Science Achievement Recovery Plan

Reverse the Decline in Science Scores Before It's Too Late

Grounded in the latest NAEP data, this plan gives district leaders a step-by-step framework to recover lost ground and accelerate science learning.

EDforTech
STEM Specialists

1. 📌 Executive Summary

Science education is in crisis — and the latest data proves it.

The 2024 NAEP Science Report shows a significant drop in performance:

📉 Only 31% of 8th graders scored proficient

📉 38% scored below basic — the highest in 15 years

📉 Gaps are widening, especially in high-poverty schools and among girls

This isn't just a dip in test scores.

It's a warning sign for the STEM pipeline, college and career readiness, and district equity goals.

Why This Matters

Science is a core subject — just like math and reading.

But in many schools, reading and math get instructional time priority due to COVID related learning loss and other local factors.

The result?

- Students lose interest and confidence
- Teachers lack the training and resources to teach effectively
- Districts fall short on both performance and equity targets

What This Guide Delivers

You don't need a complete overhaul to turn things around.

You need a focused plan backed by high-impact professional development.

This guide gives you:

✅ A breakdown of what's behind the science score decline

✅ A 5-step recovery action plan for school leaders

✅ A proven, flexible PD solution that's fundable with Title I, II, and local/state funds

✅ A clear path to boost science achievement and teacher confidence — starting now

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Why This Matters to Communities & Our Future

Strong science education doesn't just benefit students — it shapes the future of entire communities and is in the national interest for our democracy.

When science instruction is not strong and taught with rigor, we see ripple effects:

- ⚙️ Fewer students pursue STEM careers
- 🏥 Workforce shortages in healthcare, engineering, and technology
- 🧠 Less informed citizens navigating issues like public health and innovation
- ⚖️ Widening opportunity and achievement gaps that hold back economic mobility

In short: when science achievement suffers, so does our collective future.

Communities thrive when schools produce curious, capable problem-solvers.

That starts with giving teachers the tools to teach science well — right now.

This isn't just a wake-up call. It's a starting line.

Let's turn urgency into action — and rebuild science success in every school, starting here!

2. 📉 Why Science Achievement is Declining (And Why It Matters)

The latest NAEP science scores paint a sobering picture:

Only 31% of 8th graders are proficient in science.

That's the lowest in over a decade.

But this isn't just a testing issue.

It's a teaching issue. A resource issue. A leadership issue.

And ultimately, it's a future-readiness issue for your students.

Let's break down what's driving the drop — and why this moment demands action.

🚫 1. Less Hands-On Science

- Fewer students are actually doing science in class.
- Only 14% report engaging in scientific practices like experiments or data analysis — down from 17% in 2019.

  Students thrive when they are not just passively memorizing facts.

  Reintroduce the instructional approaches proven to boost science performance.

📉 2. Shrinking Resources

Budgets are tighter than ever.

- 17% of teachers lack science textbooks
- 25% don't have access to supplementary materials

  Science is being taught without the tools to teach it well.

  Teachers are struggling to teach topics they have not been prepared for. They need both resources and training.

😕 3. Declining Student Interest

- Student interest in science has plummeted.
- **Only 28% say they're interested** — that's down 10 points in five years.

  When students check out mentally, they fall behind academically.

⚖️ 4. Widening Equity Gaps

Science achievement gaps are growing again:

- Students in high-poverty schools are falling further behind
- Girls are seeing sharper declines in interest

  The students who need science the most are getting the least access to quality instruction.

🚨 Why This Matters

If students leave middle school without a foundation in science:

- They struggle in high school coursework
- They opt out of STEM pathways
- They're unprepared for careers in an innovation-driven economy

And for districts focused on equity and excellence, this is a red flag.

Science instruction isn't just another subject — it's a lever for opportunity.

"The data isn't just bad — it's a call to action."

🎯 The good news? The decline is reversible.

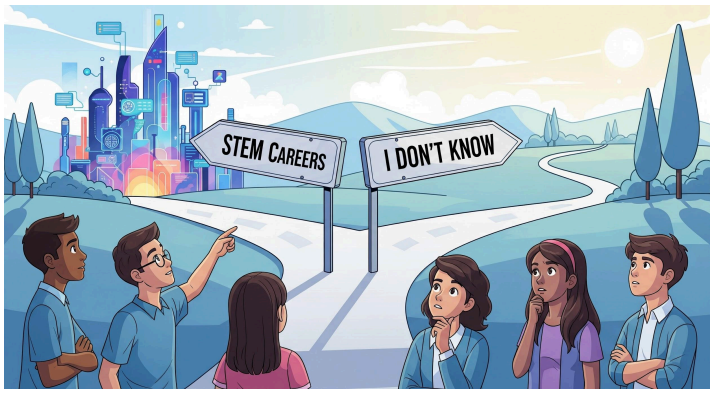
Science doesn't have to remain less of a focus than other subject areas.

Schools can focus on Math, Literacy, **and** Science education.

Science can be integrated into K-5 education..

With the right professional development, targeted resources, and support for teachers, you can turn science outcomes around in your district.

Let's show you how.



3. 💥 The Cost of Inaction

Let's be clear:

Doing nothing is a decision.

And it's the most expensive one your district can make.

Here's what's at stake:

🚧 Students Fall Further Behind

Science isn't just another subject — it's the foundation for future careers in health, technology, energy, and engineering.

When students don't master core science skills in K–8, they struggle later with STEM pathways.

They lose confidence.

They opt out.

And they fall out of the pipeline.

> "Middle school is the fork in the road. Let's make sure students take the right path."

😓 Teacher Burnout Accelerates

Teachers are being asked to deliver rigorous instruction in science and all core areas.…

…with resourced materials, little PD, and shrinking support.

That's not sustainable.

When educators don't feel equipped and confident, they disengage — or leave.

And in science, that turnover is hitting hard.

📉 District Goals Get Delayed

Your district is aiming for equity, excellence, and long-term gains.

But declining science outcomes undermine all three.

- Achievement gaps widen
- College and career readiness metrics suffer
- Your accountability data takes a hit

This isn't just a classroom issue — it's a system-wide risk.

💸 Funding Windows Don't Stay Open

Title I and II funds are available now — but they're time-bound.

Waiting too long means missing your chance to invest in targeted PD without touching local budgets.

> "You don't need a new line item — you just need to act while funds are still flexible."

🚨 Bottom Line:

Inaction costs students their future.

It costs teachers their confidence.

And it costs districts the chance to lead.

> "Waiting another year means losing another generation of science learners."

Let's not wait.

4. 🎯 Action Steps for School Leaders

Science scores are declining.

But the path to recovery is clear — and achievable.

Here's your five-step action plan to start reversing the trend today.

Each action is designed to be low-lift, high-impact, and aligned with federal funding.

✅ Science Recovery Action Plan for School Leaders

✔️ Action	💡 Why It Matters	🚀 How to Get Started
1. Restore Weekly Hands-On Science	Hands-on, inquiry-rich learning improves engagement, understanding, and retention.	Audit your current science instructional time. Aim for 2–3 sessions per week of active, investigative science in every K–8 classroom.
2. Schedule Targeted PD	Teachers need training in science, inquiry-based instruction to boost outcomes.	Book a 3–12 hour Science & Engineering Institute for your staff. Choose grade-band focus: K–5 or 6–8.
3. Target Equity Gaps	High-poverty and underserved schools are seeing the steepest declines.	Prioritize PD in schools with the lowest NAEP-aligned performance. Use Title I to support these efforts.

✔️ Action	💡 Why It Matters	🚀 How to Get Started
4. Support Teacher Confidence	Many elementary teachers feel unprepared to teach science — especially with limited resources.	Provide PD that combines content knowledge + practical strategies. Bonus: include follow-up coaching for deeper impact.
5. Align Funding to Your Goals	You don't need a new budget — you just need to direct existing funds strategically.	Work with our team to apply Title I and Title II funds. We'll help you write the language and align the PD to your district's plan.

🧠 Pro Tip:

Turn this into a PLC or leadership team activity.

Print the chart. Use it to identify:

- What's already happening?
- What needs to change?
- What's your timeline?

> "Science recovery doesn't take years. It takes a plan — and a partner."

Our Science & Engineering Institutes are designed to fit into this exact action plan — practical, scalable, and built for immediate classroom impact.

Ready to go from ideas to action?

Let's turn this plan into results.

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5. 💵 Funding Your Science Recovery Plan

One of the biggest myths in school improvement?

"*We'd love to do this, but we don't have the budget.*"

Here's the good news:

You don't need new money. You just need to use your existing funds strategically.

Our Science & Engineering Institutes align perfectly with Title I, Title II, and many State and Local grant opportunities.

Let's break it down.

🏫 Title I: Closing Gaps Where They're Widest

Title I funding is designed to support students most at risk — the same students whose science scores are dropping fastest.

You can use Title I funds to:

- 📉 Address science achievement gaps in low-performing schools
- 🧪 Fund professional development focused on Science and Engineering Practices (SEP)
- 🧰 Analyze and address teacher resources and practical strategies for inquiry based learning and what science instruction looks like

> “If your schools are struggling with science proficiency, Title I is the most direct path to PD funding.”

👩‍🏫 Title II: Building Teacher Capacity That Lasts

Title II funds are dedicated to improving teacher quality, retention, and instructional leadership.

That’s exactly what EdforTech’s PD and institutes deliver.

You can use Title II funds to:

- 💼 Invest in job-embedded, standards-aligned PD
- 👥 Offer coaching and leadership consultation for sustained impact
- 🛠️ Equip teachers with content knowledge and classroom strategies

> “Use Title II to turn overwhelmed teachers into confident science leaders.”

🏛️ State & Local: More Funding, Less Red Tape

Many states now offer STEM/CS education grants, equity-based funding initiatives, or learning targeted funds for helping high-risk student groups. Schools can also use General Funds or State Instructional Materials accounts allocated from the state per pupil allocation based on average daily attendance (ADA).

Your local education agency may also have curriculum innovation or professional learning funding resources or grants.

We help districts:

- 🔎 Identify available funds
- ✍️ Write proposals and justifications
- 🤝 Ensure PD aligns with state priorities and allowable use guidelines

> “If funding exists, we’ll help you find it — and use it.”

✅ Bonus: We Make Funding Easy

We know how hard it is to connect PD planning with budget paperwork. That's why we offer free funding consultations to help you:

- Match the right grant to your goals
- Align language with your strategic plan
- Maximize impact with minimal administrative lift

> "Our PD aligns directly with allowable uses under both Title I and II. We even help districts write the language."

💬 Ready to Talk Funding?

Whether you're planning next year's PD calendar or need to move quickly before deadlines hit, our team is here to help.

👉 Book a 15-minute funding consultation

👉 Get sample Title I/II proposal language

👉 Explore co-funding options with state grants

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6. 🔬 Spotlight: Engineering Design & Science Institutes

Not Another “Sit and Get” Workshop

Let’s face it—most science PD doesn’t stick.

It’s too theoretical. Too generic. And too disconnected from real classrooms.

Our Engineering Design & Science Institutes are built differently.

They're made to meet teachers where they are and can be implemented when they return to class!

They are hands-on and backed by research on what works.

> “94% of participants said they felt more confident teaching science the very next week.”

💡 What Makes These Institutes Different?

We don’t just train. We engage. We transform.

Each session equips teachers with strategies they can use immediately—no new curriculum, expensive kits, or extra planning time required.

Here’s what’s inside:

🕑 Flexible Formats

- Choose from 3, 6, 12, or 18-hour sessions
- Available virtually or on-site

Perfect for PD days, after-school learning, Saturday or summer institute formats.

🧪 Instructional Focus

Our content is laser-focused on what drives Engineering Design and science practices:

- Inquiry-Based Instruction that supports Universal Design Learning (UDL)
- Engineering Design Process
- Disciplinary Core Ideas, Cross Cutting Concepts and, Science & Engineering Practices (SEP)
- 5E Instructional Model (Engage, Explore, Explain, Elaborate, Evaluate)

> Teachers don't just learn strategies—they practice them and leave ready to teach the next day.

👥 Job-Embedded Coaching and Examing Student Work Protocols

Support doesn't end with the workshop.

Our model includes:

- Leadership consultation to align with district goals
- Follow-up coaching to help teachers implement what they've learned
- Examining Student Work Protocols that show students thinking and teacher learning

- A coaching model that is non evaluative and where three numbers matter:
    - 1: Coaching must be 1:1 to maximize impact
    - 3: To be effective and habit forming, coaching will take place once a week for at least 3 weeks.
    - 48: Feedback will happen within 48 hours of observation .

🎯 UDL-Aligned to Close Gaps

Every institute is grounded in the 5 E Model of instruction and three principles of Universal Design for Learning (UDL). UDL's goal is to create flexible learning environments that can accommodate individual learning differences by providing multiple ways for students to engage with material, process information, and demonstrate what they know!

This ensures:

- Differentiated strategies for diverse learners
- Built-in supports for EL, SPED, and struggling students
- A focus on equity and access in every classroom

Because great science instruction should reach every student.

✨ Who These Institutes Are For:

- K–5 Teachers who feel underprepared for science and need ready-to-use strategies
- Middle School Teachers who want to boost engagement and deepen inquiry
- Instructional Coaches & Science Leads looking for aligned, scalable PD
- School & District Leaders who need wins in science achievement and equity goals and to experience and see what science instruction looks like.

🚀 The Impact

- Immediate boost in teacher, collaboration, confidence, and instructional quality
- Increased student engagement, interest, and inquiry
- Aligned with NGSS or state science standards, and district priorities

> “This PD gave me some hands-on experiments I could use right away — and it worked to engage my class.”
> —Newark Teacher

> “I personally experienced an unlocking of my brain in terms of my thought process. The ideas that I have for my students will help me become a better educator inside and out of the classroom. I will also be able to help students understand the importance of engineering.”
> —San Antonio Teacher

🎯 EdforTech’s institutes aren’t a quick fix — they’re a launchpad for long-term science success.

Let’s talk about the steps to put this plan in motion.

7. 🛠️ Your Next Steps

You've seen the data.

You know what's at stake.

Now it's time to act — with a plan that's practical, proven, and fully fundable.

Here's how to get started:

✅ Step 1: Identify Needs

Take a quick pulse check across your schools:

- Where are science scores falling short?
- Which teachers need more support or training?
- Are students regularly engaging in hands-on science?

🎯 Use NAEP data, classroom observations, and teacher feedback to guide the audit.

✅ Step 2: Plan Your PD Strategy

Use this guide to outline a clear, high-impact science PD plan:

- Prioritize schools with the greatest need
- Choose the right format (2, 3, 6, or 12-hour sessions)
- Align with your district's equity and academic goals

🧠 Pro tip: Involve your instructional leads in building buy-in. Meet with your teachers too!

✅ Step 3: Book Your Institute

We'll help you design a session that fits your timeline, staff size, and learning goals.

Whether it's a summer institute, PD day, Saturday, or after-school series — we've got you covered.

📅 K–5 and 6–8 options available — both in-person and virtual.

✅ Step 4: Leverage Funding

Don't let budget fears stall your momentum.

We'll guide you step-by-step in using Title I, Title II, and state & local funds for your PD plan — no new dollars needed.

💬 Need help writing the funding justification? We've got templates and support.

📩 Ready to Take Action?

📞 Book your free 15-minute consultation

Let's map out your Science Achievement Recovery Plan — together.

👉 Schedule Your PD Planning Call

👉 Download Sample Proposal Language

👉 Request a Custom Quote

Your students can't wait another year.

Your teachers are ready for support.

And your district has everything to gain.

Let's turn this plan into progress — starting now.

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8. 📚 Resources & Contact

Looking for more data, guidance, or inspiration?

Here are the resources that informed this guide and support your path forward:

📖 Reference Sources

- 2024 NAEP Science Report
- National Science Teaching Association (NSTA)
- Education Week, Chalkbeat
- Universal Design for Learning Guidelines (CAST)
- EDforTech PDs and Institutes

📬 Want Personalized Support?

You don't have to figure it all out on your own.

Our STEM PD experts are ready to help you:

- Map out your district-specific recovery plan
- Choose the right institute format
- Align your strategy with available funding
- Equip your teachers with what they need to succeed

> "We're here to make sure your plan doesn't sit on a shelf — it drives real change in classrooms."

👉 Let's Talk

✅ Schedule a Free 15-Minute Strategy Call

✅ Request a Custom Quote

✅ Get Sample Funding Language for Title I/II

The data is clear. The need is urgent.

But the path forward is in your hands.

Let's build confident teachers, curious students, and stronger science outcomes — together.

Remember, you are not alone on this journey. EdforTech has STEM and Science experts who have walked in your shoes as principals and District leaders. We provide PD sessions and Institutes for teachers and principals, and principal coaching sessions for districts of all sizes across the US.

For more information about bringing sustainable PDs or institutes to your school, contact:

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(This document was created with the assistance of Claude Sonet AI and Chat GPT AI)