NOVEMBER 2026 / JANUARY 2027 PLANNING

Physical Science: Physics atlas

Standards, score design, seasonal evidence, public stimuli, scored work and original transfer tasks.

Wed Jan 27 · 1:15 p.m. | Official January 2027 schedule

January forms	June forms	August forms	Printed slots
0	1	0	50

What the available design supports

The NYSP12SLS blueprint gives 26–38% each to energy and waves/electromagnetic radiation, 20–32% to forces/interactions and 5–11% to engineering. Clusters can combine measurement, models and written reasoning.

The single public form included pendulum motion, heat exchange, helmet design, cell-phone optics and voice recognition. It had ten clusters, 31 selected responses and 19 constructed responses. Nine clusters contained an explicit diagram cue.

Only June 2026 is available in the corpus. The August schedule supplied no same-design form. January will be the first winter test, so all month comparisons are unestimated.

NYSED course guide / administration authority

A useful preparation decision

Select a recurring evidence demand, compare the official scoring criterion with a response, then change context for an independent check. The six new topic cards below broaden practice. Their contexts are original designs, and their exact future appearance has no estimated probability.

Topic	Original card
Forces and motion	PHYS_NEW-N01 A cart with competing forces
Momentum and design	PHYS_NEW-N02 A landing pad that spreads a stop
Energy accounting	PHYS_NEW-N03 Energy before the gate
Electrical energy	PHYS_NEW-N04 Two lamps on a supply
Waves	PHYS_NEW-N05 A wave crosses a boundary
Nuclear processes	PHYS_NEW-N06 Two nuclear representations

Blueprint and score contribution

Component	Range or maximum	Unit
Structure and Properties of Matter	2.0 to 5.0	percent of test
Forces and Interactions	20.0 to 32.0	percent of test
Energy	26.0 to 38.0	percent of test
Waves and Electromagnetic Radiation	26.0 to 38.0	percent of test
Earth and Space Systems	2.0 to 8.0	percent of test
Engineering Design	5.0 to 11.0	percent of test
Phenomenon-based clusters	9.0 to 11.0	clusters
Selected response	60.0 to 60.0	approx percent items
Constructed response	40.0 to 40.0	approx percent items
Required-investigation-linked questions	15.0 to 15.0	approx percent items

Inherited NYSED guide snapshot. Consult the current linked guide before operational use. Ranges describe blueprint constraints. Distinct units and weighting rules must be retained.

Preserve the scoring interpretation

A local response criterion supports feedback about that task. A shortened exam or modified full-length assembly lacks the state form's validated conversion. Report separate evidence for independent and prompted work. Preserve item weights when describing coverage.

Code ledger and form prevalence

Each row reports forms with at least one valid matching slot. A count such as 1/2 is a form prevalence, not student accuracy. Codes are retained at their actual mapping granularity. ELA writing tasks carry broad mappings and are excluded from this frequency ledger.

Published code / label	Jan	June	Aug	All
HS-ESS1-2 Evidence about the early universe	0/0	1/1	0/0	1/1
HS-ETS1-1 Define a design problem	0/0	1/1	0/0	1/1
HS-ETS1-2 Break down a complex problem	0/0	1/1	0/0	1/1
HS-ETS1-3 Evaluate trade-offs among solutions	0/0	1/1	0/0	1/1
HS-PS1-8 Nuclear processes	0/0	1/1	0/0	1/1
HS-PS2-1 Force, mass and acceleration	0/0	1/1	0/0	1/1
HS-PS2-2 Momentum conservation	0/0	1/1	0/0	1/1
HS-PS2-3 Design for collision forces	0/0	1/1	0/0	1/1
HS-PS2-4 Gravitational and electrostatic forces	0/0	1/1	0/0	1/1
HS-PS3-1 Quantify energy changes	0/0	1/1	0/0	1/1
HS-PS3-2 Models of energy at different scales	0/0	1/1	0/0	1/1
HS-PS3-3 Design an energy-converting device	0/0	1/1	0/0	1/1
HS-PS3-4 Energy transfer and thermal equilibrium	0/0	1/1	0/0	1/1
HS-PS3-5 Forces and energy in fields	0/0	1/1	0/0	1/1
HS-PS3-6 Circuits and Ohm’s law	0/0	1/1	0/0	1/1
HS-PS4-1 Wave speed, frequency and wavelength	0/0	1/1	0/0	1/1

Published code / label	Jan	June	Aug	All
HS-PS4-2 Digital transmission and storage	0/0	1/1	0/0	1/1
HS-PS4-3 Wave and particle models of light	0/0	1/1	0/0	1/1
HS-PS4-4 Effects of electromagnetic radiation	0/0	1/1	0/0	1/1
HS-PS4-5 Wave-based information technologies	0/0	1/1	0/0	1/1
HS-PS4-6 Image formation using lenses and mirrors	0/0	1/1	0/0	1/1

Zero observed January forms provide no winter rate. Multiple codes can describe the same slot. Labels are short teaching descriptions, and official code wording and its boundary remain authoritative.

Topics, trend and stimulus hypotheses

Forces and motion

HS-PS2-1
January 0/0 | June 1/1 | August 0/0

Pooled planning probability 66.7% for a union of named codes in 1/1 forms. Nominal observed-prevalence interval 21%-100%. Union of named official codes on valid printed scoring slots in fully mapped target forms.

Design hypothesis constructed motion data using elevator force model. Preserve the target relationship and change the setting.

Momentum and design

HS-PS2-3
January 0/0 | June 1/1 | August 0/0

Pooled planning probability 66.7% for a union of named codes in 1/1 forms. Nominal observed-prevalence interval 21%-100%. Union of named official codes on valid printed scoring slots in fully mapped target forms.

Design hypothesis constructed force-time models using helmet liner. Preserve the target relationship and change the setting.

Energy accounting

HS-PS3-1
January 0/0 | June 1/1 | August 0/0

Pooled planning probability 66.7% for a union of named codes in 1/1 forms. Nominal observed-prevalence interval 21%-100%. Union of named official codes on valid printed scoring slots in fully mapped target forms.

Design hypothesis constructed energy budget using thermal storage. Preserve the target relationship and change the setting.

Electrical energy

HS-PS3-6
January 0/0 | June 1/1 | August 0/0

Pooled planning probability 66.7% for a union of named codes in 1/1 forms. Nominal observed-prevalence interval 21%-100%. Union of named official codes on valid printed scoring slots in fully mapped target forms.

Design hypothesis constructed circuit using heater efficiency. Preserve the target relationship and change the setting.

Waves

HS-PS4-1
January 0/0 | June 1/1 | August 0/0

Pooled planning probability 66.7% for a union of named codes in 1/1 forms. Nominal observed-prevalence interval 21%-100%. Union of named official codes on valid printed scoring slots in fully mapped target forms.

Design hypothesis constructed wave data using sound in materials. Preserve the target relationship and change the setting.

Nuclear processes

HS-PS1-8
January 0/0 | June 1/1 | August 0/0

Pooled planning probability 66.7% for a union of named codes in 1/1 forms. Nominal observed-prevalence interval 21%-100%. Union of named official codes on valid printed scoring slots in fully mapped target forms.

Design hypothesis constructed particle model using radioactive isotope model. Preserve the target relationship and change the setting.

The contexts are possible practice stimuli. Their probabilities are unestimated. The quantitative estimates apply only to the named mapped-code event. Rows overlap and are not additive.

Observed public stimuli by topic

Forces and motion

PHYS_NEW_2026_06 Q46-50 Charged Drops

Text cues table|diagram

Open this source set or cluster

PHYS_NEW_2026_06 Q36-40 From Astro Blaster to Supernova

Text cues graph|model|diagram

Open this source set or cluster

Momentum and design

PHYS_NEW_2026_06 Q15-20 Motorcycle Helmets

Text cues graph|diagram

Open this source set or cluster

Energy accounting

PHYS_NEW_2026_06 Q36-40 From Astro Blaster to Supernova

Text cues graph|model|diagram

Open this source set or cluster

Electrical energy

PHYS_NEW_2026_06 Q30-35 Flashlight Physics

Text cues model|diagram

Open this source set or cluster

Waves

PHYS_NEW_2026_06 Q41-45 Voice Recognition Software

Text cues graph|table|model|diagram

Open this source set or cluster

PHYS_NEW_2026_06 Q30-35 Flashlight Physics

Text cues model|diagram

Open this source set or cluster

Nuclear processes

PHYS_NEW_2026_06 Q21-24 Emission Spectra and Nuclear Fusion

Text cues table|model|diagram

Open this source set or cluster

A source-set overlap with a code is broader than a one-to-one match between the format and the entire expectation. The full CSV retains all observed sets and joins.

Released item exemplars and mappings

Forces and motion / PHYS_NEW-N01

Practice evidence Net force is 12 N east, giving acceleration 3 m/s² east.

PHYS_NEW_2026_06_37 public question

Official published mapping

Verification route live map row match

Momentum and design / PHYS_NEW-N02

Practice evidence Both impulses are (1/2)(base)(peak)=16 N s.

PHYS_NEW_2026_06_20 public question

Official published mapping

Verification route live map row match

Energy accounting / PHYS_NEW-N03

Practice evidence 120-30-20=70 J kinetic energy.

PHYS_NEW_2026_06_36 public question

Official published mapping

Verification route live map row match

Electrical energy / PHYS_NEW-N04

Practice evidence I6=2 A and I3=4 A; total 6 A.

PHYS_NEW_2026_06_32 public question

Official published mapping

Verification route live map row match

Waves / PHYS_NEW-N05

Practice evidence lambdaA=4 m and lambdaB=2 m from v=f*lambda.

PHYS_NEW_2026_06_26 public question

Official published mapping

Verification route live map row match

Nuclear processes / PHYS_NEW-N06

Practice evidence A models fission; B models fusion.

PHYS_NEW_2026_06_24 public question

Official published mapping

Verification route live map row match

The connection is a shared published code. Compare the complete tasks before treating them as equivalent practice.

Represent a force with direction and magnitude

PHYS_NEW_2026_06 Q4 | Published result 1 credit criterion

Observed evidence

The accepted response combines a downward arrow with a net force from 1.4 through 1.5 N. Exact placement on the dot is flexible.

Possible interpretation

An accurate magnitude can coexist with confusion between motion direction and net-force direction.

Diagnostic prompt

If the object is moving one way, must its acceleration point that way? Which direction does the net force indicate here?

Teaching move

Sketch separate velocity and force arrows, then annotate the force vector with its measured magnitude.

Public task

Sample or criterion

Commentary

Official mapping

This is a selected released example or criterion. Local student work was not supplied. Preserve alternate explanations until a new response distinguishes them.

Select the design using the relevant peak

PHYS_NEW_2026_06 Q20 | Published result 1 credit criterion

Observed evidence

The guide requires Helmet 3 and an explanation based on its smaller maximum force or acceleration in the impact comparison.

Possible interpretation

A student may choose the right helmet by appearance or conflate peak force with total impulse.

Diagnostic prompt

Which table entry establishes the smallest maximum acceleration? How does that relate to force for the same mass?

Teaching move

Compare the maximum-acceleration entries before discussing force. In a separate force-time example compare the areas.

Public task

Sample or criterion

Commentary

Official mapping

This is a selected released example or criterion. Local student work was not supplied. Preserve alternate explanations until a new response distinguishes them.

Construct the image with rays

PHYS_NEW_2026_06 Q25 | Published result 1 credit criterion

Observed evidence

The guide requires a constructed, inverted image between F and 2F. A correct word describing orientation supplies only part of the graphical evidence.

Possible interpretation

The student may recall the image rule without being able to construct its position.

Diagnostic prompt

Which two rays determine the tip of the image? Where should they cross?

Teaching move

Draw one valid ray at a time. Locate the intersection and use it to set orientation and height.

Public task

Sample or criterion

Commentary

Official mapping

This is a selected released example or criterion. Local student work was not supplied. Preserve alternate explanations until a new response distinguishes them.

Six original contexts and the prep route

Card	Target relationship	Transfer condition
PHYS_NEW-N01 A cart with competing forces	Represent the forces and find net force and acceleration.	Keep the same forces but begin with the cart moving west. Describe its initial change in speed.
PHYS_NEW-N02 A landing pad that spreads a stop	Compare impulses using the areas.	Require a maximum thickness or stopping distance and explain the new trade-off.
PHYS_NEW-N03 Energy before the gate	Find kinetic energy at the gate.	Write a boundary-explicit diagram for cart alone versus cart plus track.
PHYS_NEW-N04 Two lamps on a supply	Calculate each branch current and total current.	Give the supply an internal resistance and identify which prediction needs revision.
PHYS_NEW-N05 A wave crosses a boundary	Find wavelength in each medium.	Double source frequency while keeping medium speeds fixed and revise the wavelengths.
PHYS_NEW-N06 Two nuclear representations	Distinguish the processes.	Replace B with a radioactive decay. Identify what additional particles or radiation must be represented.

Retained three-week Studio sequence

Week 1 session 1 Two force curves, one change in motion

Week 1 session 2 Where the energy went

Week 2 session 3 Use evidence from a wave

Week 2 session 4 Test a lens claim

Week 3 session 5 Read electrical power as evidence

Week 3 session 6 Choose a design under two constraints

The practice folder contains the prior standalone original exam, Form B rehearsal insert and directions, exam guide, six-session student prep and worked responses. Separate new stimulus student and teacher books add these six contexts. Use the full-length public booklet links in the assembly map.

Connections and department decisions

PHYS_NEW-N01 A cart with competing forces

Using the largest single force as the net force or confusing acceleration with velocity. This is a diagnostic hypothesis. Ask the learner to explain the step before selecting a response.

Related reasoning ALG1-N02 Raised garden arch, GEO-N06 Which transformations undo each other?

PHYS_NEW-N02 A landing pad that spreads a stop

Choosing by peak alone without checking whether the stopping requirement is comparable. This is a diagnostic hypothesis. Ask the learner to explain the step before selecting a response.

Related reasoning ALG1-N01 Charging the battery cart, ALG1-N03 Two receipt checks

PHYS_NEW-N03 Energy before the gate

Treating decreased mechanical energy as destruction of energy. This is a diagnostic hypothesis. Ask the learner to explain the step before selecting a response.

Related reasoning ALG1-N05 Labels on an exponential model, BIO-N03 Where does the dry mass come from?

PHYS_NEW-N04 Two lamps on a supply

Splitting voltage between parallel branches as if the circuit were series. This is a diagnostic hypothesis. Ask the learner to explain the step before selecting a response.

Related reasoning ALG1-N05 Labels on an exponential model, BIO-N03 Where does the dry mass come from?

PHYS_NEW-N05 A wave crosses a boundary

Holding wavelength constant and changing frequency at the boundary. This is a diagnostic hypothesis. Ask the learner to explain the step before selecting a response.

Related reasoning ALG1-N02 Raised garden arch, GEO-N06 Which transformations undo each other?

PHYS_NEW-N06 Two nuclear representations

Interpreting a lower product rest mass as a failure of total mass-energy conservation. This is a diagnostic hypothesis. Ask the learner to explain the step before selecting a response.

Related reasoning ALG1-N05 Labels on an exponential model, BIO-N03 Where does the dry mass come from?

Use the anonymous calibration record to preserve the initial judgments, criterion evidence, an instructional move and a new independent response. Review the same reasoning in a changed context and record prior exposure.