



Science in Action

The Science in Action Video Series is a collection of videos that focus on Elementary Science in Georgia. This series is meant to showcase exemplary science teaching and features Georgia teachers explaining various aspects of science instruction related to the Science Georgia Standards of Excellence. We have also included footage of two elementary classrooms in Georgia so that you get a glimpse of 3D science instruction.

As you watch each video use the discussion guide within your PLC or for self-reflection of science teaching that is occurring in your classroom or school. Each resource collection is designed to support the topic that is being showcased within that video. The videos, also, share examples of various strategies that can be used in any science classroom to address the Science Georgia Standard of Excellence.

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[Video 1: Science in Action Introduction](#)

Resources for Additional Information
A Framework for K-12 Science Education. National Research Council Guide for Effective Science Instruction
Discussion Guide:
<ul style="list-style-type: none"> • When students leave your classroom, what do you want them to know and be able to do? • How does science support students' learning in other content areas? • Why science in elementary grades?

[Video 2 What is 3D Science?](#)

Resources for Additional Information	
<p>Color Coded Standards</p> <ul style="list-style-type: none"> • Kindergarten • 1st Grade • 2nd grade • 3rd Grade • 4th Grade • 5th Grade <p>FAQs- Science GSE Classroom Conversations Episode on 3D Science</p>	<p>Teacher Notes:</p> <ul style="list-style-type: none"> • Kindergarten • 1st Grade • 2nd Grade • 3rd Grade • 4th Grade • 5th Grade <p>Using Phenomena with GSE GSE Planning Cards</p>
Discussion Guide:	
<ul style="list-style-type: none"> • What is 3D Science? • How is the 3D science approach to instruction similar or different from what you may have experienced before? • How does centering science instruction around phenomena provide opportunities for all students? • How has 3D science made you rethink children's ability for understanding and engaging in science? 	



[Video 3 Science and Engineering in Action](#)

Resources for Additional Information
<ul style="list-style-type: none"> • Science and Engineering Practices Matrix • The Myth of the Scientific Method • Supports for Science and Engineering in K-5
Discussion Guide:
<ul style="list-style-type: none"> • What are the science and engineering practices? • What is the purpose of these practices in supporting student sensemaking in science? • How does sensemaking build on your students' strengths?

[Video 4: Crosscutting Concepts in Action](#)

Resources for Additional Information
<ul style="list-style-type: none"> • Crosscutting Concepts Matrix • Supports for Crosscutting Concepts in K-5
Discussion Guide:
<ul style="list-style-type: none"> • What are the crosscutting concepts (CCCs)? • What is the purpose of the crosscutting concepts in supporting student sensemaking in science? • What are some strategies that you have used in your class to engage students in using crosscutting concepts during science instruction?

[Video 5: Putting Science in Action Part 1](#)

Resources for Additional Information
<p>Phenomenon Tasks (there are more lessons in GaDOE Inspire)</p> <ul style="list-style-type: none"> • 3rd Grade • 4th Grade • 5th Grade <p>Resources Mentioned in Video</p> <ul style="list-style-type: none"> • K-12 Framework for Statistical Reasoning • Inquiry in Science and Social Studies <p>Several of the strategies mentioned in the video can be found in the Science Instructional Strategies Playlist</p>
Discussion Guide
<ul style="list-style-type: none"> • Describe how you make time for science in your class. • How have you integrated other subject areas with science? • How do you keep the focus on the phenomenon for the lesson or unit?

[Video 6 Putting Science in Action Part 2](#)

Resources for Additional Information
<p>Self-Evaluation Checklists</p> <ul style="list-style-type: none"> • Kindergarten • 1st Grade • 2nd Grade • 3rd Grade • 4th Grade • 5th Grade <p>KLEWS Board Display</p> <p>Several of the strategies mentioned in the video can be found in the Science Instructional Strategies Playlist</p>
Discussion Guide
<ul style="list-style-type: none"> • Describe strategies you use to keep track of student ideas throughout a unit. • What are some formative assessment strategies that you use over the course of a unit? • Describe some strategies you use that give students in your class a choice on how they communicate their thinking.

[Video 7 Student Discourse and Sensemaking](#)

Resources for Additional Information	
Several of the strategies mentioned in the video can be found in the Science Instructional Strategies Playlist Sentence Stems	
Discussion Guide	
<ul style="list-style-type: none"> • Describe strategies you use in your science class to support classroom discourse and scientific argumentation. • What strategies do you use to ensure that all students share their ideas? • Describe strategies you use to facilitate classroom discourse and scientific argumentation. 	

[Video 8 Science and Literacy in Action](#)

Resources for Additional Information	
K-5 Literacy-Based Science Lessons (there are more lessons in GaDOE Inspire) <ul style="list-style-type: none"> • Kindergarten • 1st Grade • 2nd grade • 3rd Grade • 4th Grade • 5th Grade 	Multimodality Stations (there are more lessons in GaDOE Inspire) <ul style="list-style-type: none"> • Kindergarten • 2nd Grade • 3rd Grade • 4th Grade • 5th Grade Reading and Writing Sentence Frames
Discussion Guide	
<ul style="list-style-type: none"> • Describe strategies you use that support all students in obtaining, evaluating, and communicating information. • How is science the engine for reading, writing, listening, and speaking? • Describe how your students use mathematics and computational thinking in science. 	

Video 9 Analyzing Student Work

Resources for Additional Information
<p> Work Samples Work Analysis Form Science and Engineering Practices Matrix Crosscutting Concepts Matrix </p> <p>For information about the disciplinary core ideas, please refer to the unit pacing guides for your grade level. You can locate these by selecting the Course Resource Tab in GaDOE Inspire</p>
Discussion Guide
<ul style="list-style-type: none"> • Describe how you analyze student work and performance. • How do you encourage students to revise initial ideas/models/explanations over the course of a unit? • How do you use student work to inform instruction?

Additional Resources
<p>GaDOE has launched a platform to provide the opportunity for science teachers, leaders, and GaDOE staff to share thoughts and resources. To get started, visit the GaDOE community website, select Create an Account, and follow the prompts. Next, navigate to the groups section and join the groups you are most interested in. We look forward to connecting!</p> <p>Where do I find learning resources for science? GaConnects provides access to GaDOE learning resources, standards, data, and professional learning. To find instructional resources for your grade or course, select GaDOE Inspire. Watch this video to learn more about this platform: GaDOE Inspire Video. For Science Georgia Standards of Excellence, select Suitcase. For additional professional learning opportunities, select Georgia Learns.</p> <p>There are three ways to stay in touch with the GaDOE Science Program:</p> <ol style="list-style-type: none"> 1. Join the GaDOE Science Listserv to receive the latest updates. To receive, send a blank email to any of these: <ul style="list-style-type: none"> • Science K-5: join-science-k-5@list.doe.k12.ga.us • Science 6-8: join-science-6-8@list.doe.k12.ga.us • Science 9-12: join-science-9-12@list.doe.k12.ga.us 2. Follow us on X (formerly known as Twitter) @GaDOE Science. 3. We are also on Facebook. Please like our page: Georgia Department of Education Science Program