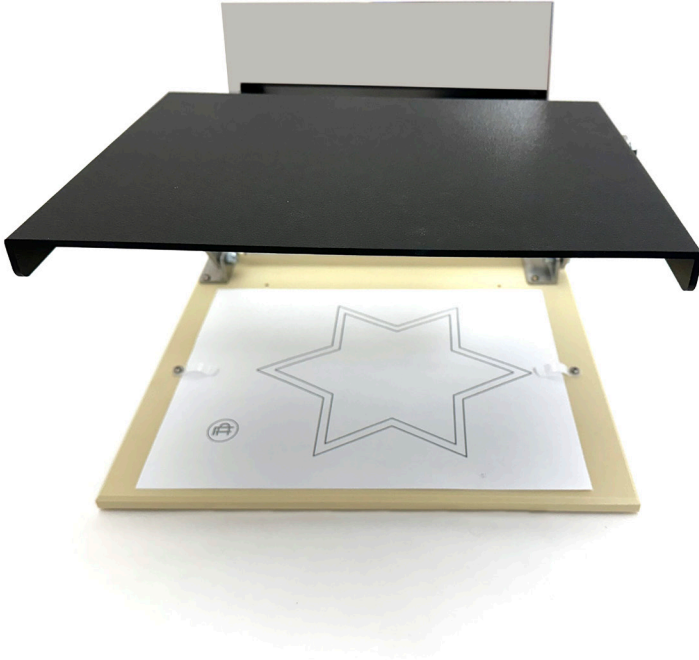


# Mirror Tracer

## *User Instructions*



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# Lafayette Instrument Mirror Tracer

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## Description

The 31010 Mirror Tracing Apparatus is a standard laboratory instrument, which can be used in a variety of experimental studies. The subject's task is to trace a pattern, which is attached to the board from visual cues that are reversed and inverted in a mirror. A metal shield prevents the subject from looking directly at his hand or the pattern, yet it does not interfere with his hand and arm movements.

One of the common patterns which has been used is a six-pointed star made up of two sets of parallel lines approximately  $\frac{1}{4}$ " apart. The subject then has to trace between the lines with a pencil without touching the sides of the star. Errors are tallied by counting the number of times the subject touches or crosses over one of the sides. This task is generally quite difficult at first, but shows very rapid learning; thus, it is an ideal device to demonstrate learning curves.

Bilateral transfer of training can also be shown by giving the subject a test period consisting of a few pre-test trials with the non-preferred hand, a large number of practice trials with his preferred hand, and a final test period of one or two trials with the non-preferred hand. A marked improvement in performance of the non-preferred hand is usually obtained due to the transfer of practice from the preferred hand. Following is a sample experiment for your convenience.

## Purpose

The purpose of this test is to study the effects of bilateral transfer of learning in a mirror tracing motor skill. The tracing of an outline seen in a mirror has been selected to study the acquisition of a motor skill to equate all subjects with respect to unknown and, therefore, uncontrolled effects of training prior to the experiment.

## Apparatus

- 31010: Lafayette's Mirror Tracer
- 31100: Mirror Tracing Stars
- 15643: Digital Stop Watch (optional)

## Procedure

Each student will serve alternately as both E and S. The task is to draw a continuous line within the guidelines of the star as quickly as possible while using only those visual cues obtained by looking at the reflection of the star and pencil in the mirror. The experimenter should insure that the subject uses the correct hand (either preferred [P] or non-preferred [N]), record the number of errors (the number of times S crosses the guide lines), and the amount of time required to complete each trial. The following trials should be administered with a one-minute rest period between each trial:

- Three (3) pre-test trials with the non-preferred hand,
- Fourteen (14) training trials with the preferred hand, and
- Three (3) test trials with the non-preferred hand.
- Following these twenty trials, the E and S should switch roles.

## Results

Compute the total number of errors for each trial. An error consists of each time the S's pencil touches a guideline. If S crosses the line, he must re-enter at the same point; otherwise, a re-entry counts as a second error. Graph the time required for each trial carefully labeling each group of trials. Discuss the evidence of transfer.

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# Terms and Conditions

## LIC Worldwide Headquarters

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There is a \$50 minimum order. Open accounts can be extended to most recognized businesses. Net amount due 30 days from the date of shipment unless otherwise specified by us. Enclose payment with the order; charge with VISA, MasterCard, American Express, or pay COD. We must have a hard copy of your purchase order by mail, E-mail or fax. Students, individuals and private companies may call for a credit application.

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If ordering instrumentation for use outside the USA, please specify the country of ultimate destination, as well as the power requirements (110V/60Hz or 220V/50Hz). Some model numbers for 220V/50Hz will have a "CC" suffix.

## Quotations

Quotations are supplied upon request. Written quotations will include the price of goods, cost of shipping and handling, if requested, and estimated delivery time frame. Quotations are good for 30 days, unless otherwise noted. Following that time, prices are subject to change and will be re-quoted at your request.

## Cancellations

Orders for custom products, custom assemblies or instruments built to customer specifications will be subject to a cancellation penalty of 100%. Payment for up to 100% of the invoice value of custom products may be required in advance. Cancellation for a standard Lafayette Instrument manufactured product once the product has been shipped will normally be assessed a charge of 25% of the invoice value, plus shipping charges. Resell items, like custom products, will be subject to a cancellation penalty of 100%.

## Exchanges and Refunds

Please see the cancellation penalty as described above. No item may be returned without prior authorization of Lafayette Instrument Company and a Return Goods Authorization (RGA#) number which must be affixed to the shipping label of the returned goods. The merchandise should be packed well, insured for the full value and returned along with a cover letter explaining the reason for return. Unopened merchandise may be returned prepaid within thirty (30) days after receipt of the item and in the original shipping carton. Collect shipments will not be accepted. Product must be returned in saleable condition, and credit is subject to inspection of the merchandise.

## Repairs

Instrumentation may not be returned without first receiving a Return Goods Authorization Number (RGA). When returning instrumentation for service,

please call Lafayette Instrument to receive a RGA number. Your RGA number will be good for 30 days. Address the shipment to:

Lafayette Instrument Company

3700 Sagamore Parkway North

Lafayette, IN 47904, USA.

Shipments cannot be received at the PO Box. The items should be packed well, insured for full value, and returned along with a cover letter explaining the malfunction. An estimate of repair will be given prior to completion ONLY if requested in your enclosed cover letter. We must have a hard copy of your purchase order by mail or fax, or repair work cannot commence for non-warranty repairs.

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Damaged instrumentation should not be returned to Lafayette Instrument prior to a thorough inspection. If a shipment arrives damaged, note damage on delivery bill and have the driver sign it to acknowledge the damage. Contact the delivery service, and they will file an insurance claim. If damage is not detected at the time of delivery, contact the carrier/shipper and request an inspection within 10 days of the original delivery. Please call the Lafayette Instrument Customer Service Department for repair or replacement of the damaged merchandise.

## Limited Warranty

Lafayette Instrument Company warrants equipment manufactured by the company to be free of defects in material and workmanship for a period of one year from the date of shipment, except as provided hereinafter. The original manufacturer's warranty will be honored by Lafayette Instrument for items not manufactured by Lafayette Instrument Company, i.e. resell items. This assumes normal usage under commonly accepted operating parameters and excludes consumable products.

Warranty period for repairs or used instrumentation purchased from Lafayette Instrument is 90 days. Lafayette Instrument Company agrees either to repair or replace, at its sole option and free of part charges to the customer, instrumentation which, under proper and normal conditions of use, proves to be defective within the warranty period. Warranty for any parts of such repaired or replaced instrumentation shall be covered under the same limited warranty and shall have a warranty period of 90 days from the date of shipment or the remainder of the original warranty period whichever is greater. This warranty and remedy are given expressly and in lieu of all other warranties, expressed or implied, of merchantability or fitness for a particular purpose and constitutes the only warranty made by Lafayette Instrument Company.

Lafayette Instrument Company neither assumes nor authorizes any person to assume for it any other liability in connection with the sale, installation, service or use of its instrumentation. Lafayette Instrument Company shall have no liability whatsoever for special, consequential, or punitive damages of any kind from any cause arising out of the sale, installation, service or use of its instrumentation. All products manufactured by Lafayette Instrument Company are tested and inspected prior to shipment. Upon prompt notification by the Customer, Lafayette Instrument Company will correct any defect in warranted equipment of its manufacture either, at its option, by return of the item to the factory, or shipment of a repaired or replacement part. Lafayette Instrument Company will not be obliged, however, to replace or repair any piece of equipment, which has been abused, improperly installed, altered, damaged, or repaired by others. Defects in equipment do not include decomposition, wear, or damage by chemical action or corrosion, or damage incurred during shipment.

## Limited Obligations Covered by this Warranty

1. In the case of instruments not of Lafayette Instrument Company manufacture, the original manufacturer's warranty applies.
2. Shipping charges under warranty are covered only in one direction. The customer is responsible for shipping charges to the factory if return of the part is required.
3. This warranty does not cover damage to components due to improper installation by the customer.
4. Consumable and/or expendable items, including but not limited to electrodes, lights, batteries, fuses, O-rings, gaskets, and tubing, are excluded from warranty.
5. Failure by the customer to perform normal and reasonable maintenance on instruments will void warranty claims.
6. If the original invoice for the instrument is issued to a company that is not the company of the end user, and not an authorized Lafayette Instrument Company distributor, then all requests for warranty must be processed through the company that sold the product to the end user, and not directly to Lafayette Instrument Company.

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