



**THE  
EDUCATION  
FUND**

FOR EXCELLENCE IN MIAMI-DADE PUBLIC SCHOOLS

**2020-2021**

# Ideas With **IMPACT**



**idea packet**

sponsored by:



FORD MOTOR COMPANY FUND



**Diversity and  
Evolution of  
Living Organisms**



# TIES

TEACHER INSTITUTE FOR  
EVOLUTIONARY SCIENCE

[www.tieseducation.org](http://www.tieseducation.org)

Bertha Vazquez

[bm vazquez@dadeschools.net](mailto:bm vazquez@dadeschools.net)

G.W. Carver Middle School

Mail Code: 6071



## Table of Contents

Goals and Objectives.....	2
Florida Standards.....	3
Course Outline/Overview.....	4
Lesson Plans/Step-by-Step Guide in implementing.....	5
Resource List.....	6

## Goals and Objectives

A middle school science teacher will typically cover many areas of science within his/her annual curriculum, including earth science, physical science, and life science. It is virtually impossible to become an expert in all these areas, at least not initially. The purpose of the Teacher Institute for Evolutionary Science (TIES) is to familiarize interested science teachers with the concepts of natural selection, common ancestry, and diversity in order for them to confidently cover the topics in their classrooms and fulfill their curriculum requirements. The success of TIES depends upon providing ready-to-use resources that teachers can begin to use immediately. Participating teachers leave our workshops with presentation slides, labs, guided reading assignments, an exam, and a valuable resource list for their lesson plans. In just five years, TIES has presented 180 workshops nationwide with an exceptionally positive response from the participating teachers.

## Florida Standards

Big Idea: [Diversity and Evolution of Living Organisms](#) -

- A. The scientific theory of evolution is the organizing principle of life science.
- B. The scientific theory of evolution is supported by multiple forms of evidence.
- C. Natural Selection is a primary mechanism leading to change over time in organisms.

For 7th grade:

SC.7.L.15.2

Explore the scientific theory of evolution by recognizing and explaining ways in which genetic variation and environmental factors contribute to evolution by natural selection and diversity of organisms.

SC.7.L.15.1 Recognize that fossil evidence is consistent with the scientific theory of evolution that living things evolved from earlier species.

## Course Outline/Overview

TIES is presenting its student-guided units which cover the Florida Science Standards for Evolution. We are presenting the middle school version in this session but we have both middle and high school versions, as well as resources for middle school. The units and all of the related materials are also available in Spanish.

The unit includes:

1. The slide show with embedded online games, hands-on activities, engaging videos, and interactive websites.
2. The student response sheet
3. The answer key and rubric
4. The final assessment and answer key

## Lesson Plans

This activity will take about 4-5 hours in total. Consider breaking it up or assigning only certain parts at a time. Three, discrete parts are:

1. What is Evolution (slides 1-6)
2. Evidence for Evolution (slides 7-22)
3. Natural Selection (slides 23-29)

You can e-mail me for a free exam for this content at [bvazquez@centerforinquiry.org](mailto:bvazquez@centerforinquiry.org).

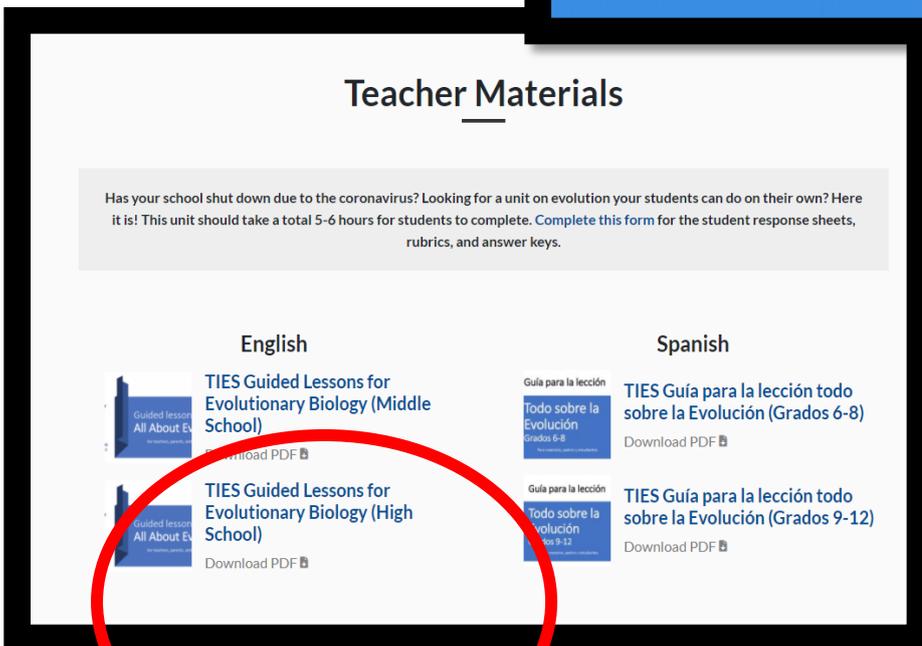
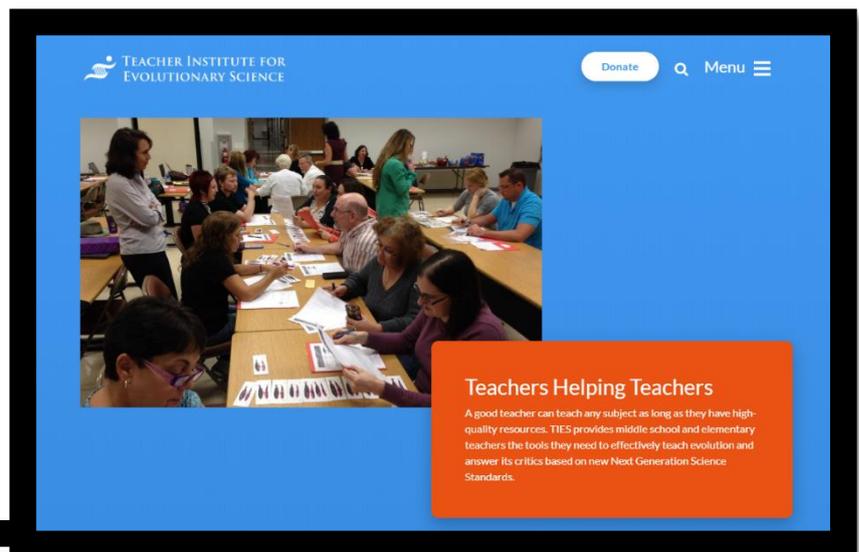
And please visit [www.tieseducation.org](http://www.tieseducation.org) for many more resources!

Thanks,

Bertha Vazquez

Director, The Teacher Institute for Evolutionary Science

To find the lesson. go to [www.tieseducation.org](http://www.tieseducation.org)



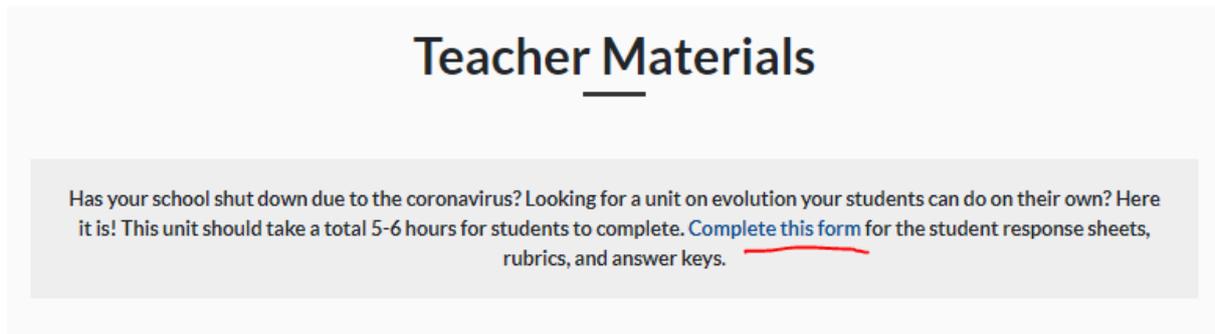
Scroll down and click on Resources: Teachers will find all the lesson materials here.

## Resource List:

In addition to the student-guided units themselves, TIES offers several helpful, ancillary documents.

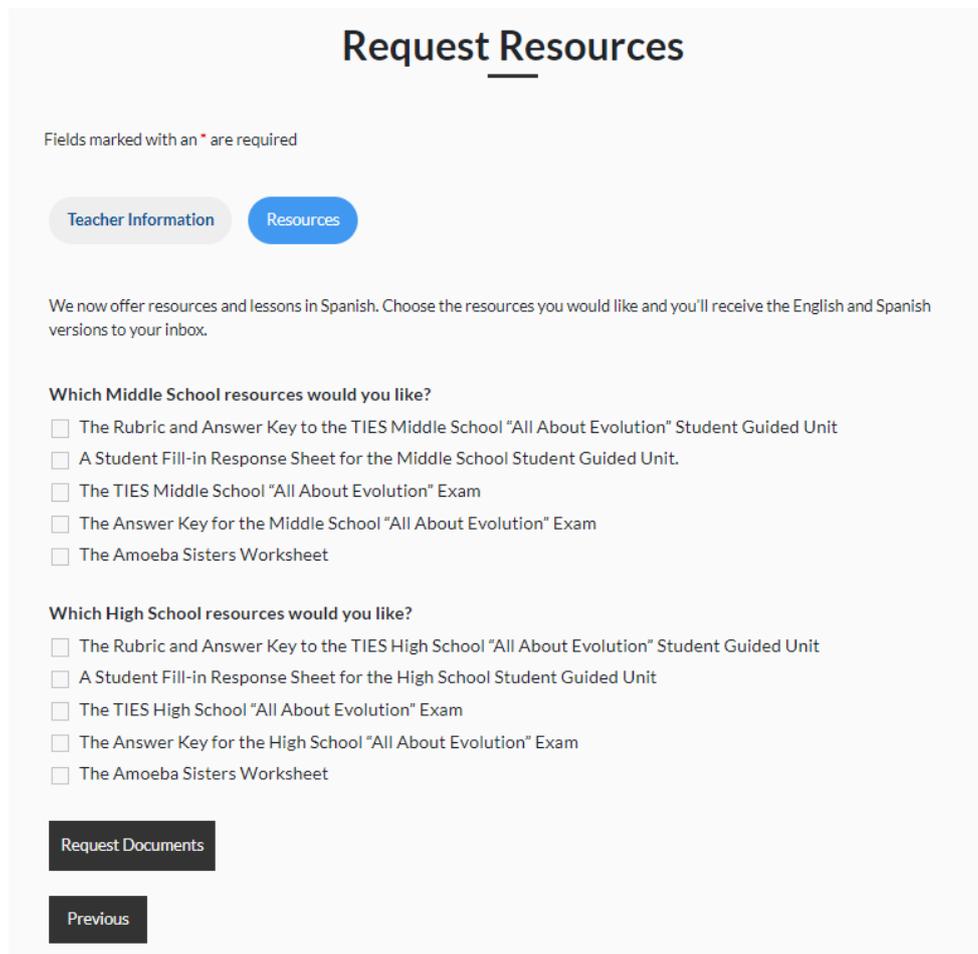
Go to [www.tieseducation.org/](http://www.tieseducation.org/)

Please note the “Complete this Form” link found under Teacher Materials:



The screenshot shows a page titled "Teacher Materials" with a sub-header "Teacher Materials" and a red underline. Below the title is a text box containing the following information: "Has your school shut down due to the coronavirus? Looking for a unit on evolution your students can do on their own? Here it is! This unit should take a total 5-6 hours for students to complete. [Complete this form](#) for the student response sheets, rubrics, and answer keys." The link "Complete this form" is underlined in red.

You can complete the form for the following resources:



The screenshot shows a form titled "Request Resources" with a red underline. Below the title is a note: "Fields marked with an \* are required". There are two tabs: "Teacher Information" and "Resources". Below the tabs is a note: "We now offer resources and lessons in Spanish. Choose the resources you would like and you'll receive the English and Spanish versions to your inbox." There are two sections of resources to request, each with a list of checkboxes:

**Which Middle School resources would you like?**

- The Rubric and Answer Key to the TIES Middle School "All About Evolution" Student Guided Unit
- A Student Fill-in Response Sheet for the Middle School Student Guided Unit.
- The TIES Middle School "All About Evolution" Exam
- The Answer Key for the Middle School "All About Evolution" Exam
- The Amoeba Sisters Worksheet

**Which High School resources would you like?**

- The Rubric and Answer Key to the TIES High School "All About Evolution" Student Guided Unit
- A Student Fill-in Response Sheet for the High School Student Guided Unit
- The TIES High School "All About Evolution" Exam
- The Answer Key for the High School "All About Evolution" Exam
- The Amoeba Sisters Worksheet

At the bottom of the form are two buttons: "Request Documents" and "Previous".