PARAMOUNT UNIFIED SCHOOL DISTRICT

GREAT THINGS ARE HAPPENING IN PARAMOUNT SCHOOLS

# K-8 Next Generation Science Standards Update

## Board of Education Meeting
## June 25, 2018

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# Purpose of Presentation

- Provide an update on the implementation of the Next Generation Science Standards (NGSS) in both elementary and middle school.

- Provide information on the two options, or course models, for science instruction in grades 6-8.

# Why NGSS?

- Prepare students to pursue career opportunities in science-related fields in the 21st century.
- Include critical thinking and communication skills needed for rapid advancements in science and technology.
- Are written to address the science expectations of high performing countries to ensure our students can complete in the global economy.

# What is taking place in science in K-5?

## 2017-2018

- Science Lead Teacher meetings
- NGSS awareness training for all teachers at all grade-levels (summer)
- Administer CAST field test (grade 5)

## 2018-2019

- Science Lead Teacher meetings
- NGSS-aligned science lessons taught by all teacher (fall and spring)
- Professional development for grade 5 (fall and spring)
- Administer CAST operational test (grade 5)
- Textbook adoption

# What is taking place in science in 6-8?

## 2017-2018

- Professional development for all science teachers (3 days)
- Science Lead Teacher meetings
- Course models discussion
- Administer CAST field test (grade 8)

## 2018-2019

- Professional development for all science teachers (2 days)
- Science Lead Teacher meetings
- Communicate course model recommendation and plan
- Administer CAST operational test (grade 8)
- Textbook adoption

# NGSS Course Models for 6-8 Science

| Discipline-Specific | Integrated |
| --- | --- |
| Grade 6 Earth and Space Science | Grade 6 Integrated |
| Grade 7 Life Science | Grade 7 Integrated |
| Grade 8 Physical Science | Grade 8 Integrated |

# What is the Integrated Course Model?

Interweaves science disciplines in a progression that connects science topics as they relate in the natural world.

| | Disciplinary Core Idea | | Subtopic | Integrated | | | Discipline-Specific | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 6 | 7 | 8 | 6 | 7 | 8 |
| Earth & Space | 1 | Earth's Place in the Universe | Universe, Stars, Solar System | | | X | X | | |
| | | | History of Planet Earth | | | X | X | | |
| | 2 | Earth's Systems | Water Cycle, Weather, Climate | X | | | X | | |
| | | | Rock cycle, Plate tectonics | | X | | X | | |
| | 3 | Earth and Human Activity | Global climate change causes | X | | | X | | |
| | | | Resources availability | | X | | X | | |
| | | | Natural hazards | | X | | X | | |
| | | | Resource consumption | | | X | X | | |

# What are the Benefits of the Grades 6-8 Integrated Course Model ?

- Standards are based around unifying ideas and are bundled according to natural connections rather than being limited to disciplinary boundaries.
- Teachers can address real-world phenomena, ask questions, and seek answers to questions as they connect naturally and across disciplines.
- Defined as "preferred" model by state of California—the Science Expert Panel concluded that the integrated model is most effective for optimizing student learning of NGSS.
- High-performing countries in the field of science use an integrated science model.

# Middle School Course Model: Communication

**April 2018**

Presented course model options to 6-8 science lead teachers.

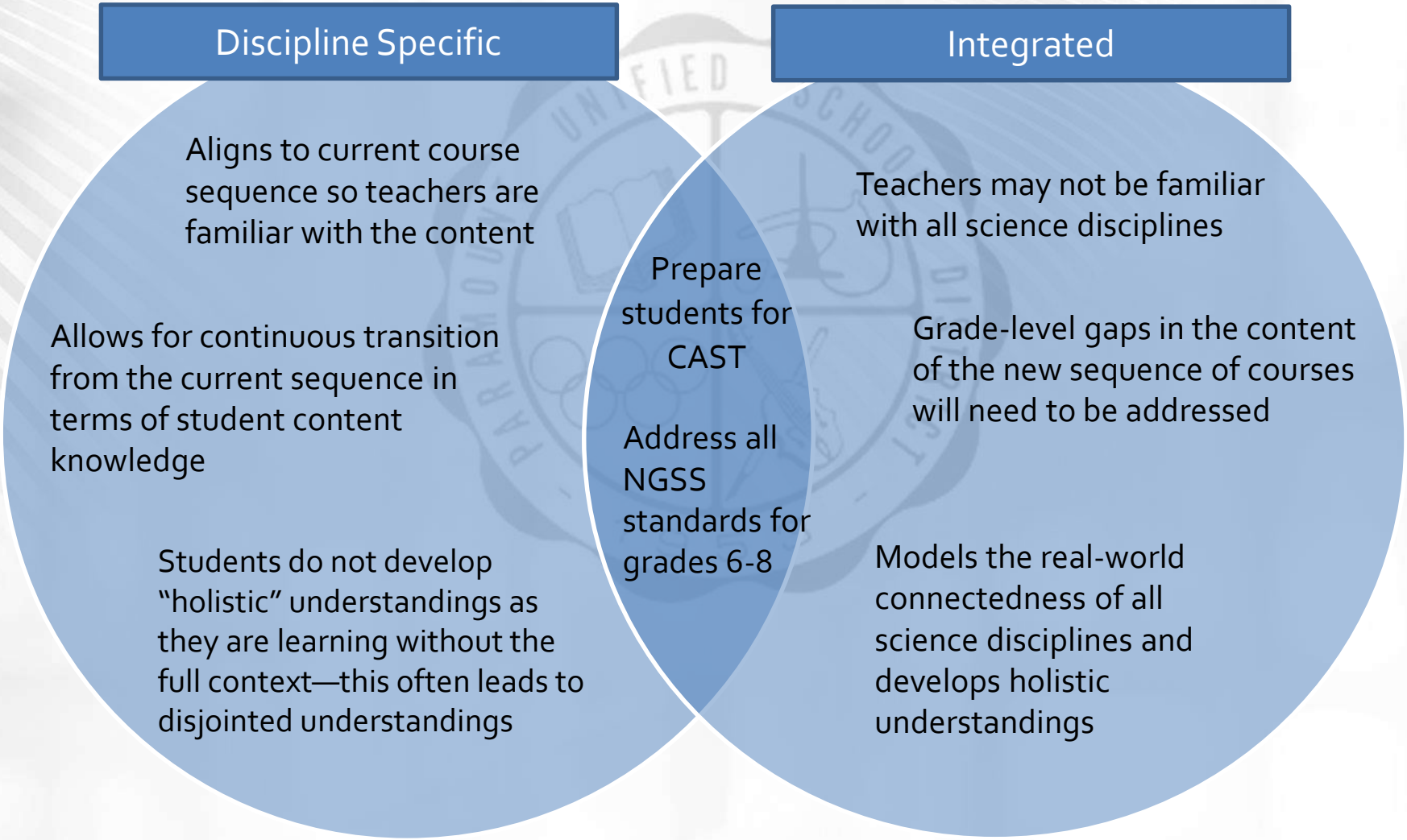
**May 2018**

Collected feedback from teams at each site, discussions facilitated by lead teachers.

**May 2018**

Shared feedback from lead teacher discussion with 6-8 principals. Solicited input from principals.

# Insights from Science Teachers



# Course Model Recommendation

Based on feedback from science lead teachers, science teachers and principals we recommend the implementation of the Integrated Course Model in grades 6-8 science in the 2019-20 school year.

# Next Steps

## Fall 2018

Hold Science Lead Teacher meetings.

Communicate course model to all 6-8 science lead teachers, science teachers, principals.

## Spring 2019

Review and recommend K-8 textbooks for adoption; 6-8 texts that align to the integrated course model.

## Summer 2019

Provide professional development for K-8 teachers; professional development to prepare 6-8 teachers to transition to an integrated model.

Develop supplemental curriculum to support content gaps in 6-8.

Plan parent communication.

# NGSS: A new vision for science instruction