

Supporting Teacher Learning: Teaching and Learning in Science Series



Sensemaking in Elementary Science: Supporting Teacher Learning (Teaching and Learning in Science Series) by Jay McTighe

★★★★★ 5 out of 5

Language : English
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Screen Reader : Supported
Enhanced typesetting : Enabled
Word Wise : Enabled
Print length : 292 pages



Teacher learning is a crucial factor in improving science education and ensuring that students develop a deep understanding of science concepts and skills. The Teaching and Learning in Science (TLS) series is a comprehensive resource that supports teacher learning in science education.

The TLS series is based on the constructivist approach to learning, which emphasizes the importance of students actively constructing their own knowledge and understanding. This approach requires teachers to facilitate students' learning by providing them with opportunities to explore, investigate, and question scientific concepts.

The TLS series provides teachers with the theoretical and practical knowledge they need to implement constructivist approaches to teaching science. The series includes modules on topics such as:

- Inquiry-based learning
- Science as a process
- Student misconceptions
- Assessment in science
- Technology in science education

Each module in the TLS series includes a variety of resources such as lesson plans, activities, and assessment tools. These resources help teachers to implement constructivist approaches to teaching science in their own classrooms.

Inquiry-Based Learning

Inquiry-based learning is a student-centered approach to learning that emphasizes the importance of students actively constructing their own knowledge and understanding. In inquiry-based science lessons, students are given opportunities to explore, investigate, and question scientific concepts. This approach helps students to develop a deeper understanding of science concepts and to learn how to think critically and solve problems.

The TLS series provides teachers with the resources they need to implement inquiry-based learning in their own classrooms. These resources include:

- Lesson plans that guide students through the inquiry process

- Activities that help students to explore and investigate scientific concepts
- Assessment tools that help teachers to evaluate students' understanding of science concepts

Science as a Process

Science is a process of inquiry and discovery. In science class, students should have opportunities to engage in the same processes that scientists use to learn about the world. This includes making observations, forming hypotheses, conducting experiments, and analyzing data.

The TLS series helps teachers to create science classrooms where students can experience science as a process. The series includes resources such as:

- Activities that help students to develop their observation skills
- Experiments that help students to test their hypotheses
- Data analysis tools that help students to make sense of their data

Student Misconceptions

Students often bring misconceptions into the science classroom. These misconceptions can interfere with students' learning and make it difficult for them to understand new science concepts.

The TLS series helps teachers to identify and address student misconceptions. The series includes resources such as:

- Activities that help students to identify their own misconceptions

- Lesson plans that help teachers to address student misconceptions
- Assessment tools that help teachers to evaluate students' understanding of science concepts

Assessment in Science

Assessment is an important part of science education. Assessment helps teachers to evaluate students' understanding of science concepts and to identify areas where students need additional support.

The TLS series provides teachers with a variety of assessment tools that can be used to assess students' understanding of science concepts. These tools include:

- Formative assessment tools that help teachers to assess students' understanding of science concepts during instruction
- Summative assessment tools that help teachers to assess students' understanding of science concepts at the end of a unit or course
- Performance assessment tools that help teachers to assess students' ability to apply science concepts to new situations

Technology in Science Education

Technology can be a powerful tool for teaching and learning science.

Technology can be used to:

- Engage students in science learning
- Provide students with access to information and resources
- Help students to visualize and understand science concepts

- Assess students' understanding of science concepts

The TLS series provides teachers with resources that help them to use technology effectively in science education. These resources include:

- Lesson plans that incorporate technology
- Activities that use technology to engage students in science learning
- Assessment tools that use technology to assess students' understanding of science concepts

The Teaching and Learning in Science (TLS) series is a comprehensive resource that supports teacher learning in science education. The series provides teachers with the theoretical and practical knowledge they need to implement constructivist approaches to teaching science. The series also includes a variety of resources such as lesson plans, activities, and assessment tools. These resources help teachers to create science classrooms where students can experience science as a process of inquiry and discovery.

Teachers who use the TLS series in their classrooms can expect to see improvements in student learning. Students who are taught by teachers who use the TLS series are more engaged in science learning, have a deeper understanding of science concepts, and are better able to think critically and solve problems.

References

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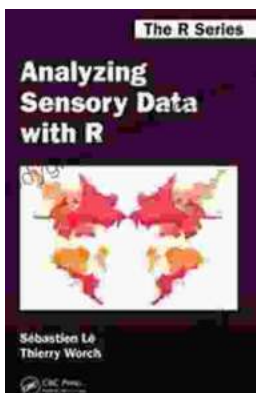
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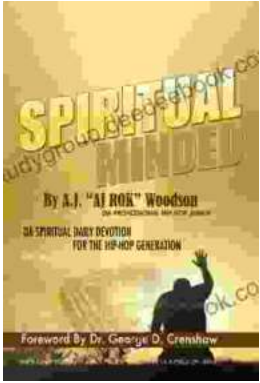
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