

Tiered Activities

Tiered Instruction

When teachers tier assignments, they make slight adjustments within the same lesson to meet the needs of students. All students learn the same fundamental skills and concepts but through varying modes and activities. The tiers appropriately challenge students at their ability levels. The teacher's challenge is to make sure all tasks, regardless of the tier level, are interesting, engaging, and challenging. Activities and assignments can be adjusted in any of the following ways:

- Level of complexity
- Amount of structure
- Materials provided
- Time allowed
- Level of independence required
- Pacing of the assignment
- Number of steps required for completion
- Form of expression (letter, essay, report, research paper, short story, speech)

Steps:

1. Identify key concepts, skills, and essential understandings that you want all students to achieve. These elements become the basis for your on-level tasks.
2. Identify how you will cluster groups/activities. Although you can create multiple levels of tiers, keep the number of levels consistent with your group of students. Don't make three tiers if only two groups of students exist in your classroom—those students who are working at grade level and those students who are struggling, for example.
3. Select elements to tier. (See "Six Ways to Tier a Lesson" on page 9.)
4. Create your on-level tier.
5. Next, design a similar task for struggling learners. The task should make adjustments based on student readiness.
6. If needed, develop a third, more advanced activity for learners who have already mastered the basic standard or competency being addressed. Make sure the task actually requires higher-level thinking than the on-level tasks. The advanced tier shouldn't just be more of the same thing.

What Is Tiered Instruction?

Teachers use tiered activities so that all students focus on essential understandings and skills but at different levels of complexity, abstractness, and open-endedness.

By keeping the focus of the activity the same, but providing routes of access at varying degrees of difficulty, the teacher maximizes the likelihood that:

- Each student comes away with pivotal skills and understandings.
- Each student is appropriately challenged.

(Adapted from the work of Carol Ann Tomlinson and Tiered Instruction, a PowerPoint presentation from the Montgomery County Public Schools, Rockville, MD)

Tiered Instruction

Author Bruce Campbell's examples are organized from least complex to most complex (least challenging to most challenging). Keep in mind that when tiering lessons, there is no set number of tiers. There may be as few as two or as many as six tiers, according to Campbell.

Animal Farm Tiers:

1. Describe the novel's basic symbolism.
2. Explain direct correlations between the book and communism.
3. Discuss examples of current human behavior reflected in the book.

Pythagorean Formula Tiers:

1. Apply the formula to simple triangles.
2. Devise a real-life application of the formula and apply it.
3. Identify applications of the formula that are really used in the world of work.

Ancient Greece Tiers:

1. Identify the major dates, battles, and figures in the Peloponnesian Wars.
2. Explain important strategies used in the wars and the resulting effects.
3. Describe the impact the wars had on ancient Greek history.
4. Compare the Peloponnesian Wars with events in world history today.

As you review the tiers, notice that in order for students to accomplish a higher level, they must also have an understanding of the lower levels. For example, in order to compare the Peloponnesian Wars with events in today's world, students need to know the strategies used in the wars and some of the major battles.

Six Ways to Tier a Lesson

- Tier by challenge level (Bloom's Taxonomy)
- Tier by complexity (When you tier by complexity, you address the needs of students at introductory levels as well as the needs of students who are ready for more advanced work.)
- Tier by resources (When you choose materials at various reading levels and complexity of content, you are tiering assignments by resources.)
- Tier by outcomes (Students use the same materials but end products vary.)
- Tier by process (The end products are the same but the ways students arrive at those outcomes may vary.)
- Tier by product (Group by multiple intelligences or learning styles followed by assignments that fit those preferences.)

(Diane Heacox, *Differentiating Instruction in the Regular Classroom*)

Sources:

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Tomlinson, Carol Ann. *Fulfilling the Promise of the Differentiated Classroom: Strategies and Tools for ---. The Differentiated Classroom: Responding to the Needs of All Learners*. Alexandria, VA: ASCD, 1999, pages 83-87.

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Planning a Tiered Activity

Rationale and Purpose

This tool provides teachers with a format for planning tiered activities, which are designed to help students at different levels of readiness meet common KUD goals.

Directions

- Review the definition and purposes of tiered activities.
- Distribute a copy of the tool to each teacher. Tell them they will use the tool to help them design an activity that is differentiated for student readiness.
- Tell teachers they may skip Step 2 if they wish.
- Point out that Step 3 of the planner asks teachers to begin by designing an activity that would challenge their most advanced students. This may differ from how they usually plan, but encourage them to try it. When teachers plan this way, they often find that they have raised the challenge level for all students while providing appropriate scaffolding.
- Remind teachers that they are not limited to three tiers. For a particular set of objectives or a particular set of students, two or four tiers may be more appropriate.
- Ask teachers to share their work with another teacher or group of teachers to give and receive feedback on their work.

Tips and Differentiation Options

- Some teachers will work better on their own; others will prefer to work with colleagues who teach the same or a similar curriculum. Allow them to choose.
- If teachers prefer to use a different format for their planning, let them. The format doesn't matter as much as ensuring that they begin with identifying their objectives and that these objectives include Understand goals or the equivalent.
- Novice differentiators will probably find it easier to differentiate an activity in a familiar area of the curriculum that they particularly enjoy teaching, especially if the activity has been successful in the past.
- Suggest that teachers who have experience with differentiation try to plan a differentiated activity in a subject or topic area that is less familiar to them.
- Step 2 is optional. This step is a helpful start for some teachers, but it may lock others into a preconceived way of designing the activity. Watch for this, and make appropriate changes to the planner.
- If possible, collect the work to analyze it and give feedback.

What to Look For

- Check that teachers have identified an appropriate KUD plan and that any understandings truly represent “big ideas.”
- Make sure that each version of the activity leads students to increased competency with activity goals.
- Make sure that each version of the activity will feel respectful to students.

Planning a Tiered Activity

Activity

Step 1: Devise KUD goals (what you want students to know, understand, and be able to do as a result of the lesson or activity).

KNOW (facts, dates, definitions, rules, people, places)	UNDERSTAND (big ideas, principles, generalizations, rules, the “point” of the discipline or topic within the discipline) <i>I want students to understand that . . .</i>	BE ABLE TO DO (skills of literacy, numeracy, communication, thinking, planning, production, etc.; start with a verb such as: describe, explain, show, compare, synthesize, analyze, apply, construct, or solve)

Step 2: Determine your usual starting point (optional).

Jot down what you would typically do in this lesson if you were **not** going to differentiate. (Sketch out the steps you would follow or the assignment you would give.)

Planning a Tiered Activity

Activity (Cont.)

Step 3: Write differentiated plans.

Think about the most advanced student you have ever had. Design an activity (clearly related to your KUD goals) that would stretch this student.	Figure out ways to scaffold the task so that students at or near grade level can be successful with the task. Make sure this version still matches your KUD goals.	Figure out ways to further scaffold the task so that students who may struggle with the task can be successful. Double-check that you have not watered down the task to the point that students miss out on the KUD goals.

Step 4: Check your KUD goals.

- Double-check that every version of the activity leads students to increased competency with activity goals. If not, adjust as needed.
- Double-check that every version of the activity will feel respectful to the student for whom it is designed. If not, adjust as needed.

Planning a Tiered Activity

Activity (Cont.)

Step 5: Assess your plans.

- Where might you run into trouble in carrying out the differentiation in this lesson?
- How will you give directions for each version of the task? Will you color-code task cards or assignment sheets? Audio-record directions?
- Will you tell students the lesson is differentiated? If so, how? If not, why not?
- What will you do if some students or groups finish early?
- If necessary, how will you get students into groups efficiently? How will you get them back to a whole-class configuration?

How Credit Cards Work

Credit cards are plastic cards that are approximately 3 inches by 2 inches in size. Both businesses and banks issue credit cards to people. The owner of the credit card is called a cardholder.

Credit cards were first used in the United States in the 1920s. Back then, businesses like oil companies and hotel chains had their own credit cards that they issued to customers. If a person needed to stay in a hotel, they would use the credit card issued to them by that hotel. The first universal credit card was introduced by Diners Club Incorporated in 1950. American Express issued its first card in 1958. Visa and MasterCard are both bank cards. Banks pay the merchants right away for the purchases and services accumulated on the credit cards. At the end of the billing period, the cardholder pays the bank back.

Credit cards can come in handy. Many people use credit cards as a source of identification. If someone wants to buy something online, they usually pay with a credit card. If someone needs to rent a car, they must show a credit card to the car rental agency. The cardholder can use it to buy something without having to pay cash. Some cardholders use them when they don't have the cash at that moment to pay for a service or good. This way, cardholders have almost a month before they have to pay the credit card companies back for the services or goods that they purchased.

Later, a bill comes in the mail that shows how much has been purchased. The bill also lists a minimum payment that must be made. The cardholder has one of two choices: he or she can pay either the entire amount on the bill or part of the amount on the bill. The cardholder must pay at least the minimum payment on the bill. If the entire amount on the bill is not paid in full, then the cardholder is charged interest, which is called a finance charge.

Credit cards have different interest rates. Interest rates can be 5, 12, or even 24 percent. The higher the interest, the more money a cardholder will owe in finance charges. Ideally, a cardholder wants a card with a low interest rate. If the interest rate is high and a cardholder does not pay off the bill in full, then a cardholder will pay much more for the goods or services than what they actually cost at the time of purchase.



How Credit Cards Work

Credit cards are plastic cards that are about 3 inches by 2 inches in size. Businesses and banks give credit cards to people. The person who owns the credit card is called a cardholder.

Credit cards were first used in the United States in the 1920s. Back then, oil companies and hotel chains had their own credit cards. They gave these credit cards to people. If a person needed to stay in a hotel, they would use the hotel's credit card. The first common credit card was introduced by Diners Club Incorporated in 1950. American Express issued its first card in 1958. Visa and MasterCard are both bank cards. Banks pay the businesses for the goods and services. When the bill comes, the cardholder pays the bank back.

Credit cards can come in handy. Many people use credit cards as a source of ID. If a person wants to buy an item online, he or she can pay with a credit card. If someone needs to rent a car, he or she shows a credit card to the car rental business. The cardholder can use a credit card instead of paying cash. Some cardholders use them when they don't have enough cash. This way, cardholders have almost a month before they have to pay the credit card companies back.

Later, a bill comes in the mail. The bill shows how much has been purchased. The bill also shows a minimum payment that must be made. A minimum payment is the lowest payment that a cardholder can pay. The cardholder has a choice. He or she can pay all of the bill or some of the bill. At the very least, the cardholder must pay the minimum payment on the bill. If all of the bill is not paid in full, then the cardholder is charged interest. This is called a finance charge.

Credit cards have different interest rates. Interest rates can be 5, 12 or 24 percent. The higher the interest, the higher the finance charges will be. It is best if a cardholder gets a card with a low interest rate. Sometimes the interest rate is high. If a cardholder does not pay the bill in full, then he or she owes more because of the interest.



Name _____

Calculating the Interest Rate



1. Choose any items that you want to purchase for \$1,000. List them and their prices on the lines below.

2. Let's imagine that you used a credit card to purchase these items. If the APR is 18%, calculate the interest for one month.

3. Use the *Interest Rate Chart* to calculate the interest each month for 1 year if you paid only \$20 a month. Fill out your chart.

4. How does this relate to the debt problem in our society? Write a paragraph that explains your answer.

5. In the space below, make a 5-point strategy to keep families in your community from overspending.

Name _____



Calculating the Interest Rate

1. Choose any items that you want to purchase for \$1,000. List them and their prices on the lines below.

2. Let's imagine that you used a credit card to purchase these items. If the APR is 24%, calculate the interest for one month.

3. Use the *Interest Rate Chart* to calculate the interest each month for 1 year if you paid only \$20 a month. Fill out your chart.

4. Add the interest for each month to get the total amount of interest you paid for the year. How much do you still owe to the credit card company at the end of the year?

5. Was this purchase worth the amount of interest you had to pay? Why or why not? Use the lines below to write a letter to a friend about these purchases that explains your answer.

Name _____

Calculating the Interest Rate



1. Choose any items that you want to purchase for \$1,000. List them and their prices on the lines below.

2. Let's imagine that you used a credit card to purchase these items. If the APR is 12%, find the interest for one month. (Divide the APR by the number of months in a year.)

3. You make \$20 payments each month. Fill in the *Interest Rate Chart*.

4. Add the interest for each month to get the total amount of interest you paid for the year. How much do you still owe to the credit card company at the end of the year?

5. What are some good uses for credit cards? What are some bad uses of credit cards? Fill in the T-chart below to show your answers.

Good Uses	Bad Uses

Name _____

Calculating the Interest Rate



1. Define these words with a partner: *annual percentage rate (APR)*, *interest*, and *purchase*.
2. You make a \$20 payment each month. Ask your teacher for the annual percentage rate (APR). Write it here.

3. What is the interest rate for one month? (Divide the APR by the number of months in a year.)

4. Add the interest for each month of the year. This is the interest you paid for the year. How much do you still owe the credit card company at the end of the year?

5. In the space below, make an advertisement that tells people how much they would spend in interest on a purchase of \$1,000.

Name _____

Interest Rate Chart

Month	Balance	Interest charge at _____ APR	Balance plus interest	Your Payment	Remaining Balance
January	\$1,000	0	\$1,000	\$20	\$980
February	\$980	\$9.80	\$989.80	\$20	\$969.80
March	\$969.80	\$9.70	\$979.50	\$20	\$959.50

Name _____

Igneous Group



1. Observe the pictures of igneous rocks your teacher has given you. How do the rocks show what forces, temperatures, and minerals created them?

▶ forces: _____

▶ temperatures: _____

▶ minerals: _____

2. Next, make inferences based on these observations. Write a brief summary that tells how igneous rocks are formed.

3. Now, read the background information about igneous rocks. After reading the information with your group, answer the following questions:

▶ Describe the formation of igneous rocks.

▶ Based on the background information, were your inferences above correct?

▶ List three non-attributes of igneous rocks.

▶ List at least one thing you did not know about igneous rocks before today.

▶ Where do you see igneous rocks being used in today's world?

4. Complete the igneous rock portion of the *Rock Comparison Chart*. Be prepared to share these answers and other information about igneous rocks with the class.

Name _____



Metamorphic Group

1. Observe the pictures of metamorphic rocks your teacher has given you. What kinds of forces, minerals, and temperatures do you think created these rocks?

▶ forces: _____

▶ minerals: _____

▶ temperatures: _____

2. Now, read the background information about metamorphic rocks.

3. After reading the information with your partner, answer the following questions:

▶ Describe the formation of metamorphic rocks.

▶ Compare your observations to the background information. Were there any similarities?

▶ List two attributes and one non-attribute of metamorphic rocks.

▶ What conclusion can you make about the type of force involved in creating a metamorphic rock?

4. Complete the metamorphic rock portion of the *Rock Comparison Chart*. Be prepared to share these answers and other information about metamorphic rocks with the class.

Name _____



Sedimentary Group

1. Read the background information about sedimentary rocks with your teacher.
2. Look at the pictures of sedimentary rocks. Talk about your answers to these questions:
 - ▶ What forces could have created the sedimentary rocks? _____

 - ▶ What temperatures could have created the sedimentary rocks? _____

 - ▶ What minerals could have created sedimentary rocks? _____

3. Answer the following questions:
 - ▶ How are sedimentary rocks formed?

 - ▶ List two attributes of sedimentary rocks. What is one non-attribute?

 - ▶ Were your observations above correct? Explain your answer.

 - ▶ What is one interesting fact about sedimentary rocks?

4. Complete the sedimentary rock portion of the *Rock Comparison Chart*. Be prepared to share these answers and other information about sedimentary rocks with the class.

Name _____

Rock Comparison Chart

	Sedimentary	Igneous	Metamorphic
How they are formed			
Attributes			
Examples			
Interesting fact			

Igneous Rocks

Background Information



There are many different kinds of rocks in an amazing variety of shapes, sizes, colors, and textures. Regardless of those differences, all rocks have some characteristics in common. Rocks are made naturally of groups of smaller particles and minerals that are stuck together. Minerals are naturally occurring substances that Earth or organisms on Earth produce. They form crystals and are made of specific chemicals.

Factories use different processes to make things. They use heat, water, and force from machines to form their products. Earth is like a giant rock factory. Wherever you are right now, if you could dig down far enough, you would find rocks being made deep inside the earth.

Rocks can be divided into three rock types: igneous, sedimentary, and metamorphic. These groups reflect the different conditions under which rocks are made.

Igneous rocks form from Earth materials that have melted to a liquid called magma. Magma usually forms deep beneath the earth's surface where the temperature is in the hundreds or thousands of degrees.

Some types of magma are thin and runny like water. Other magmas are thick and gooey like molasses. Magma often gets pushed toward the earth's surface, where it squeezes through cracks and holes in solid rocks. Igneous rocks can be found near volcanoes or areas formed by volcanoes. Almost all the islands of Hawaii are made up of igneous rocks.

All igneous rocks start deep in the earth as hot, molten magma. If the magma cools and hardens inside Earth, the rock is called an intrusive igneous rock. If the rock cools outside Earth, then it is called an extrusive igneous rock.

Intrusive igneous rocks cool slowly and have large crystals. Granite is one example of this. Extrusive rocks cool off quickly, and the crystals that form are very small. Because they cool so quickly, air is often trapped inside, making extrusive igneous rocks very porous and often very light. Pumice is one example of this.

Metamorphic Rocks

Background Information



There are many kinds of rocks. They come in a great variety of shapes, sizes, colors, and textures. Rocks also have some things in common. They are made naturally of groups of smaller particles and minerals that are stuck together. Minerals are naturally occurring substances and are made by Earth or by organisms on Earth. They are made of specific chemicals.

Factories use different processes to make things. They use heat, water, and force from machines to form their products. Earth is like a giant rock factory. Wherever you are right now, if you could dig down far enough, you would find rocks being made deep inside the earth.

Rocks can be divided into three rock types: igneous, sedimentary, and metamorphic. These groups reflect the different conditions under which rocks are made.

Deep underground there is high pressure and heat. When rocks get buried, they begin to change over millions of years. Heat and pressure can transform rocks such as sandstone or granite. They might liquefy and turn into magma. They might melt halfway and then cool down and become solid again. Since they did not melt all the way, they are not igneous rocks. They are metamorphic, which means that they have changed.

The pressure and heat from inside Earth changes sedimentary, igneous, and even metamorphic rocks into new metamorphic rocks. Because of this, metamorphic rocks are sometimes called recycled rocks. Limestone, a sedimentary rock, is changed into marble. Sandstone, also a sedimentary rock, is changed into the metamorphic rock, quartzite. And shale, an igneous rock, is changed into slate.

Sedimentary Rocks

Background Information



There are many kinds of rocks. Rocks have many shapes and sizes. They have many colors and textures. Rocks also have some things in common. They are natural. They are made of smaller particles and minerals that are stuck together. A mineral is a thing found in nature. They are made by Earth. They can also be made by living things on Earth.

Factories use many processes to make things. They use heat, water, and force. They use machines to form their products. Earth is like a giant rock factory. No matter where you are, you could dig down deep into the earth. You would find rocks being made there.

Rocks can be sorted into three rock types. Some rocks are igneous. Some rocks are sedimentary. The rest of the rocks are metamorphic.

On Earth's surface, rocks are changed by weather. The rocks are hit with rain and ice. They also get hit by snow and wind. Rocks can be changed by chemicals. Plants and animals can also change rocks. Heat or cold can make them change, too.

These things cause rocks to break down. They fall apart into large and small pieces. Each piece is called a particle. The pieces can pile up in layers. This is called sediment. They are deposited as strata. Strata are layers of rock and soil in the earth.

When water flows it can have lots of power. It can pick up these sediments. It moves them from place to place. Then, the rock particles are dropped off. Other sediments can cover them. This is common in oceans and lakes. They can be buried under lots of layers of sediment. That much rock is very heavy. It puts a lot of pressure on the bottom. The particles get squeezed. They form new rocks. They are called sedimentary rocks. Limestone and sandstone are two kinds of sedimentary rocks.