

**Subject Area:** Science  
**Unit Title:** Introduction to Dinosaurs and Prehistoric Life  
**Grade Level:** 7-8  
**Lesson Number:** 1 of 10

**Duration:** 60 minutes  
**Date:** March 10, 2023  
**Teacher:** Ms. Johnson  
**Room:** Science Lab

## Curriculum Standards Alignment

### Content Standards:

- Understand the concept of adaptation and how it relates to dinosaur survival
- Identify and name at least three different types of dinosaurs
- Describe the unique characteristics of each dinosaur type

### Skills Standards:

- Critical thinking and problem-solving skills
- Communication and collaboration skills
- Scientific literacy and inquiry skills

### Cross-Curricular Links:

- English Language Arts: reading and writing about dinosaurs
- Mathematics: measuring and calculating dinosaur sizes and scales
- Art and Design: creating dinosaur models and illustrations

## Essential Questions & Big Ideas

### Essential Questions:

- What were the different types of dinosaurs and their characteristics?
- How did dinosaurs adapt to their environments?
- What can we learn from the study of dinosaurs?

### Enduring Understandings:

- Dinosaurs were diverse and complex creatures that lived during the Mesozoic Era
- Adaptation is a key concept in understanding dinosaur survival and evolution
- The study of dinosaurs can provide insights into the natural world and our place in it

## Student Context Analysis

**Class Profile:**

- Total Students: 25
- ELL Students: 5
- IEP/504 Plans: 3
- Gifted: 2

**Learning Styles Distribution:**

- Visual: 40%
- Auditory: 30%
- Kinesthetic: 30%

## Pre-Lesson Preparation

### Room Setup:

- Arrange desks in a U-shape to facilitate discussion and collaboration
- Set up a display of dinosaur models and fossils
- Prepare a list of dinosaur-related vocabulary words

### Technology Needs:

- Computer with internet access for research and multimedia integration
- Projector and screen for presentations and videos
- Audio equipment for audio clips and podcasts

### Materials Preparation:

- Dinosaur models and fossils
- Dinosaur-related books and articles
- Whiteboard and markers

### Safety Considerations:

- Ensure that students handle dinosaur models and fossils with care
- Supervise students during hands-on activities
- Provide a safe and respectful learning environment

## Detailed Lesson Flow

### Introduction (10 minutes)

- Introduce the topic of dinosaurs and prehistoric life
- Review the learning objectives
- Show a video or image of a dinosaur to spark interest and curiosity

### Dinosaur Types (20 minutes)

- Presentation on different types of dinosaurs, using visual aids and multimedia integration
- Examples of different dinosaur types, such as herbivores, carnivores, and omnivores
- Discussion and Q&A

### Engagement Strategies:

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- Think-pair-share to encourage collaboration and discussion
- Graphic organizers to help students organize their thoughts and ideas
- Hands-on activities to reinforce learning and promote active engagement

### Interactive Quiz (15 minutes)

- Administer an interactive quiz to test students' knowledge of different dinosaur types
- Use multimedia integration, such as online quizzes or games, to engage students and promote active learning

- Provide feedback and encouragement to students to motivate them and build their confidence

## Differentiation & Support Strategies

### For Struggling Learners:

- Provide additional support and scaffolding during hands-on activities
- Offer one-on-one instruction and feedback
- Use visual aids and multimedia integration to support students with visual or auditory learning styles

### For Advanced Learners:

- Provide additional challenges and extensions, such as research projects or presentations
- Encourage students to take on leadership roles and facilitate discussions
- Use technology and multimedia integration to provide additional resources and support

### ELL Support Strategies:

- Provide visual aids and multimedia integration to support students with visual or auditory learning styles
- Offer one-on-one instruction and feedback
- Use simplified language and vocabulary to support students with language barriers

### Social-Emotional Learning Integration:

- Encourage students to work in groups and collaborate on projects
- Teach students how to provide feedback and encouragement to their peers
- Use restorative circles and discussions to promote empathy and understanding

## Assessment & Feedback Plan

### Formative Assessment Strategies:

- Quizzes and tests to assess students' knowledge and understanding
- Class discussions and participation to assess students' critical thinking and communication skills
- Projects and presentations to assess students' creativity and problem-solving skills

### Success Criteria:

- Students can identify and name at least three different types of dinosaurs
- Students can describe the unique characteristics of each dinosaur type
- Students can demonstrate critical thinking and problem-solving skills through projects and presentations

### Feedback Methods:

- Verbal feedback during class discussions and one-on-one instruction
- Written feedback on quizzes, tests, and projects
- Peer feedback and self-assessment to promote reflection and growth

## Hands-on Activity

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### **Fossil Casting:**

- Provide students with plaster of Paris and molds to create fossil casts
- Have students research and create a presentation about their fossil find
- Encourage students to ask questions and think critically about the fossilization process

### **Dino Dig Simulation:**

- Set up a simulated dig site with sand, rocks, and hidden dinosaur bones
- Have students work in teams to excavate the bones and assemble a dinosaur skeleton
- Encourage students to think critically about the excavation process and the importance of fossil discovery

## Conclusion

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### Review Key Points:

- Review the different types of dinosaurs and their characteristics
- Review the concept of adaptation and how it relates to dinosaur survival
- Review the importance of fossil discovery and the excavation process

### Assessment and Evaluation:

- Evaluate student understanding and progress through quizzes, tests, and projects
- Use assessment opportunities to identify areas where students need additional support or review
- Provide feedback and encouragement to students to motivate them and build their confidence

## Teacher Reflection

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### Pre-Lesson Reflection:

- What challenges do I anticipate?
- Which students might need extra support?
- What backup plans should I have ready?

### Post-Lesson Reflection:

- What went well?
- What would I change?
- Next steps for instruction?



## Appendices

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### Dinosaur Facts and Figures:

- Dinosaur types and characteristics
- Dinosaur habitats and ecosystems
- Dinosaur extinction theories and debates

### Teaching Resources:

- Dinosaur-related books and articles
- Dinosaur models and fossils
- Online resources and multimedia integration

