

# Fossils

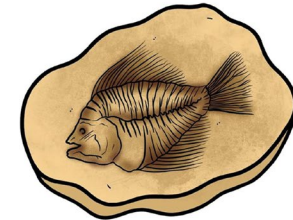
## Interactive Lesson

PRINT and DIGITAL

### Carbonized Fossil

formed when a plant or animal leaves an impression on a rock that is then filled in with carbon

- thinnest, flattest type of fossil
- also called carbon film fossil
- organisms can include: leaves, stems, flowers, and fish



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# Compatible with Google Slides and PPT

## How are fossils formed?

- The soft parts of organisms may decay and the harder parts, **protected from erosion and decay**, undergo a chemical change. Ultimately, they are preserved and **become rock**.
- There are very **specific conditions** that fossils to be all organisms.



A key is also included!

Drag the circle to the correct response.

Organisms can become trapped and preserved in all of the following except:

- water
- rock
- ice
- tar



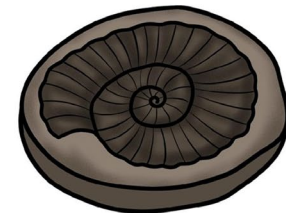
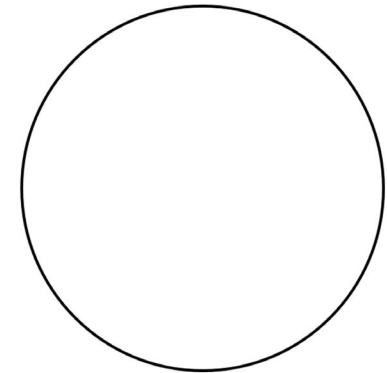
# Drag and Drop

Drag the circle to the correct response.

Fossils are commonly  
found in:

- the core
- metamorphic rock
- sedimentary rock
- trees

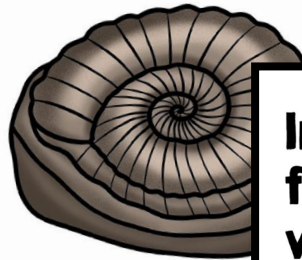
Drag a circle  
around the  
example of a mold  
fossil.



# Type in the Text Box

In the text box below, describe why the picture is labeled the way that it is.

Type here.



Cast Fos

In the text box below, explain why fossils are valuable to scientists and what you think they can be used for.

Type here.

# and more!

**Last Slide**

### Anticipation Guide

Before completing the lesson, read the statements below, think about your prior knowledge, and put an x in the box for true or false (column 1 and 2). As you go through the lesson, look for evidence to support or refute your ideas. You will revisit this anticipation guide after completing this lesson. For now, only complete columns 1 and 2.

True	False	Statement	True	False	Evidence
		Bones, shells, and imprints are all examples of fossils.			
		Scientists believe that the top layers of sedimentary rock are the oldest.			
		The majority of organisms turn into fossils.			
		Mold Fossils are created when an organism is buried under leaves and leaves.			
		Petri			
		Trace fo part of			
		A true-			
		Trace			
		True f			
		Scient Earth			

## Complete the following four corners vocabulary activity.

Using the drawing tools, create an illustration of fossil formation. You may also copy and paste an image from another source.

Write a sentence using the term fossil formation.

Type here.

**Fossil Formation**

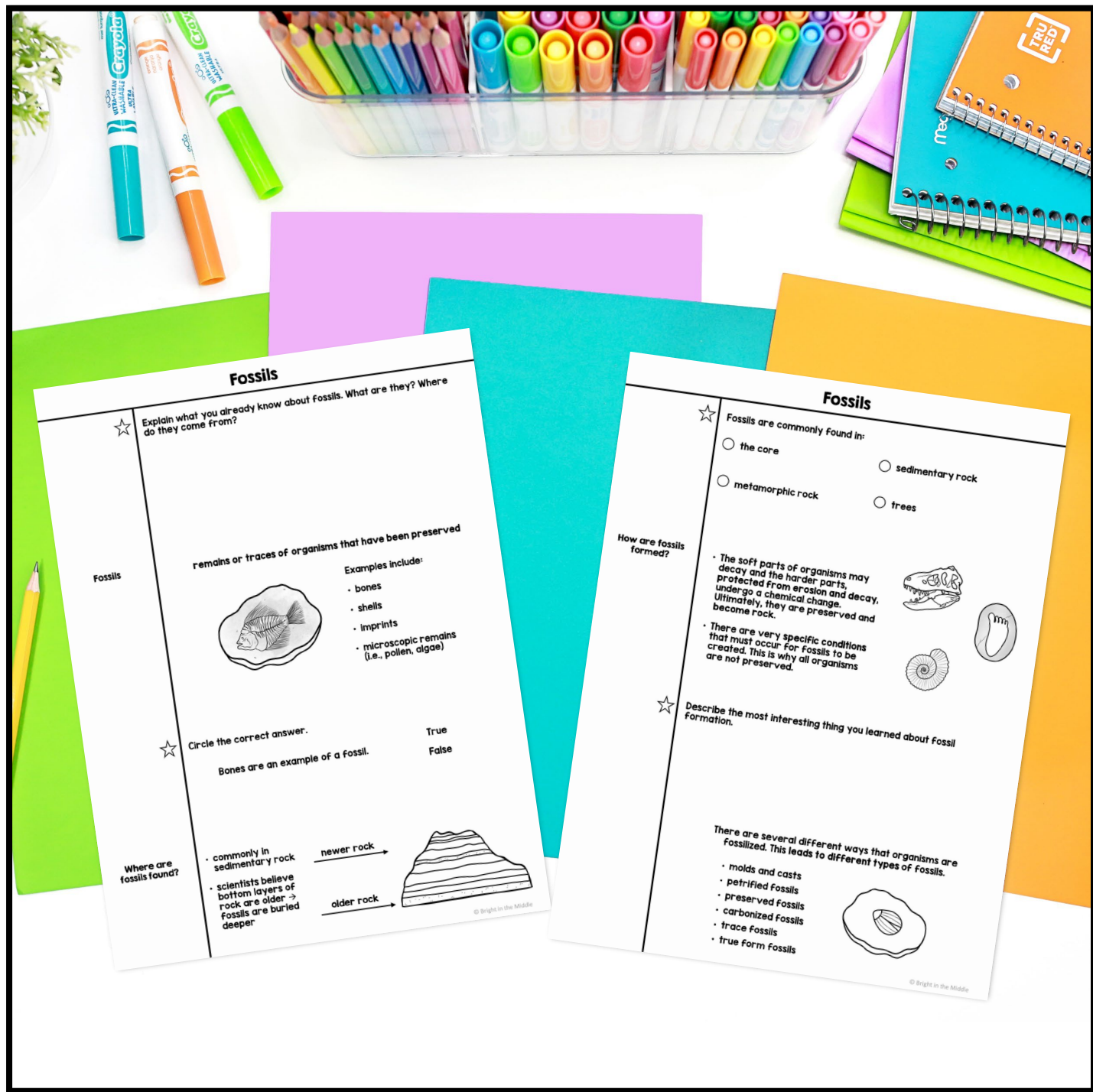
Write the definition of the term fossil formation.

Type here.

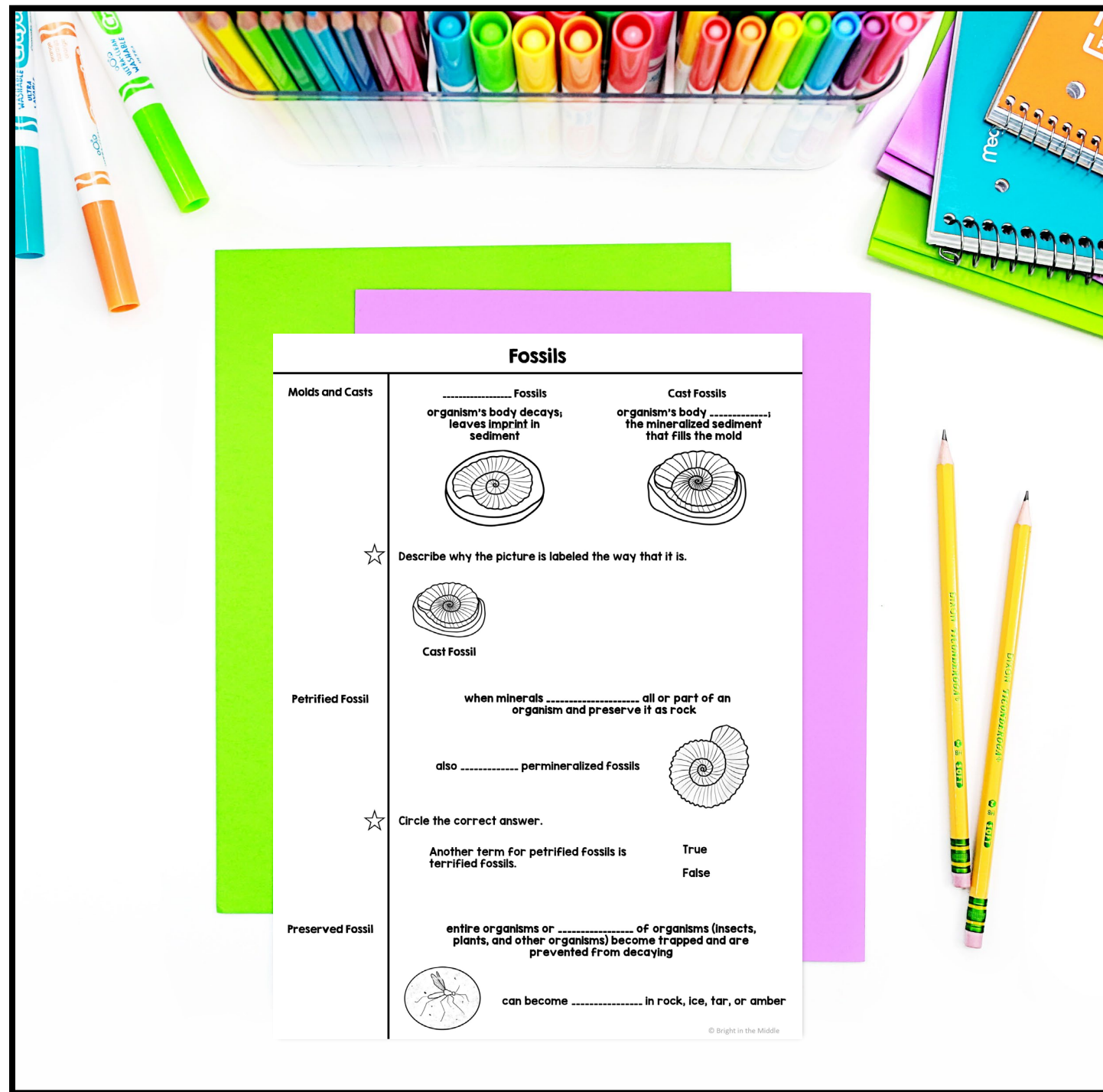
Write some words related to the term fossil formation.

Type here.

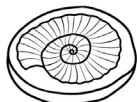
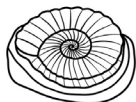



**A paper version is also included with interactive activities embedded.**



**Guided  
Cornell  
notes are  
included as  
well!**



**Fossils**

Molds and Casts	..... Fossils organism's body decays, leaves imprint in sediment	Cast Fossils organism's body ..... the mineralized sediment that fills the mold
		
	★ Describe why the picture is labeled the way that it is.	
		
	Cast Fossil	
Petrified Fossil	when minerals ..... all or part of an organism and preserve it as rock	
	also ..... permineralized fossils	
	★ Circle the correct answer.	
	Another term for petrified fossils is terrified fossils.	True False
Preserved Fossil	entire organisms or ..... of organisms (insects, plants, and other organisms) become trapped and are prevented from decaying	
		can become ..... in rock, ice, tar, or amber

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# Ways to Use Digital Interactive Lessons

Science digital interactive lessons are a great way to teach or review science content with your students for many reasons.

They are fun. They are engaging. Another reason, which I think is the most important, is that they help decrease the cognitive load. The way that digital interactive lessons are set up is first, a little bit of content, and then practice with that content, and repeat the process.

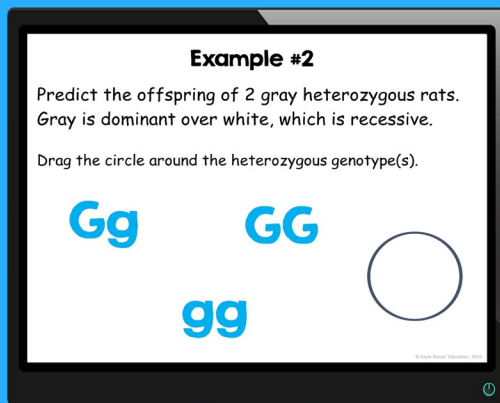
Students can digest small chunks of information a little at a time, apply that information, and then learn more! This will help keep their attention.

So, now, what are some ways that you can use them in your middle school science classroom?



# Individual Learning

One way that interactive lessons can be used in the classroom is just for individual learning. These are digital lessons, so students can pull up the lesson on their computer, either via Google Classroom, Microsoft Teams, PowerPoint, or whatever you use in your classroom.



Students read through the lessons themselves and **work through the practice** at their own pace.

The benefits of doing this are that students can work at their own pace and you, as the teacher, can walk around the classroom as they are learning to answer any questions that they have. In addition, you can see what that particular student is learning. As you walk around the room and view their work, you can use it as a formative assessment to see if they are understanding the material.

You can also bump it up a notch. Since students will be working using the computer, you can embed related YouTube videos in the lesson for extra enrichment!

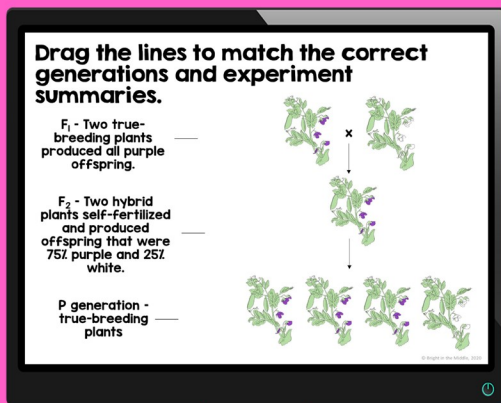
**Digital Science**  
**INTERACTIVE**  
**Lessons**  
*for*

**INDIVIDUAL LEARNING**



# Distance Learning

Digital interactive science lessons are a great tool to use for individual learning at a distance for the middle school science classroom.



Students can read through the material, and after digesting chunks at a time, they can apply the information with embedded practice slides.

**Digital Science**  
**INTERACTIVE**  
**Lessons**  
*for*

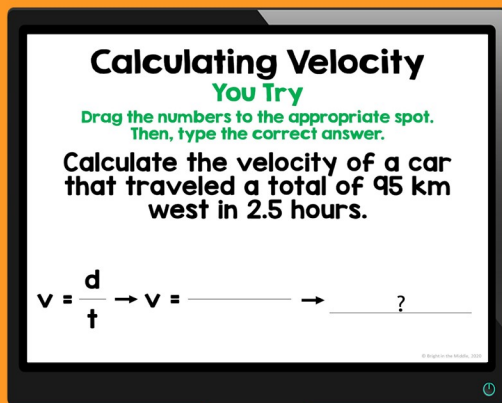
**DISTANCE LEARNING**

After completing the lessons, students can submit their work to their teacher.



# Small Groups/ Partners

This works similarly to having students working as individuals except that students have the opportunity to work with one another. I think that this an awesome approach to differentiated learning in the classroom.



**Calculating Velocity**  
**You Try**  
Drag the numbers to the appropriate spot.  
Then, type the correct answer.  
Calculate the velocity of a car  
that traveled a total of 95 km  
west in 2.5 hours.

$$v = \frac{d}{t} \rightarrow v = \underline{\hspace{2cm}} \rightarrow \underline{\hspace{2cm}} ?$$


In small groups, or in partners, students are able to read the lesson together, discuss each practice slide, and apply the information together.

I prefer this method in many ways because I believe in the power of cooperative learning. As a teacher, you still have the opportunity to walk around and help the individual students as needed, but students also have each other for support.

**Digital Science**  
**INTERACTIVE**  
**Lessons**  
*for*

**SMALL GROUPS/  
PARTNERS**



# Direct Instruction

As mentioned, digital interactive lessons are set up as a lesson with embedded practice to help decrease the cognitive load. If teachers choose to, they can pull up the lesson and teach it to their students and still take pieces of content and digest them bit by bit.



For example, when teaching about **pedigree charts**, the teacher can first discuss what a square and a circle represent in a pedigree chart.

**Digital Science**  
**INTERACTIVE**  
**Lessons**  
*for*

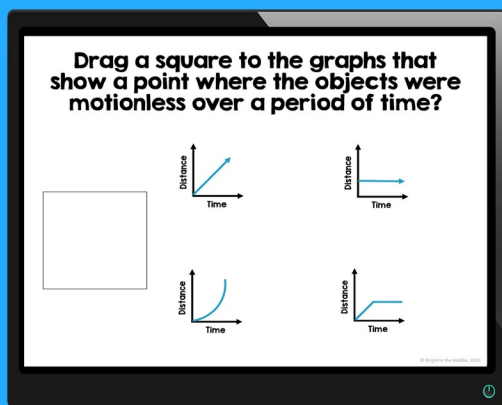
**DIRECT INSTRUCTION**

After students digest this material, the teacher can ask students to discuss how they will remember this information and then apply the information in practice.



# Science Centers

Digital interactive science lessons can be used in one of two ways for science centers. First, science centers on a particular topic. For example, say you are teaching distance-time graphs, and you are ready for students to complete science centers on this topic. You can have a center for a [digital interactive lesson](#) (make groups in Google Classroom, or another platform), [task cards](#), [story match](#), and a reading passage.



**Digital Science**  
**INTERACTIVE**  
**Lessons**  
*for*

**SCIENCE CENTERS**

Another way that you can use interactive science lessons for science centers is only using digital interactive lessons. Time to review for a [genetics](#) test? You can have stations set up where students will move around the room.

They can work through individual lessons such as Gregor Mendel and an Introduction to Genetics, Asexual and Sexual Reproduction, Mitosis and the Cell Cycle, Meiosis, Punnett Squares, Pedigree Charts, and Variation of Traits and Genetics Disorders. This route may take more than one day. It just depends on how long your classes are and how much time you can devote to review. I personally like the first approach to using digital interactive lessons as a science center.



# For ELL Students

With technology, there are so many awesome opportunities for students that do not speak English as their primary language to learn science content in schools that speak predominantly English. That goes vice versa as well. If you are trying to learn in any language you are unfamiliar with, technology is here to help!



There are many options that students can use to learn science material. As a teacher that only speaks English, you can imagine how difficult it is to teach a student that speaks another language. I'm sure there are other teachers out there with the same dilemma.

**Digital Science  
INTERACTIVE  
Lessons**  
*for*

**ELL STUDENTS**

With technology, I have been able to give my students the science lesson and have them use Google translate in order to understand what the lesson is saying. Now, I'm working on creating digital science lessons in Spanish, so that one step is taken out.



# Enrichment/ Tutoring

I know that many schools set up a time during the day just for enrichment/tutoring.



Many schools only set up this time for reading/math, but some do science too! Especially those that test in science. Interactive lessons are a great way to review standards-based science material and practice!

**Digital Science**  
**INTERACTIVE**  
**Lessons**  
*for*

**ENRICHMENT/  
TUTORING**

