

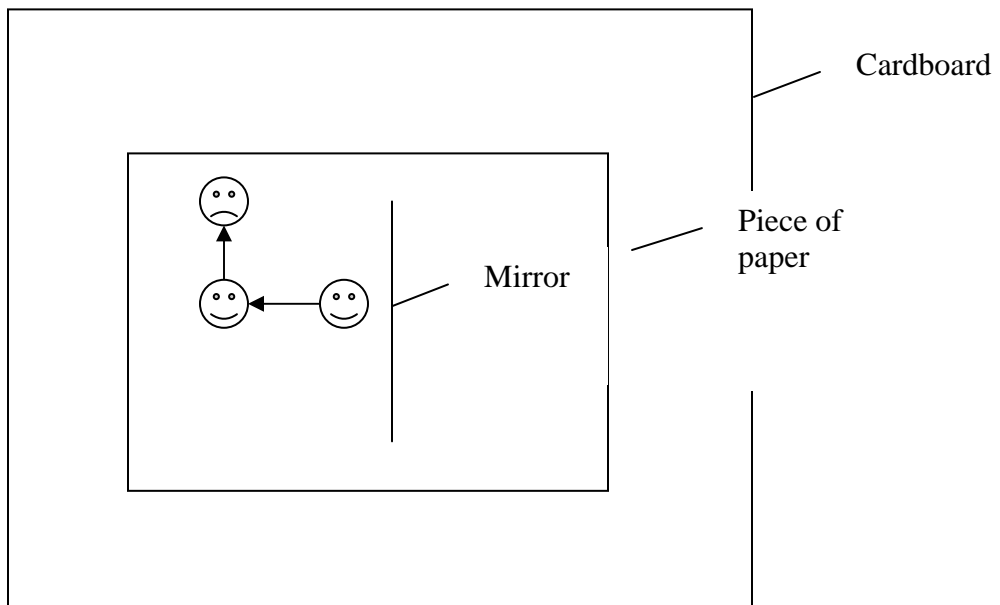
Name: _____

Leonardo's Invention Club

Mirror Activity – When can you see an image in a mirror?

The purpose of this activity is to help you to begin thinking about how light works. Plane mirrors are great ways to keep track of light. Answer the questions below on a separate sheet of paper – word processed - and hand them in tomorrow.

1. Put a piece of paper on a piece of card board and do your best to prop a small hand mirror up vertically using pins in the middle of the paper.
2. Put a penny close to the mirror in the middle of the mirror. How far can you move to the left or the right and still see the image (reflection) of the penny? Find some way to mark the limits of when you can see the penny.
3. Move the penny away from the mirror keeping it halfway between the edges of the mirror. Did the limits of where you can be to see the image of the penny change?
4. Now move the penny so that it's just at the edge of the mirror. What happened to the limits of where you can see the image of the penny?
5. Explain what you think is happening to determine whether or not you can see the image of the penny



Name: _____

Leonardo's Invention Club Mirror Activity – The Law of Reflection

Hand in your piece of paper from the activity below with your name and the names of your partner(s).

1. Take the penny away from the previous exercise and instead stick two pins marked A and B vertically in the piece of cardboard. Write the letters A and B on the paper next to these pins
2. Trace around the mirror.
3. While looking at the reflection of A in the mirror, A', line up A', B and a third pin C. Mark Pin C's position on the paper.
4. Repeat steps one and three but this time move pin B to a new location and label it D then realign the third pin (E) to line up A', D and E. Mark pin E's position on the paper.
5. Take all the pins and mirror away from a paper. Draw lines to the mirror through B and C AND through D and E.
6. Draw a line from A to where the BC line intersects the outline of the mirror.
7. Draw a line from A to where the DE line intersects the outline of the mirror.
8. Use a protractor to measure the angles that the light came into the mirror from A and reflected to BC AND also the angles that the light came into the mirror from A and reflected to DE. Write down the results of your measurements on the paper.
9. What is true about the relationship between the "angle of incidence" and the "angle of reflection"?

