



## Differentiated Instruction

### Introduction

This guide discusses how to meet the needs of all students in the classroom when teaching with Interactive Science. It covers the program features and resources that support struggling learners and how to address students with different learning styles.

No two students are alike. They each have different personalities, backgrounds, language skills, learning styles, content knowledge, abilities, and needs.

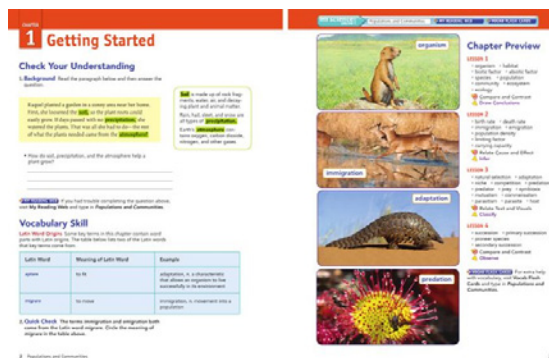
Teaching a diverse group of students requires a good deal of patience, know-how, and support. In Interactive Science, find structure, scaffolding, and support.

### Reteaching All Students

There's no one-size-fits-all strategy for reaching all students. However, there are a few best practices that are designed to help make the content accessible to most students.

### Build Background Knowledge

Students have varying levels of knowledge concerning the topics taught. It is important to assess this prior knowledge and build background to prepare students for the study of a particular topic. Each chapter features a Getting Started section, where students will assess their prior knowledge, build background knowledge, and preview chapter vocabulary. Premium tools like MyReadingWeb and MyScienceCoach can help struggling students build adequate background.



### Set Expectations

Students excel when they have a clear set of expectations and goals. The Interactive Science series establishes these goals through the use of Big Questions and key learning objectives. One way to establish these goals is to write them on the chalkboard or post them in the classroom.

Features such as Assess Your Understanding clearly assign ownership of learning to students. They have the opportunity to express what

they have learned and communicate when they need additional assistance.

Create a predictable and positive environment by setting routines in the classroom. By modeling and practicing routines such as lab and notebook procedures, establish expectations for students.

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### Address Learning Styles

Utilize media to address visual, auditory, and kinesthetic learning styles. Interactive Science is a media-rich program. Students will enjoy learning through videos like Untamed Science and other digital resources available on MyScienceOnline.com. These activities can provide support to many types of users.

One way to vary the learning experiences in the classroom is to create a balance between student-directed activities and teacher-directed activities. The Chapter Activities and Projects workbook provides many opportunities for students to demonstrate what they know through meaningful projects instead of traditional chapter tests.

Cooperative grouping is a vital practice in the science classroom. By varying the student groupings, allow students to work with pupils who have different strengths and personalities.

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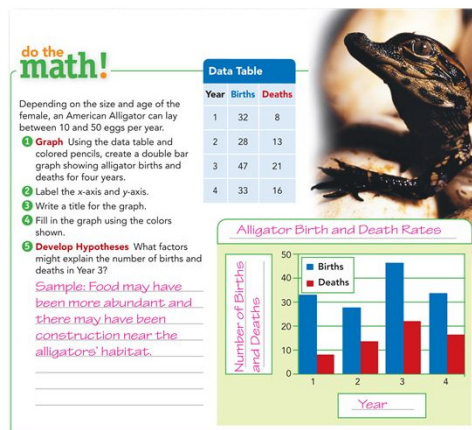
### Build Academic Skills

Interactive Science provides students with tools to reinforce their reading strategies. The student write-in edition encourages students to read, reflect, and write about what they have learned.

Note-taking strategies are encouraged throughout each Interactive Science textbook. MyScienceOnline.com also provides opportunities for students to take notes and respond online.

The Reading Strategies Handbook provides activities to support reading instruction before, during, and after reading.

Students have many opportunities to practice math skills in the program. Do the Math! is one feature in the write-in student edition.



Another resource is the Math Skill and Problem-Solving Activities Handbook. This handbook provides students with in-depth practice of math skills and real connections to math and science content.

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## Schedule Regular Assessments

The key to student success is data-driven instruction. By assessing frequently and using a variety of assessments, collect important data to plan appropriate interventions.

By conducting diagnostic assessments, learn more about the students' background knowledge, which will assist in measuring a student's growth during a unit.

Utilize formative and summative assessments. Interactive Science provides assessment opportunities that are at the key concept level as well as at the lesson, chapter, and unit level.



Encourage students to use the self-assessment tools in their text and online to help them solidify what they know and identify where they are struggling.

By using actual student assessment data, make informed intervention decisions. These decisions will help specifically target students' problem areas.

For more about assessment, view the Assessment tutorial on this Web site.

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## Intervene as Appropriate

It is important to respond to students' needs with appropriate interventions. The Teacher's Edition provides Differentiated Instruction and Response to Intervention notes for responding appropriately.

**Evaluate**

**Assess Your Understanding**  
After students answer the questions, have them evaluate their understanding by completing the appropriate sentence.

**RTI Response to Intervention**

**1a.** If students need help biotic and abiotic factors, **then** have them review the definitions of each type of factor.

**b.** If students have trouble explaining the importance of biotic and abiotic factors, **then** remind them that human beings need water for all vital body functions.

**my science COACH** Have students go online for help in understanding biotic and abiotic factors.

Differentiated instruction examples include relating a topic to a student's personal experience, addressing misconceptions, or reinforcing a word-study skill.

Students may also access MyScienceOnline.com to use My Science Coach or My Reading Web. These premium tools provide extra support as well as activities presented at varying levels of readability.

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## **Review**

This guide outlined best practices for differentiated instruction and discussed building background and vocabulary. It identified the importance of setting expectations through posting goals and modeling routines. This guide also looked at options for addressing learning styles and building academic skills. Finally, this guide explained using assessment to gather student data and using that data to mold instruction.

For more differentiated instruction resources, check out the Reading Strategies Handbook, Math Skill and Problem-Solving Activities Handbook, and Accelerating the Progress of English Language Learners Handbook.

For more information, please watch the other Interactive Science tutorials on this Web site.