if there is are any invisible forces acting on each piece of tape and then draw an arrow to show which direction it will move. Under each picture write attract, repel, or nothing for how the pieces of tape interact.

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