A professional portrait of Stephen J. Acquario, a middle-aged man with a balding head, smiling warmly. He is wearing a dark blue suit jacket, a white dress shirt, and a red tie with a small white polka-dot pattern. He is standing outdoors, leaning against a light-colored stone pillar on the right side of the frame. The background is a soft-focus green landscape.

Stephen J. Acquario
Executive Director
NYSAC



Cristina Dyer-Drobnack
Project Director



Travis O'Donnell





K-12 COVID testing

New York State Association of Counties

August 2021

A decorative graphic in the bottom left corner consisting of several curved lines in shades of orange, teal, and pink, mirroring the style of the main title text.

EVERYBODY'S HEALTH IS CONNECTED



THE WALL STREET JOURNAL.

Ginkgo Bioworks Redirects Its Biotech Platform to Coronavirus

Startup valued at around \$4.2 billion shifts resources to pandemic fight



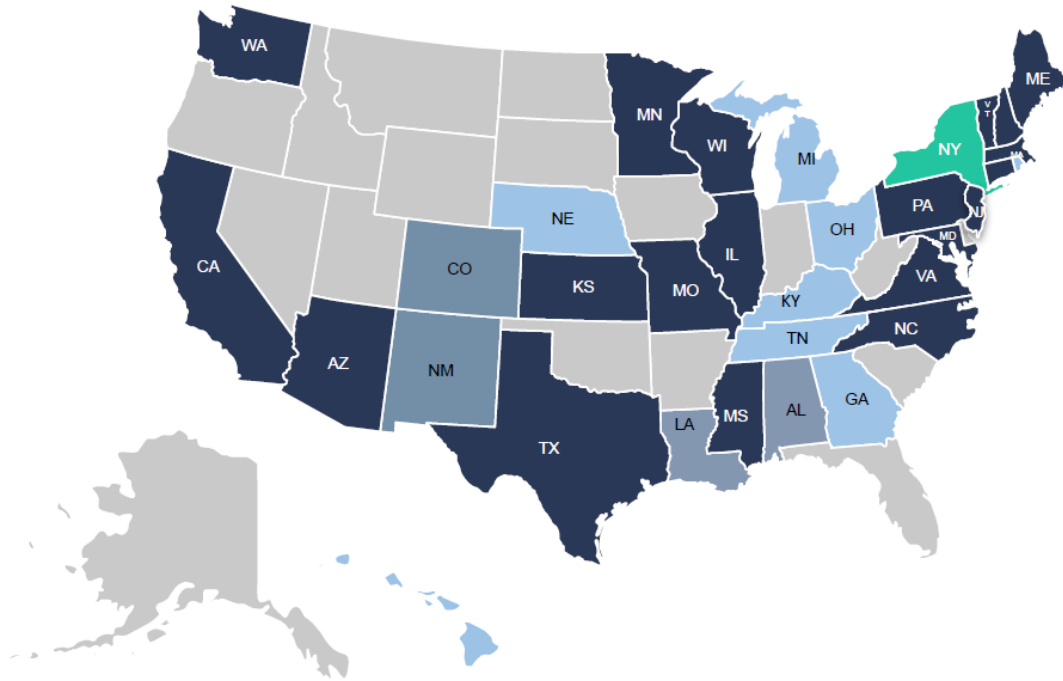
OUR MISSION

**To make testing
accessible to every school
in America, every week
— because everybody's
health is connected.**

Our COVID-19 classroom pooled testing program is helping schools safeguard the health and wellbeing of teachers, students, and their community.



Concentric by Ginkgo currently runs full service K12 testing programs in states and major school districts across the country



Ginkgo has developed a comprehensive program designed solely for affordable and seamless testing in K12 settings, utilizing local resources

-  Contracted with districts or schools
-  Advanced contracting
-  In discussions

A few of Concentric's programs include:

Massachusetts: Statewide classroom pooling program

The Boston Globe — 1.8.21

Baker announces coronavirus pool testing to be made available to all Massachusetts public schools



Weekly testing for every classroom



350+ schools



120,000+ students

Maryland: Testing in Baltimore & Montgomery Counties



Maryland's Largest School District

MONTGOMERY COUNTY PUBLIC SCHOOLS

Bethesda **BEAT** 2021 | SCHOOLS

MCPS will conduct 'surveillance' testing for COVID-19 in reopened schools

California: Testing in multiple school districts



Los Angeles Unified School District:
Begun initial pilots



Poway Unified School District: Weekly testing commenced for athletics



Los Altos School District: Weekly testing for athletics commenced

A few of Concentric's new programs include:

New Hampshire: Statewide program announced in June



New Hampshire Department of Health and Human Services Brings Pooled Testing to K-12 Classrooms in Partnership with Concentric by Ginkgo

State-sponsored program supported by CDC funds will enable testing to help keep classrooms open at no cost to schools

- **New Hampshire DHHS utilizing state-allocated funding from CDC to fund program**
- **Program available for children and staff in schools, overnight camps and some day care centers.**

Arizona: Statewide classroom pooling program



Weekly testing for every classroom



2,700 public, private & charter schools



1,210,000 students - \$114M funding from CDC

Maine: Statewide K12 pooling program launched

Mills Administration Advances New COVID-19 Testing Option for Maine Schools

April 27, 2021

Pooled testing program launches in May to help keep classrooms safe

AUGUSTA— Today, the Mills Administration announced that it will partner with Ginkgo Bioworks Inc. to offer a new COVID-19 testing option to Maine schools that allows them to easily test many

"...when you're working with a great vendor, they really take a lot of the burden, and make sure that schools have all the support they need, and all the resources they need." - Sally Weiss, Maine DHHS

Concentric offers a FULLY INTEGRATED service to implement and operate a statewide program - going live within ~1-2 weeks

Component 1

Pooled (Cohort) Testing

Pooled testing is the foundation of Concentric's program. This approach is designed to minimize the burden on school staff and allows 5-25 individuals to be tested as a group.

Component 2

Individual Diagnostics

We recommend that participating schools have a plan for individual diagnostic testing. Concentric can discuss options and provide rapid antigen and/or individual PCR tests

Component 3

Staffing Support

Tier 1 - Schools use existing school resources

Tier 2 (optional) - Schools access local staffing support through the program according to their needs and at the option of the state.

Component 4

Program Admin and Reporting

End-to-end capabilities for reporting and administration. Support provided for management of CDC ELC requirements or other reporting requirements.

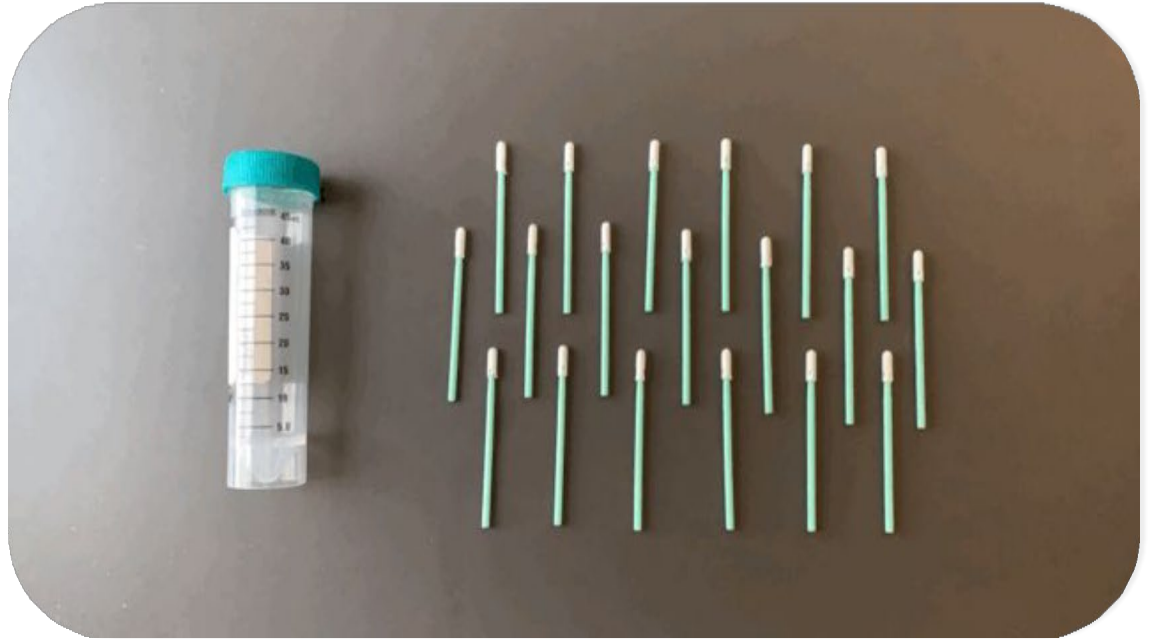
Deploying this protocol, New York State can offer optional testing to **“every student, every week”** either directly or through partnerships with local departments of health.

How does pooled testing look?

Component 1

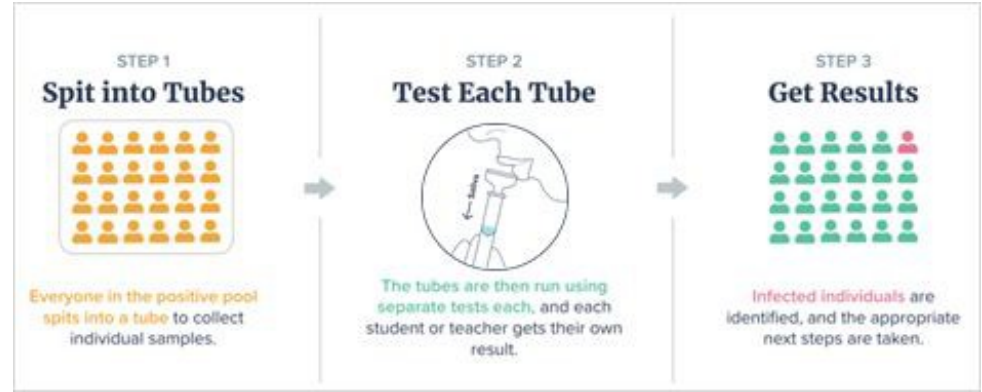
Pooled Testing

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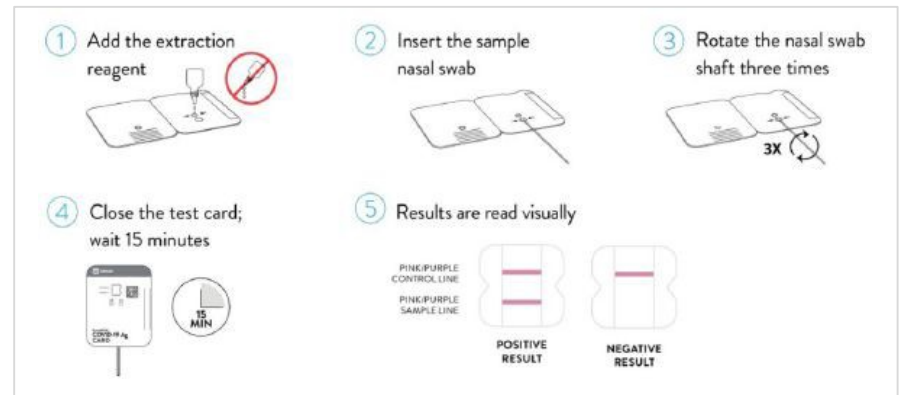


Individual testing is used in support of pooled testing, leveraging existing Antigen and PCR programs

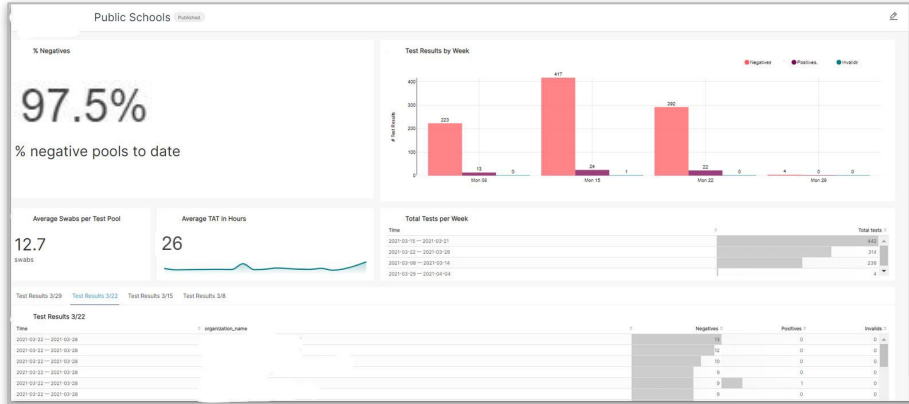
Individual PCR testing such as our saliva-based test or partnered with other local providers



Rapid antigen testing such as the Abbott BinaxNOW test or other products



Concentric provides end-to-end capabilities for reporting based on CDC ELC guidelines and other state reporting requirements



Illustrative

State-level dashboard summarizing key metrics including:

- Number of tests run statewide by district
- Test positivity rate
- Turnaround time

CK19-1904: ELC Reopening Schools COVID Award - Alabama - April 12 - April 16

Place Holder

| County | School District Name | Week | Total Enrollment | Tests Conducted: PCR | Tests Conducted: Antigen | Positive Cases (All test types) | Notes |
|----------------|----------------------|---------------------|------------------|----------------------|--------------------------|---------------------------------|-------|
| Autauga County | Autauga County | April 12 - April 16 | | | | | |
| Baldwin County | Baldwin County | April 12 - April 16 | | | | | |
| Barbour County | Barbour County | April 12 - April 16 | | | | | |
| Barbour County | Eufaula City | April 12 - April 16 | | | | | |
| Bibb County | Bibb County | April 12 - April 16 | | | | | |
| Blount County | Blount County | April 12 - April 16 | | | | | |
| Blount County | Oneonta City | April 12 - April 16 | | | | | |
| Bullock County | Bullock County | April 12 - April 16 | | | | | |
| Butler County | Butler County | April 12 - April 16 | | | | | |
| Calhoun County | Anniston City | April 12 - April 16 | | | | | |

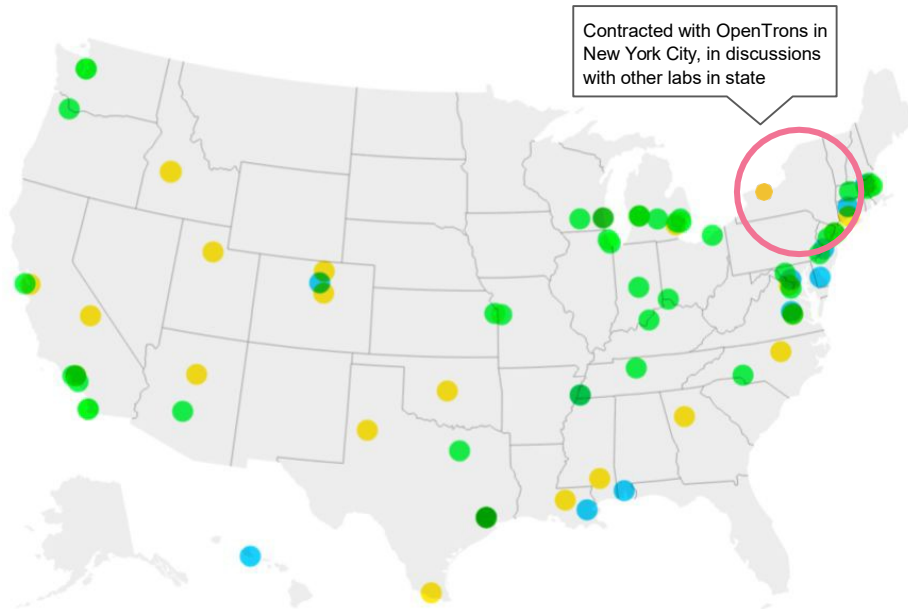
April 12 - April 16 | April 19 - April 23 | April 26 - April 30 | May 3 - May 7 | May 10 - May 14

Data to meet ELC required weekly reporting and federal and state DPH requirements

Concentric partners with local providers for lab processing and support services

Concentric by Ginkgo: Lab Network

■ In Discussion ■ In Validation ■ Validated



Local Partnerships

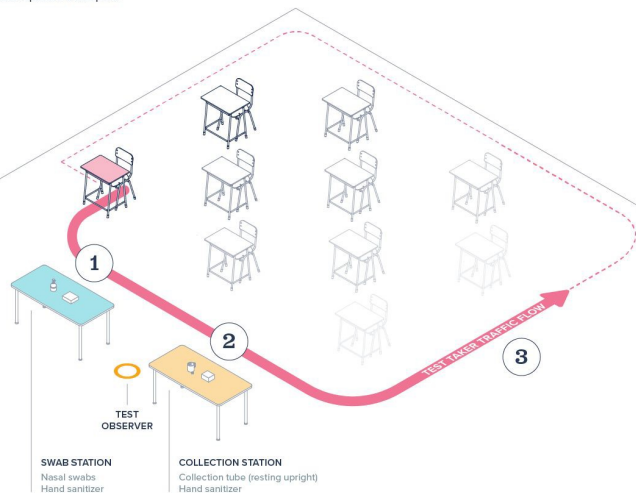
- Integrate **local service providers** to help operate the testing program and/or train supplementary staff
- Allow local processing of school lab samples providing **quick turnaround** times
- Increase **community engagement** and **economic benefits** from the program

We Provide Support Materials for Schools

Example Setting: Classroom, Setup A Swabbing Station with a Collection Station



In this example, Test Takers can swab and deposit their samples individually or by small groups. The room can be arranged in any configuration but should include one Swab Station and one Collection Station spaced 8 ft. apart.



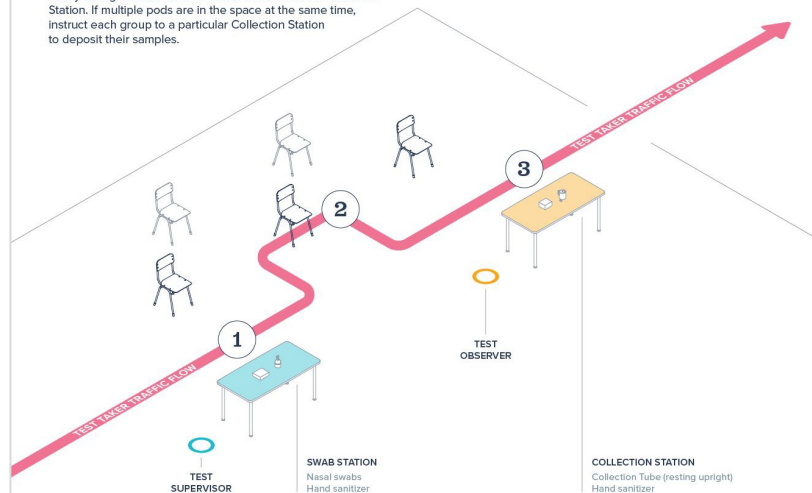
Testing Steps

- 1 Test Takers sanitize their hands and then swab their noses at the Swab Station.
If the classroom has more than one Swab Station, multiple Test Takers can be called up at the same time.
- 2 After swabbing, Test Takers drop their swab in the collection tube at the Collection Station.
The Test Observer watches over the stations. Only one Collection Station is needed per classroom.
- 3 After depositing their swab, students sanitize their hands and return to their seats.

Example Setting: Central Location, Setup A Communal Space with Multiple Stations



In this example, pools of Test Takers go to a central location to swab their noses. The location could be a gym, conference room, or any other large space. The space can be arranged in any configuration and can include more than one Collection Station. If multiple pods are in the space at the same time, instruct each group to a particular Collection Station to deposit their samples.

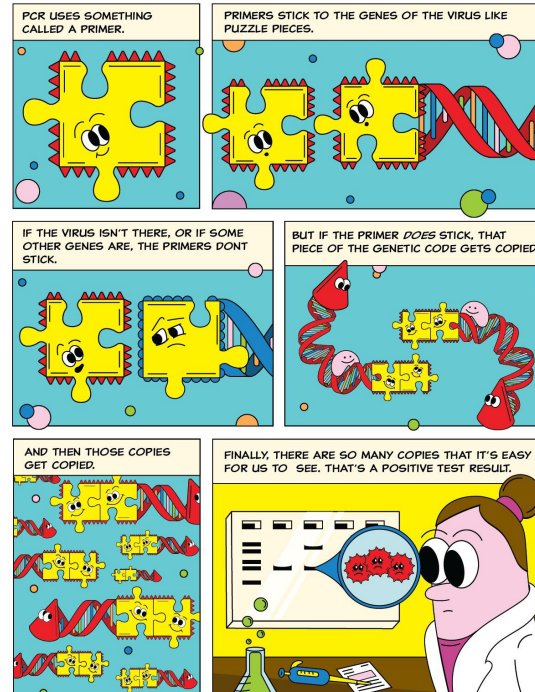
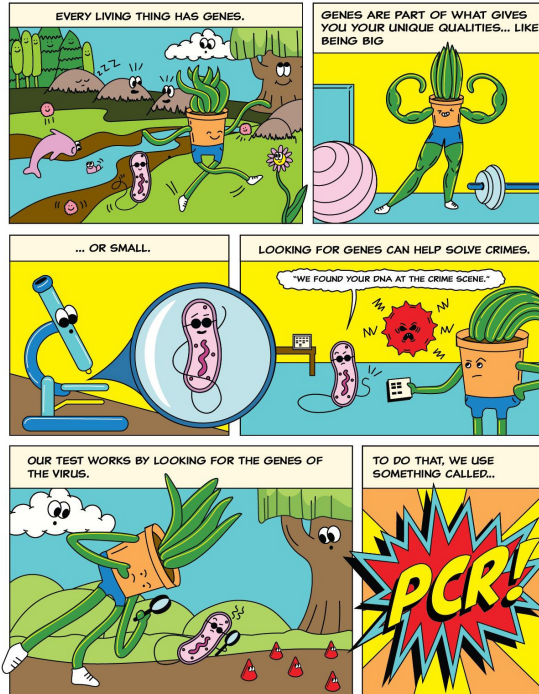


Testing Steps

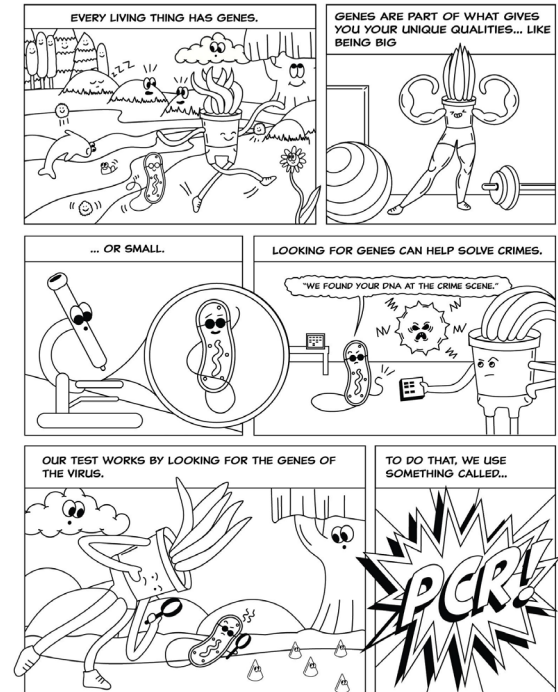
- 1 A pool of Test Takers enters the room, are registered at the Swab Station, and sanitize their hands. The Test Supervisor instructs them to take a swab and directs them to designated spots in the space.
- 2 At the designated spots, Test Takers swab their noses while Test Observer watches.
- 3 Once done, Test Takers drop their samples in the collection tube at the Collection Station, sanitize their hands, and return to their seats.

We Create Engaging Content for Students

Educational Comic Books!



Coloring sheets!



We Provide Information for Families

FOR PARENTS

Hello and welcome to your pooled testing program!

Our mission at Concentric by Ginkgo is to make testing accessible for every school in America. We use a method called pooling that dramatically lowers costs without sacrificing accuracy, making it possible to test every student, every week.



Why should we test for COVID-19 in schools? Why should my student participate in pooled testing?

You know the old saying: "knowledge is power." Tools like pooled testing empower us to make great decisions. Without knowing the prevalence of COVID-19 in your school, it's tough for school leaders to make informed decisions about safeguarding your school community, returning to school, or continuing in-person learning.

What is classroom pooling? How does it work?

Classroom pooling tests up to 25 people using one test. All students in a class, pod, or cohort swab their own noses using short nasal swabs; think: cotton swabs. (We like to say, "if you can pick your nose, you can take this test!") Then, everyone places their swabs in a single tube (that's the pooling step). The samples in that tube are then run using one test. [See it in action here.](#)

How accurate is Concentric's test?

Molecular tests like our pooled test are typically highly accurate at detecting the virus that causes COVID-19. We validated our pooled test by comparing its performance against an FDA-authorized "gold standard" PCR test. Our test correctly identified 96% of the positive tests detected by the PCR test and 100% of the negative tests (meaning that there were no false positives). The pooled results in our study matched the expected individual results 100% of the time.

Each of our lab partners has also validated their test by comparing performance to an FDA-authorized "gold standard" PCR test. [Click here](#) to read our validation reports for our lab at Ginkgo and all our partner labs across the country. Fair warning: it's a bit dense!



What happens if my child's pool is positive?

While we understand a positive test result can cause concern, a positive result means the routine testing program is doing exactly what it was designed to do: monitoring pockets of infections. This can help your school stop or mitigate potential outbreaks. A positive pooled test result enables your school to take further steps to safeguard your student, you, and your community.

Your school has designed a policy to respond to a positive pool. Please reach out to your school directly about its specific guidelines and available resources.

Is my child's privacy protected?

We take privacy concerns very seriously and will never use test results for any reason other than to help your school make decisions about safeguarding its community and continuing in-person learning.

We provide pooled test results directly to schools and minimize access to results to only people authorized by each school. Since our test is a public health tool designed for communities, we're only interested in collecting or analyzing data that will enable schools to formulate the best public health response to COVID-19.

We safeguard student's privacy through several layers of protection. [Please read our full blog post on this](#); we think it's important and want you to understand how we take this responsibility seriously and with care.

What if I have other questions?

For more information on Concentric by Ginkgo visit our website www.concentricbyginkgo.com where we have answers to many FAQs. Or, check out our blog www.concentricbyginkgo.com/blog which we regularly update to answer questions in longer form.



Example program startup timeline



**NY State
Counties /
Local DOH**

| Week T-1 | Week 0 | Week 1 | Week 2+ |
|----------|--------|--------|---------|
|----------|--------|--------|---------|

- Announce program and provide details to districts via memo

- Regular cadence with Concentric (as needed) for program status updates

- Press event at testing school
- Receive weekly program reports from Concentric

- Conduct webinar for schools to familiarize with the program
- Outreach to schools for training and onboarding

- Shipping test kits
- Assist schools in collecting consents and driving participation

- Ongoing program support including continued onboarding and program management



*First round of pooled testing
beings*



*First weekly program report
for ELC requirements*

For additional information please contact:

Matt Mcknight, *Chief Commercial Officer*: mmcknight@ginkgobioworks.com

Ben Rome, *State K12 Testing Lead*: brome@ginkgobioworks.com



EVERYBODY'S HEALTH IS CONNECTED



NYSAC
— NEW YORK STATE —
ASSOCIATION OF COUNTIES

Driving better outcomes, together

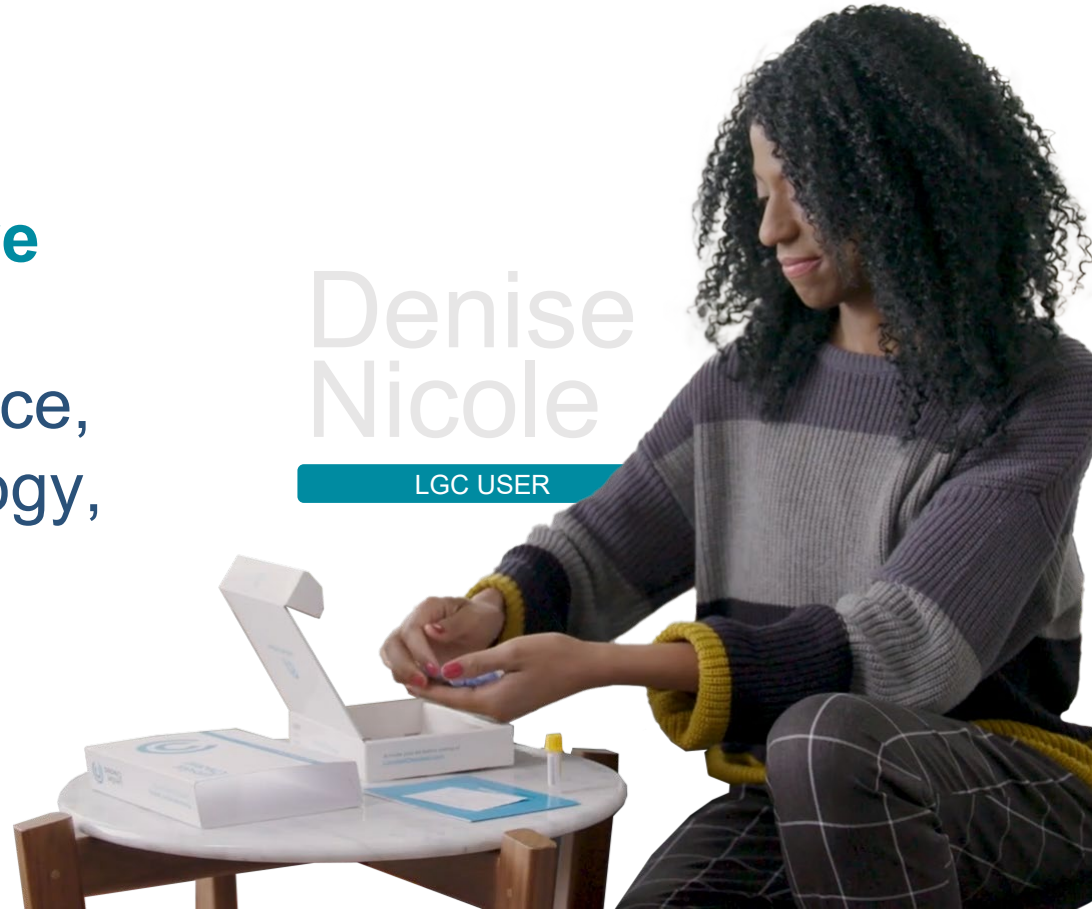


Our purpose is to
**empower people to live
longer, happier lives.**

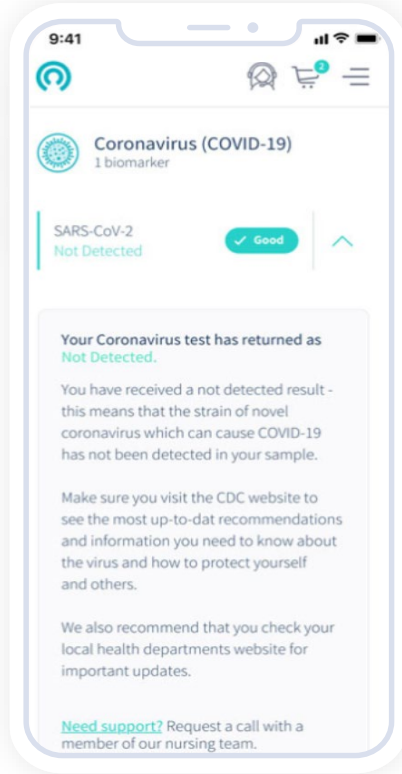
We are guided by science,
empowered by technology,
and passionate about
caring for people.






Denise
Nicole

LGC USER



COVID-19 TEST OVERVIEW



| | | |
|---|------------------------|-------------------------|
|  | IDENTIFY OR MANAGE: | SARS-CoV-2 |
|  | COLLECTION METHOD: | Lower nasal swab |
|  | ONLINE RESULTS: | 1-3 days |
|  | WHAT DOES IT TEST FOR? | RT-PCR/TMA lab analysis |
|  | SHELF LIFE: | 3-6 months |



PCR TESTS

RAPID ANTIGEN

| | | |
|-------------------|---|---|
| DESCRIPTION | Molecular tests can diagnose the virus even with a small amount of viral particles. | Antigen tests (or rapid test) are more likely to miss the infection or provide a false negative result. |
| COLLECTION METHOD | Lower nasal swab | Lower nasal swab or throat |
| TURNAROUND TIME | 24 – 48 hours | 15 – 30 minutes |
| ACCURACY | Highly accurate | 1 in 5 patients can receive a false negative ¹ |
| SENSITIVITY | 99.7% | Moderate |
| SPECIFICITY | 99.7% | High |

FDA ranked LetsGetChecked as the most analytically sensitive at-home COVID test on the market.

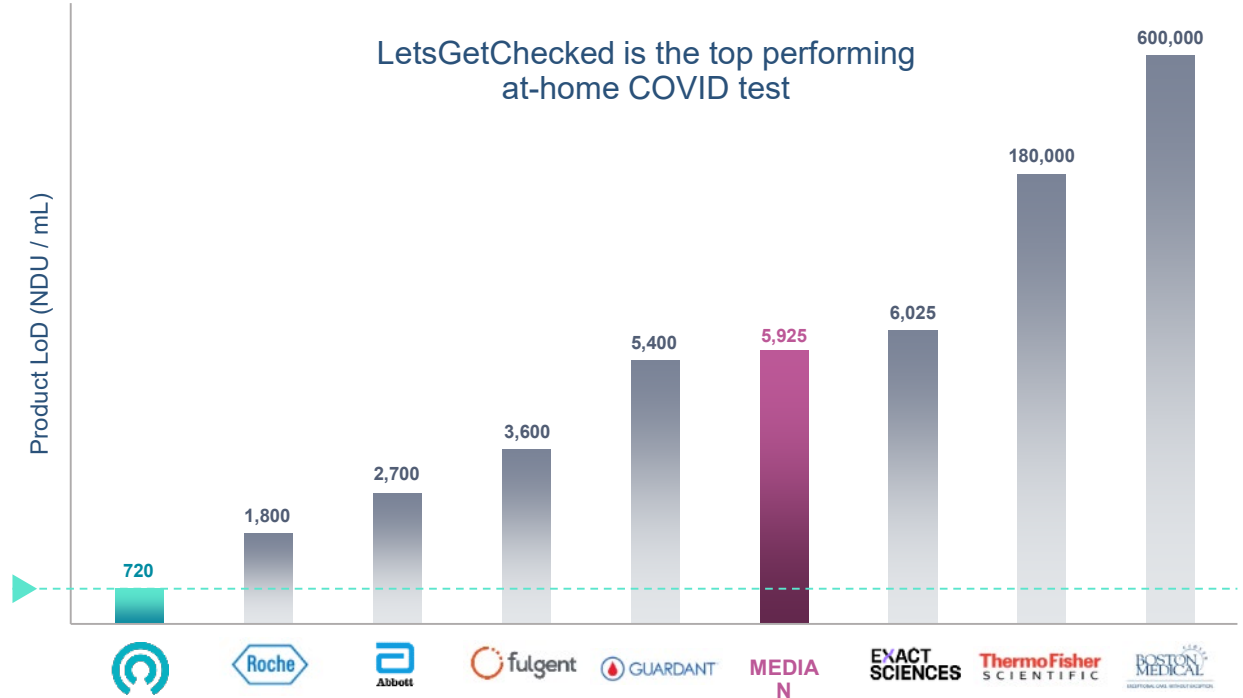
LetsGetChecked's at-home COVID test is the only end-to-end testing service on the market.

FDA accessed all elements of the delivery model.

Developed and launched the only end-to-end COVID testing platform in 8 weeks.

Since launch LetsGetChecked has performed over 1M at-home COVID tests.

Source: <https://www.fda.gov/medical-devices/coronavirus-covid-19-and-medical-devices/sars-cov-2-reference-panel-comparative-data>



NEW STRATEGIES



POOLING

Cost savings



SEQUENCING

Spread Impact



SURVEILLANCE

Other testing avenues



VACCINES

New methods

POOLING: BY THE NUMBERS

10-1
max. ratio

CA
lab pooled

\$
cost-saving

24 hr.
results

COVID-19 TESTING FOR MINORS



At-home test EUA approved for minors ages 2+



Secure activation and
results delivery

9:41

Child activation

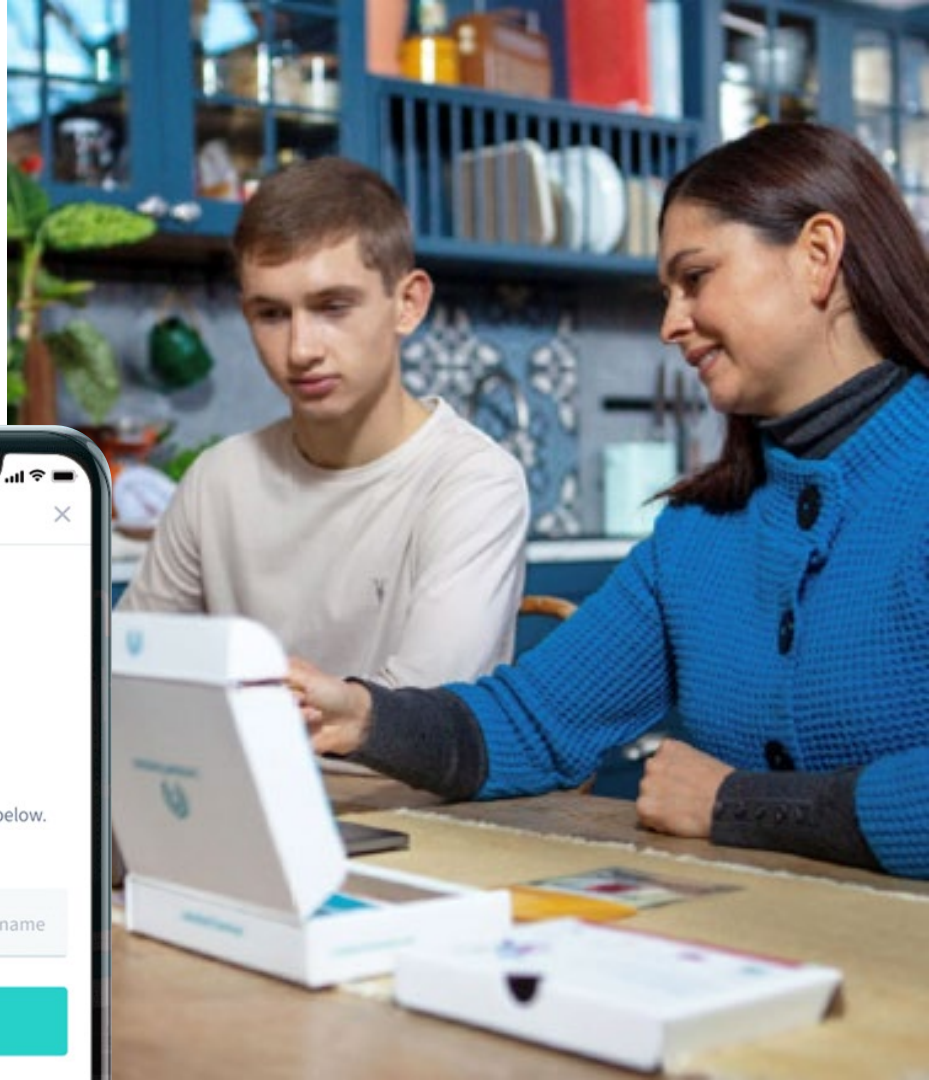
Please enter your child's name below.

ENTER NEW CHILD

Child First Name
John

Child Surname

Continue





Innovative Coronavirus Testing Strategy to Create a Safer Learning Environment

50,000+

at-home tests

98.8% of tests returned negative

14 hr.

average turn
around time

