

# ac / TEKS science

Dynamic, Interactive Learning





**Adaptive Curriculum Texas™** award-winning instructional solution builds middle and high school science mastery through dynamic, interactive learning. Our real-world active learning approach motivates learners to explore, make hypotheses, manipulate items, and see the impact of their decisions. Adaptive Curriculum Texas™ has more than 400 Activity and Animation Objects that are Texas Essential Knowledge and Skills (TEKS) aligned. These combined lessons and activities complement existing curriculums and address more than 1,300 Learner Outcomes. Its easy and flexible delivery allows it to be used for whole or small group or individual instruction. With Adaptive Curriculum Texas™, students acquire core mastery through active participation in an immersive, differentiated and exciting learning environment that provides real-time feedback and assessment.



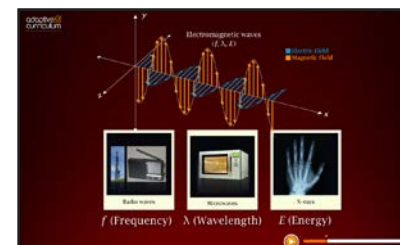
### Adaptive Curriculum Texas™ Award-winning Instructional Solution

Our program builds middle and high school science mastery through dynamic, interactive learning. Unlike other programs developed from print, Adaptive Curriculum Texas™ was developed as a digital solution to take full advantage of the online environment and cutting-edge instructional tools, such as interactive white boards.

### Active Learning & Engagement

Adaptive Curriculum Texas™ engages students to explore concepts, create and test hypotheses and manipulate items through an immersive learning environment. In addition, it offers:

- Differentiated instruction
- Real-time feedback
- Multimedia and multi-sensory delivery for different learning styles



### Science Mastery through Dynamic, Interactive Learning

Adaptive Curriculum Texas™ Activity and Animation Objects are built utilizing the most recent research and proven instructional strategies and pedagogy. Incorporating rich multimedia and real-world scenarios, Activity and Animation Objects are intentionally created to engage today's digital-age learners and promote active learning. This guided discovery approach builds deep concept mastery and lasting understanding.





## Dynamic & Flexible

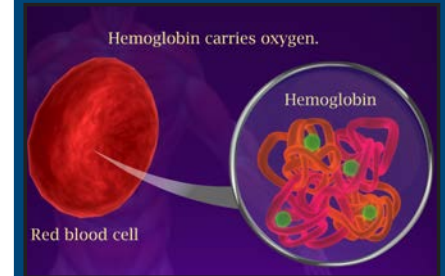
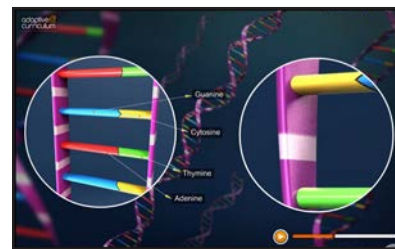
Adaptive Curriculum Texas™ is web based and portable (access anywhere, anytime), providing teachers tremendous flexibility for application. Easy integration with white boards leverages school technology investments and provides opportunities for group learning, problem solving and discussion.

## TEKS Alignment

Activity and Animation Objects are created to build deep concept mastery of science, aligned to the Texas Essential Knowledge and Skills (TEKS) standards. Through My Adaptive Space, the Adaptive Curriculum Texas™ product portal, teachers in Texas will be able to search for Activity and Animation Objects by topic, by textbook or by conducting a keyword search to create customized lesson plans by grouping different objects together and assigning them to students.

Activity and Animation Objects are designed to:

- Accelerate learning
- Create active engagement for real-time feedback
- Provide access to online teacher guides and lesson assignment tools

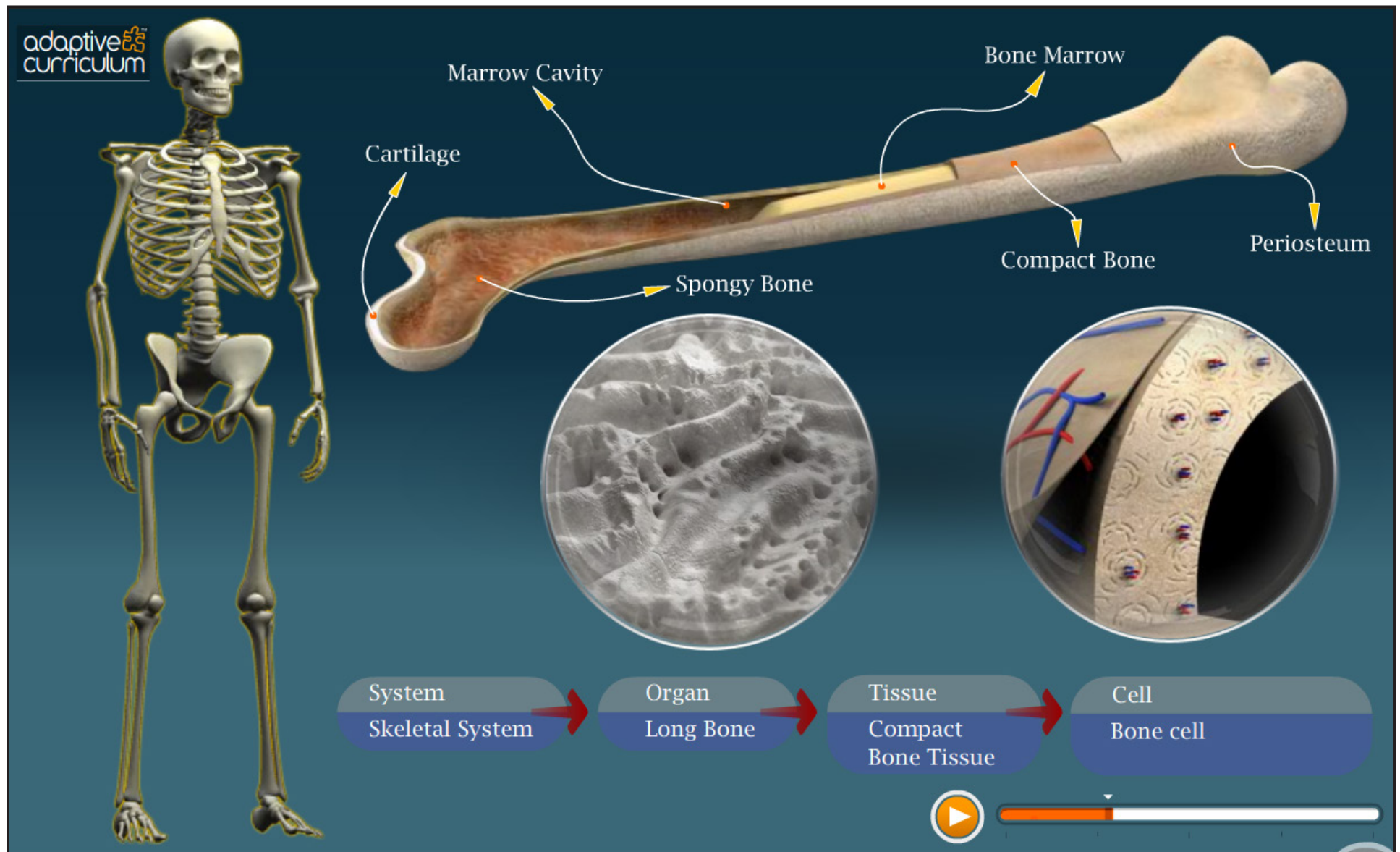


*“Now when students get to the test, they have an image in their minds—something they can remember and relate the question to, and that is reflected in our test scores. Over the last two years, our science scores have gone up six or seven points a year.”*

Alma Cardenas-Rubio  
Principal  
Bestiero Middle School  
Brownsville, TX



# 175 Science Activity Objects

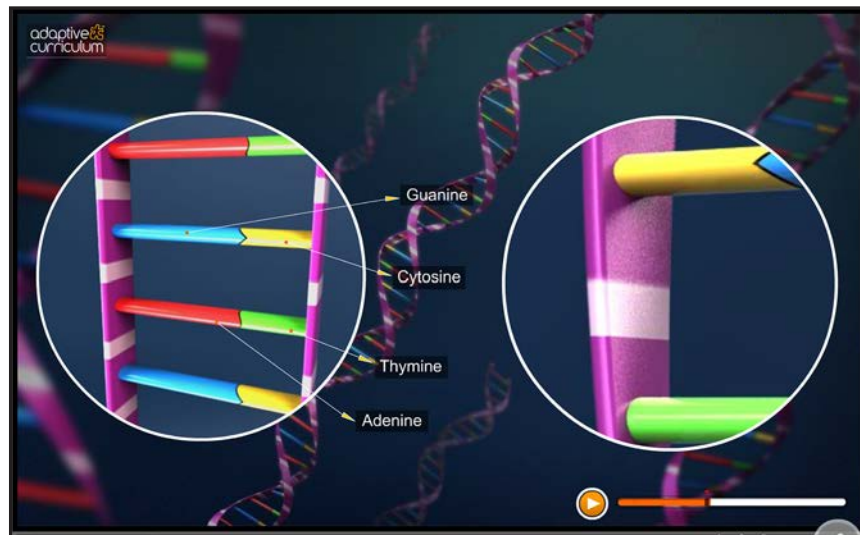


Structure of Bones 3D Model

**Interactive 3D Model:** These Activity Objects allow learners to explore scientific structures using interactive 3D models.

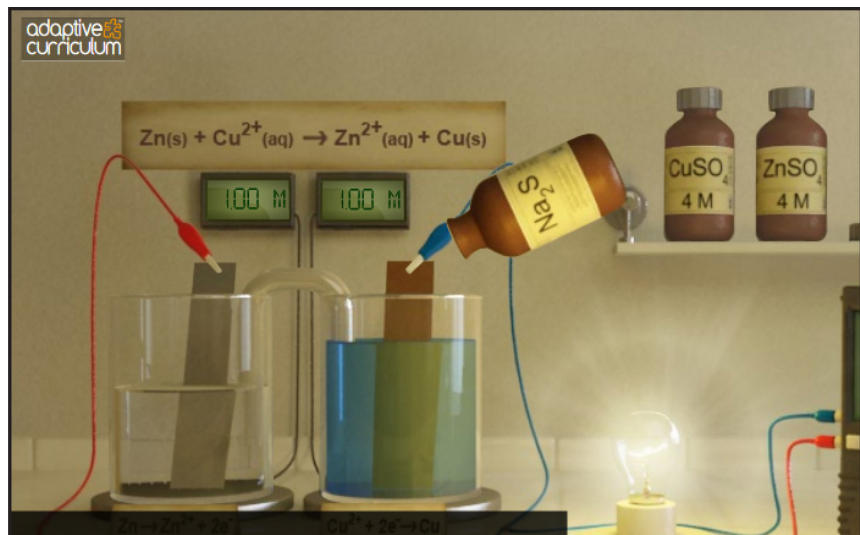


**Concept Development:** *These Activity Objects introduce difficult concepts using real-world scenarios.*



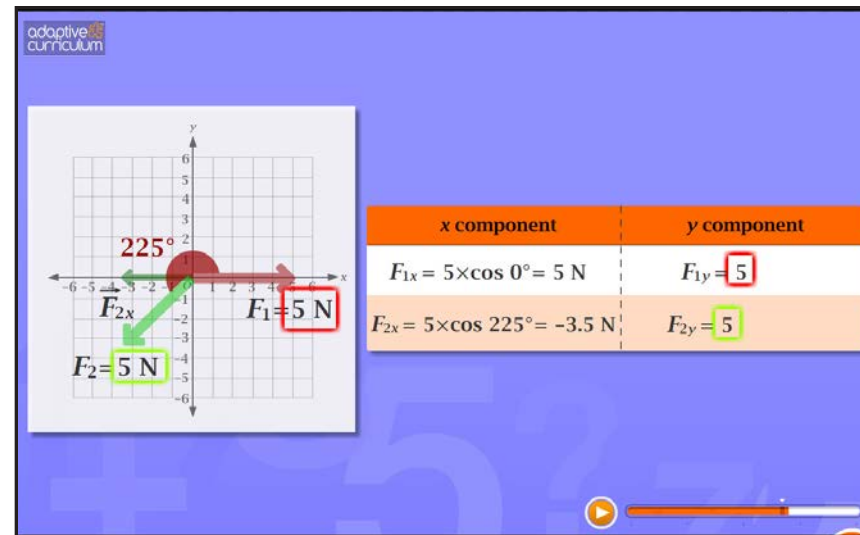
DNA Structure

**Experiment:** *These Activity Objects engage learners in a virtual lab environment to develop inquiry skills.*



Batteries, Chemicals and Potential Difference

**Skills Application:** *These Activity Objects help learners apply rules and procedures to strengthen computational skills.*



Combining Non-Perpendicular Forces

**Problem Solving:** *These Activity Objects engage learners in problem-solving scenarios.*

adaptive curriculum

acceleration → force →

*Newton's Second Law*

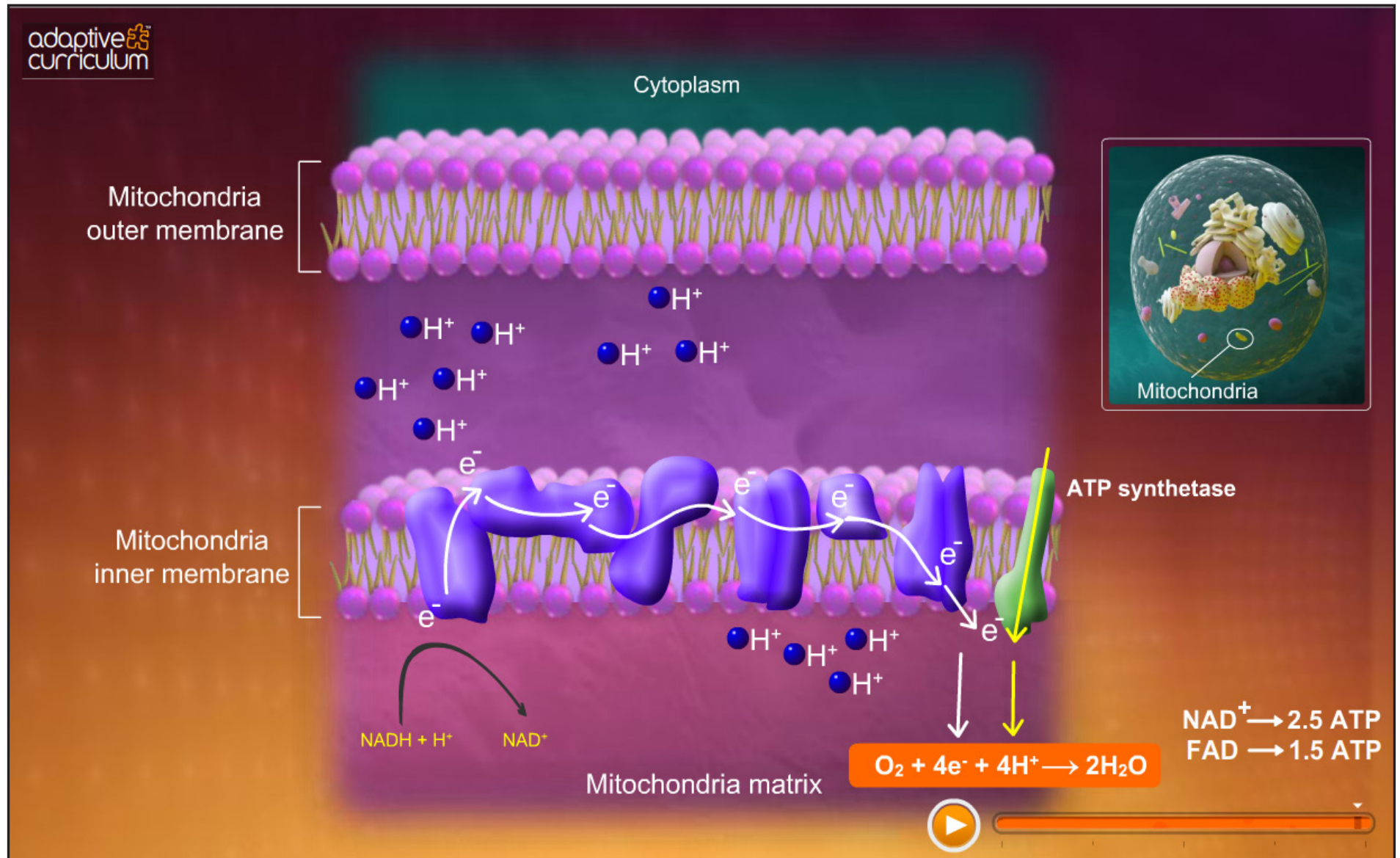
$$\vec{F}_{\text{net}} = m \cdot \vec{a}$$

constant ↑ ↓

constant ↓

Solving Problems with Newton's Second Law

# 235 Science Animation Objects

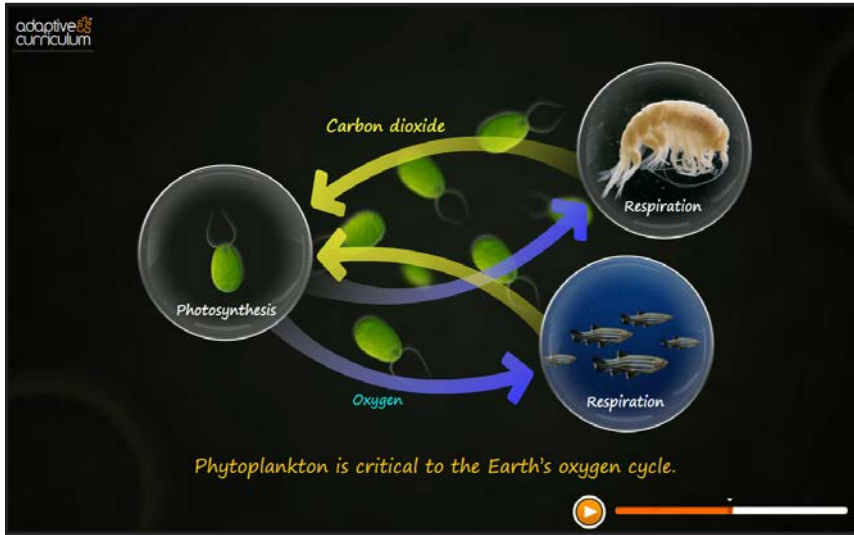


**Adaptive Curriculum Animations:** These Animations provide learners a visualization of scientific concepts that can be applied to real-world scenarios.

Electron Transport Chain



## Biology



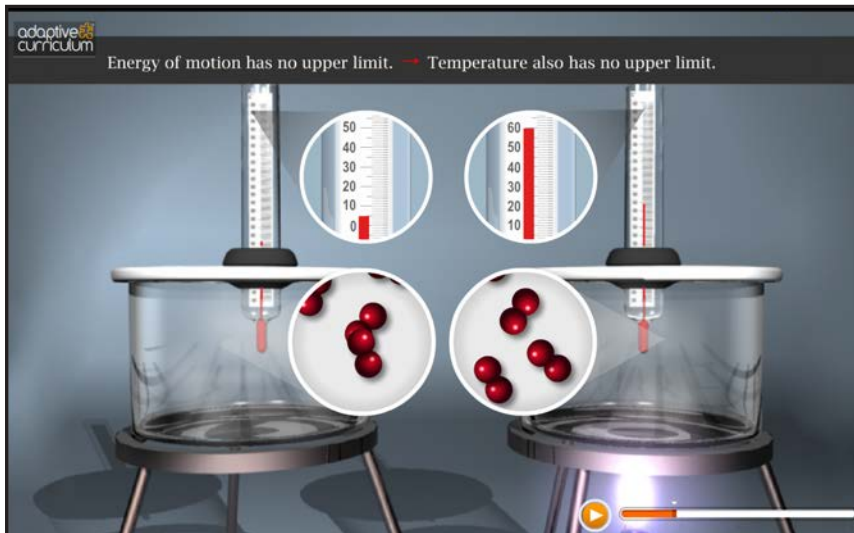
Importance of Protista

## Physics



Instantaneous Velocity and Acceleration

## Chemistry



Temperature Measurements

## Integrated Physics and Chemistry



Uniform Circular Motion

## Utilizing the 5E Instructional Model

Activity and Animation Objects are built on a design of structured instruction consisting of a carefully crafted sequence of activities to promote conceptual learning utilizing the 5E Instructional Model (BSCS, 2006; SCIS, 1973).

The **five-step** process of the model includes:

### 1. Engage

This phase initiates the learning task and piques the interest of students.

### 2. Explore

This phase provides students with experiences designed to develop current concepts, processes and skills.

### 3. Explanation

This phase focuses students' attention on a particular aspect of their engagement and/or exploration experiences and provides a definition for a concept, process, skill, or behavior.

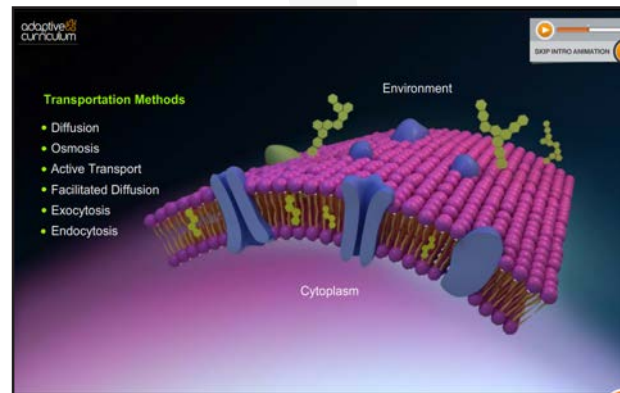
### 4. Elaboration

This phase challenges and extends students' conceptual understanding and allows further opportunity for students to practice desired skills and behaviors.

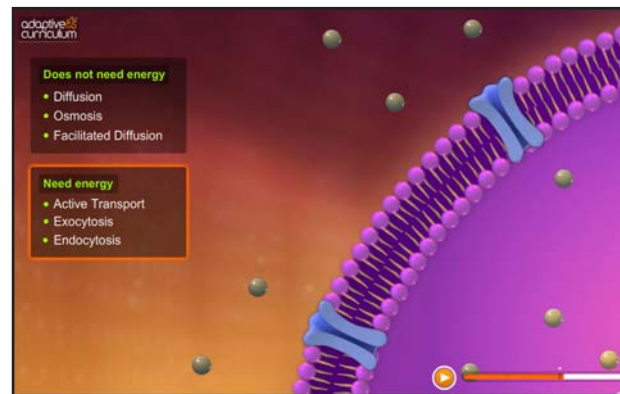
### 5. Evaluation

This phase assesses students' understanding and their ability to achieve proficiency over the Learner Outcomes.

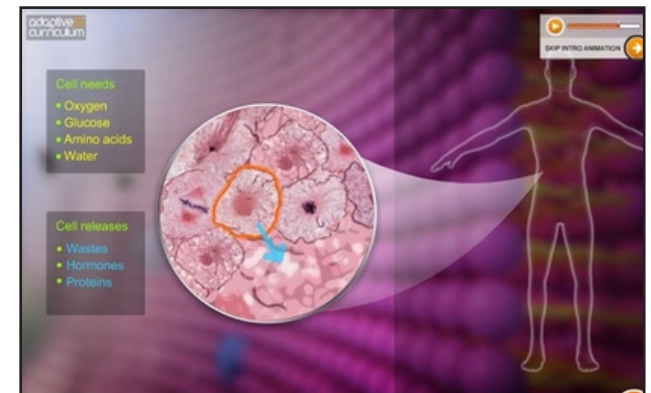
## Anatomy of an Activity Object: Structure and Function of a Cell Membrane



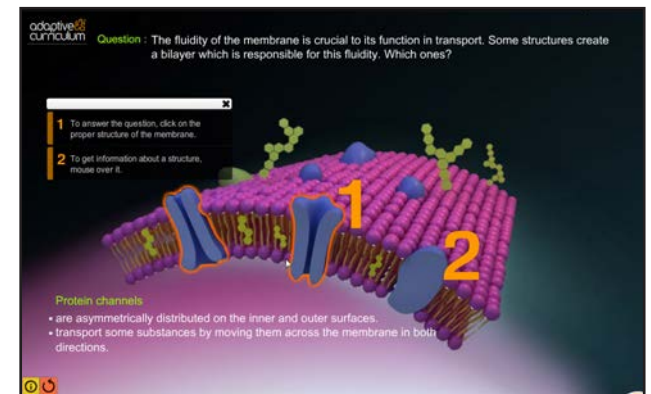
**1. Engage:** The concept and function of a cell structure and each of its components is explained in detail using realistic visuals and animation and presented in a real world context.



**4. Elaborate:** Core Concepts are elaborated upon, leading to deeper understanding. Increasingly challenging assessment is layered with elaboration to provide richer learning opportunities.



**2. Explore & 3. Explain:** Students explore cell structures more deeply and interact with cell processes. Further explanation is provided on core concepts.



**5. Evaluate:** Knowledge of a cell structure and its functionality is tested through a series of assessment questions.





## Whole Group



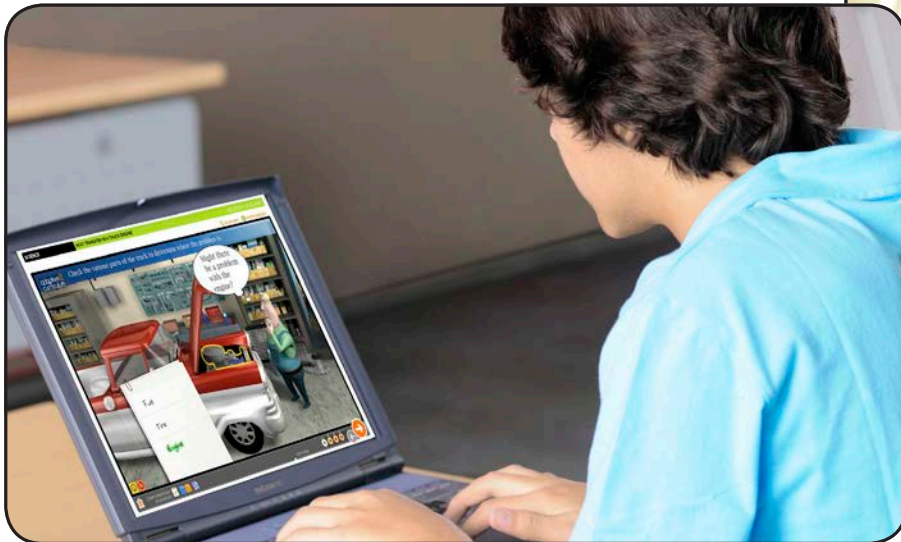
## Dynamic and Flexible

Adaptive Curriculum Texas™ TEKS standards-based approach and modular structure adapt to any curriculum, offering teachers a powerful and flexible instructional resource. In addition, Adaptive Curriculum Texas™ can be used anytime, anywhere and in a variety of settings, providing teachers with a wide array of application possibilities.

## Small Group



## Individual



## Professional Development

Adaptive Curriculum Texas™ software is complemented by outstanding online and onsite professional development. Our professional development team works directly with school and district teams to ensure successful program implementation, including providing strategies to compliment existing curriculums to fully leverage and integrate Adaptive Curriculum Texas™.

Adaptive Curriculum Texas™ offers:

- Tiered Professional Development Options
- Onsite Professional Development
- Webcasts
- Robust Web support including video tutorials and product walkthroughs

## Supplementary Tools

Teachers and students are also provided with a rich array of supplemental support materials.

### Assessment Component

Assessments track student progress and report the results to teachers and students.

### Activity Sheet

Activity Sheets are designed as student handouts and/or for formative assessments, as well as for school/home communication. All Activity Sheets have Teachers' Editions for quick reference.

## Teacher Guide

The Teacher Guide is essentially a comprehensive lesson plan. It is designed to provide detailed information on each Activity Object.

The information provided in the Teacher Guide includes:

- Background information on Activity Object content
- Strategies for engaging learners
- Strategies for overcoming learner misconceptions
- Real-world connections
- Aligning assessments with outcomes

LP EED-411				Assessment Result	
Duration: 35:34.00				81 %	
AO Mutualism				Submit Date: 11 27 2010 15:44:35	
Duration: 02:32.00					
QUESTION	STUDENT ANSWER	CORRECT ANSWER	RESULT		
1	D	D	correct	correct	100%
2	A	A	correct	incorrect	0%
3	B	B	correct	blank	0%
4	C	C	correct		
5	B	B	correct		
AO Mendel's Experiment				Submit Date: 11 27 2010 15:56:46	
Duration: 02:58.00					
QUESTION	STUDENT ANSWER	CORRECT ANSWER	RESULT		
1	A	A	correct	correct	80%
2	B	B	correct	incorrect	20%
3	C	C	correct	blank	0%
4	D	D	correct		
5	B	C	incorrect		
AO Life from Nonliving Things? Redi's Experiment				Submit Date: 11 27 2010 16:16:35	
Duration: 03:35.00					
QUESTION	STUDENT ANSWER	CORRECT ANSWER	RESULT		
1	D	C	incorrect	correct	40%
2	A	B	incorrect	incorrect	60%
3	A	A	correct	blank	0%
4	A	A	correct		
5	C	D	incorrect		

# My Adaptive Space: The Adaptive Curriculum Texas™ Teacher Portal

## Student Management and Reporting

**MANAGE MY CLASSES**

Class: My Class 0 Students [Delete](#) [Edit](#)

Class: 7th Grade Algebra P1 5 Students [Delete](#) [Edit](#)

Bowen, Sandy	sandybowen	<a href="#">Delete</a>	<a href="#">Remove</a>	<a href="#">Edit</a>
Palmer, Raymond	RAY	<a href="#">Delete</a>	<a href="#">Remove</a>	<a href="#">Edit</a>
Roy, Carter	croy1	<a href="#">Delete</a>	<a href="#">Remove</a>	<a href="#">Edit</a>
Sanders, Kyle	kylesanders	<a href="#">Delete</a>	<a href="#">Remove</a>	<a href="#">Edit</a>
Smith, Brianna	BRIANNA	<a href="#">Delete</a>	<a href="#">Remove</a>	<a href="#">Edit</a>

Class: 7th Grade Science P3 5 Students [Delete](#) [Edit](#)

Dagle, Chris	9846	<a href="#">Delete</a>	<a href="#">Remove</a>	<a href="#">Edit</a>
Guterez, Jessica	93041	<a href="#">Delete</a>	<a href="#">Remove</a>	<a href="#">Edit</a>
Moralies, Tiffany	902851	<a href="#">Delete</a>	<a href="#">Remove</a>	<a href="#">Edit</a>
Reynolds, Patrick	920175	<a href="#">Delete</a>	<a href="#">Remove</a>	<a href="#">Edit</a>
Sanders, Suzanne	96284	<a href="#">Delete</a>	<a href="#">Remove</a>	<a href="#">Edit</a>

Class: Math Science Combined 4 Students [Delete](#) [Edit](#)

[Expand All](#) [Collapse All](#) [Add Student](#) [New Class](#)

Simple navigation and student and class management.

## Standards and Textbook Alignment

**ACTIVITY OBJECTS**

1 Middle School

- Chemical Bonding: Covalent Compounds**  
Middle School - Science  
This Activity Object introduces the concept of atoms sharing electrons to form covalent bonds, and learners construct models of molecules with covalent bonds.  
[Add To Lesson Plan](#) [See Details](#) [Play](#)
- A Musical Introduction to Chemical Formulas**  
Middle School - Science  
Learners relate writing a chemical formula to writing musical notes.  
[Add To Lesson Plan](#) [See Details](#) [Play](#)
- Chemical Compounds: Ionic Bonding**  
Middle School - Science  
Learners relate writing to ions, and the formation of ionic bonds.  
[Add To Lesson Plan](#) [See Details](#) [Play](#)
- Atomic Model History: Early Ideas to Thomson**  
Middle School - Science  
This Activity Object presents the evolution of the concept of the atom from philosophers of ancient Greece to early twentieth century ideas.  
[Add To Lesson Plan](#) [See Details](#) [Play](#)
- Atomic Model History: From Rutherford to Bohr**  
Middle School - Science  
Starting with Thomson's Model, the models of Rutherford and Bohr are presented.  
[Add To Lesson Plan](#) [See Details](#) [Play](#)

Results per page 206 results found

Adaptive Curriculum Activity and Animation Objects can be used to complement any curriculum. Alignment to TEKS, as well as a number of textbooks, makes planning with Adaptive Curriculum easy.

## Reporting

**Assignment Score Report**

Assignment: Altern Assign 4 Az Sci Center Event EED Assign Date: 09/05/2010

Student	Class	Progress	The Density of Marbles	Properties of Solids, Liquids, and Gases	Heat Conduction of Different Materials
Brisbin, Kalea	EISciMeth10	not Started	N/A	N/A	N/A
Brooks, Lyndon	EISciMeth10	In Process	60%	100%	100%
Brown, Karena	EISciMeth10	In Process	100%	100%	100%
Dinette, Brigitte	EISciMeth10	not Started	N/A	N/A	N/A
Dethlefsen, Katherine	EISciMeth10	not Started	N/A	N/A	N/A
Eschler, Stacy	EISciMeth10	In Process	100%	100%	100%
Hockenberry, Kristen	EISciMeth10	not Started	N/A	N/A	N/A
Hogg, Paige	EISciMeth10	not Started	N/A	N/A	N/A
Jones, Marissa	EISciMeth10	In Process	100%	80%	100%
Lawrence, Aleksandra	EISciMeth10	In Process	80%	100%	100%
Malone, Kayla	EISciMeth10	not Started	N/A	N/A	N/A
Manner, Caitlyn	EISciMeth10	not Started	N/A	N/A	N/A
McBride, Kira	EISciMeth10	not Started	N/A	N/A	N/A
McMillon, Stacy	EISciMeth10	not Started	N/A	N/A	N/A
Mezger, Mark	EISciMeth10	not Started	N/A	N/A	N/A
Moote, Alicia	EISciMeth10	In Process	N/A	N/A	N/A
Mordukhayev, Ilya	EISciMeth10	not Started	N/A	N/A	N/A
Nathe, Rachel	EISciMeth10	not Started	N/A	N/A	N/A
Nunez, Christina	EISciMeth10	In Process	100%	100%	100%
Pantaria, Mariela	EISciMeth10	In Process	80%	80%	80%
Rodgers, Lauren	EISciMeth10	In Process	100%	80%	100%

Clear and intuitive assessment reports.

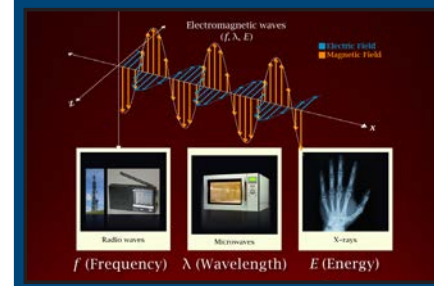
**Assignment Report**

Jennifer Scruggs

LP Biology for Teachers 2009 **COMPLETED**

Assign Date: 05/22/2009 / Due Date: 08/12/2009

AO Mutualism	<b>COMPLETED</b>
AO Aerobic Respiration in Plants	<b>COMPLETED</b>
AO Plants' Needs for Photosynthesis	<b>COMPLETED</b>
AO Bees, Flowers and Pollination	<b>COMPLETED</b>
AO Functions of Roots	<b>COMPLETED</b>
AO Classification of Animals	<b>COMPLETED</b>
AO Commensalism	<b>COMPLETED</b>
AO Parasitism	<b>COMPLETED</b>
AO Natural Selection	<b>COMPLETED</b>
AO Mendel's Experiment	<b>COMPLETED</b>
AO DNA Structure	<b>COMPLETED</b>
AO Agent Organelles	<b>COMPLETED</b>
AO The Structure of Bones	<b>COMPLETED</b>
AO Digestive System	<b>COMPLETED</b>



"What I liked from the start were the real life scenarios. Often when we teach something in class, students have nothing to relate it to in the real world. So they forget it. I could see that Adaptive Curriculum would help them remember concepts because it connects to real applications."

Alma Cardenas-Rubio  
Principal  
Bestiero Middle School  
Brownsville, TX



//CODiE//  
2013 SIA CODiE WINNER



//CODiE//  
2012 SIA CODiE WINNER



2009 SIA  
//CODiE//  
WINNER



2008 SIA  
//CODiE//  
WINNER



EdNET 2008  
WINNER



## Awards

### Best Virtual Learning Solution

2013 CODiE Award Winner  
*Software & Information  
Industry Association*

### Best Virtual School Solution for Students

2012 CODiE Award Winner  
*Software & Information  
Industry Association*

### Cool Tool Award

2012 Winner  
*edtech digest*

### Best Online Instructional Solution

2009 CODiE Award  
*Software & Information  
Industry Association*

### Teachers' Choice Award

2009  
*Learning Magazine*

### Education Newcomer of the Year

2008 CODiE Award  
*Software & Information  
Industry Association*

### Rookie of the Year

2008 EdNET Award  
*The Heller Reports and Quality  
Education Data*

### Best Middle School Math and Science Website

2008 EDDIE Award  
*ComputED Learning Center*

adaptive curriculum    
TEXAS

Adaptive Curriculum's math and science solutions are used by millions of students in the United States, Europe and Asia and are available in multiple languages. World-wide experts in math, science and online learning theory contribute to the content and design of the interactive activities for both Adaptive Curriculum and its parent company, Sebit Inc.

In the United States, Adaptive Curriculum has partnered with Arizona State University's Technology Based Learning Research Center, which provides pedagogical research, multi-disciplinary expertise and content collaboration. The company headquarters is located in the ASU SkySong Center for Innovation, Technology and Imagination.

## Adaptive Curriculum

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www.adaptivecurriculum.com/us/texas (website)