9th Grade Lesson Plan Packet 4/6/2020-4/10/2020



Remote Learning Packet

NB: Please keep all work produced this week. Details regarding how to turn in this work will be forthcoming.

April 6-10, 2020

Course: 9 Biology

Teacher(s): Mr. Malpiedi michael.malpiedi@greatheartsirving.org Ms. Oostindie megan.oostindie@greatheartsirving.org

Weekly Plan:

Monday, April 6 p. 326 - 327, up to ISOLATION AND SPECIATION Etymologies: species, morphology Goethe - On Morphology

Tuesday, April 7

Causes of Speciation - p. 327-329

 \Box Notes and key vocab

Urenn diagram exercise

Wednesday, April 8

Case study - 15.3, p. 308-310

□ Notes and key vocab

Chart the three: convergent, divergent, and coevolution. Identify given examples of each of the three.

Thursday, April 9

Friday, April 10

Statement of Academic Honesty

I affirm that the work completed from the packet is mine and that I completed it independently.

I affirm that, to the best of my knowledge, my child completed this work independently

Greetings, Biology students. I hope that as the walls of your homes become more and more familiar, you are exploring new, unknown, and beautiful things in your studies. We miss you very much. Monday mornings are just not the same without hearing your stories, and it's too bad we don't get to explore these wonderful, fundamental ideas together in person. "What makes a living thing different from another one?" What a question!

This week: be sure to establish a set study place and do your best to maintain a daily routine. In your study place, there should not be a phone or other device. Eliminate distractions so you can focus. Conversation with other students, even about school, ought to wait until you give your studies a worthy effort on your own. After all, your study is up to you. Shoulder your noble burden proudly, and look ahead to its many benefits!

Monday, April 6

- 1. Read p. 326-327 in the textbook, up to ISOLATION AND SPECIATION. Write down the name and a brief summary of all the key ideas in each section, in the order they are found in the text. As you come upon them, copy down and define all the bold vocab words.
- 2. At the end of your notes, copy the following definitions with their etymologies:

species (n.)

late 14c., from Latin *species* "a particular sort, kind, or type" (opposed to *genus*), originally "a sight, look, view, appearance," related to *specere* "to look at, to see, behold,"

1560s as "distinct class (of something) based on common characteristics." Biological sense is from c. 1600.

Morphology (n.)

1824 in biology: "science of the outer form and inner structure of animals and plants," from German *Morphologie* (1817); **morpho-** "shape" + **-logy** "study of." In philology, "science of structure or forms in language." General sense of "shape, form, external structure or arrangement"

3. Read and annotate the two-page section called "The Purpose Set Forth" from the wonderful "On Morphology" by J.W. von Goethe. Enjoy!

Tuesday, April 7

- 1. Read p. 327-329 in the textbook, starting with ISOLATION AND SPECIATION. Write down the name and a brief summary of all the key ideas in each section, in the order they are found in the text. As you come upon them, copy down and define all the bold vocab words.
- Make a full-page Venn diagram with a header on top, and plenty of room in each section (an example is attached). Label one circle Reproductive Isolation, and the other Geographic Isolation. Write an example (real or imagined) in each of the three sections of the Venn diagram. The

example on either side should be unique to its type of isolation, and the example in the middle should be one where both types of isolation occur.

Wednesday, April 8

- 1. Read p. 308-310 in the textbook. As you read, write down the name and a brief summary of all the key ideas in each section, in the order they are found in the text. As you come upon them, copy down and define all the bold vocab words.
- 2. Make a chart like the one below, and write out examples of each type of evolution cited in today's reading:

Type of Evolution	Example from Text
Convergent Evolution	
Divergent Evolution	
Coevolution	

Thursday, April 9

Species Survey

Take a 15 minute walk (or as long as you have time for) outside, preferably in a grassy, shrubby, or wooded area. Bring something to write with and something to write on.

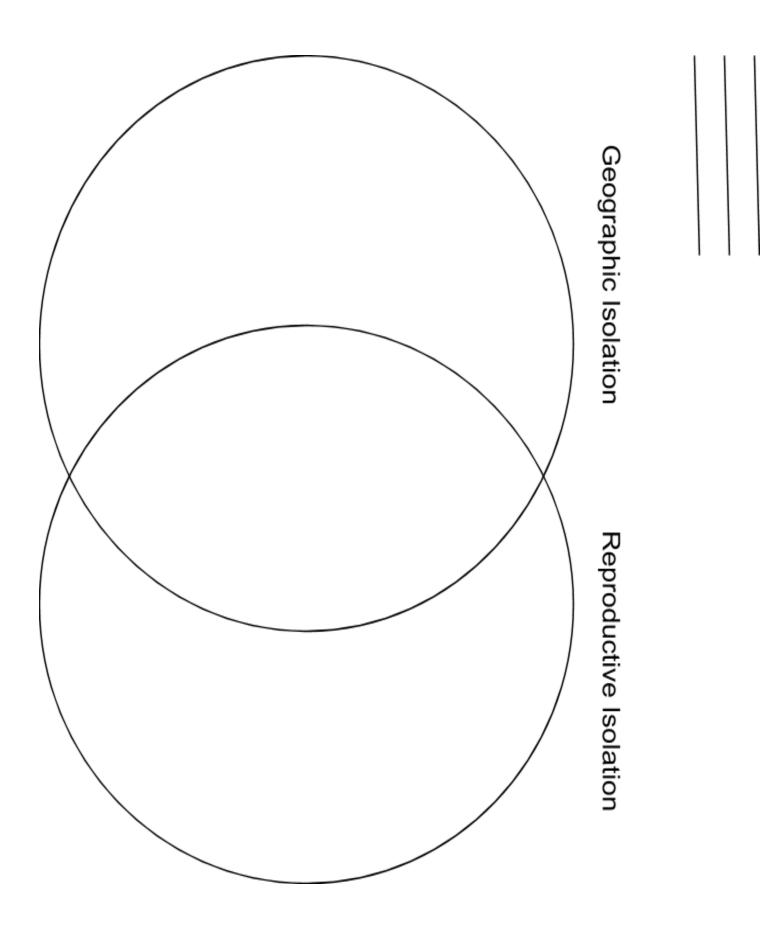
Observe and list as many different species as you can: including birds, dogs, insects, arachnids, plants, moss, lichens, mold, etc.

Describe the form (morphology) of each species.

Defend your distinctions for each species, especially for similar-seeming species. Why is this one different from the other. Even if it seems obvious to your eyes, write it down in a way that is clear for your reader.

Take a note of as many as you can, but if you can only describe and defend 4-6 species, that's quite alright.

If you have the time, keep going. Enjoy it! Go find as many species as you like.



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April 6-10, 2020

Course: 9 Geometry Teacher(s): Mr. Mooney sean.mooney@greatheartsirving.org

Weekly Plan:

Monday, April 6 Read Book IV Definitions, and IV.1 enunciation IV.2, two-column and construction

Tuesday, April 7
IV.3 two-column and construction

 \Box IV.4 construction

Wednesday, April 8

- □ IV.5 construction (no two-column/proof)
- □ IV.6 construction (no two-column/proof)
- □ IV.7 construction (no two-column/proof)
- ☐ IV.8 construction (no two-column/proof)
- □ IV.9 construction (no two-column/proof)

Thursday, April 9
Read about the Golden Ratio
Construct II.11

Friday, April 10

Statement of Academic Honesty

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Parent Signature

Student Signature



Monday, April 6

Dear Students,

Last week, we ended on III.32, which will actually be the last proposition that we study together in Book III. This week, we forge ahead into Book IV. As you shall see, Book IV is entirely about constructions, so get your compass and straight edge ready!

Here is the lesson for today:

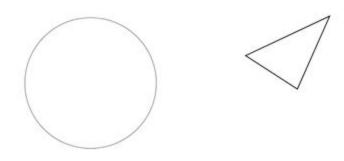
- 1) Read the Book IV Definitions 1-7 and answer the following questions in **complete sentences**. For each question, **sketch a quick diagram to aid your explanation**.
 - a. When is a triangle said to be inscribed in a circle?
 - b. When is a square said to be circumscribed about a circle?
 - c. When is a circle said to be inscribed in a triangle?
 - d. When is a circle said to be circumscribed about a square?
- 2) Read the enunciation for IV.1. You do not need to do two-column or a construction for this, but you should understand what is being constructed.
- 3) Read IV.2 and put into two-column.
- 4) Then, give yourself a circle and a triangle, like the ones below and perform the construction with compass and straight edge. Be sure to show *all necessary construction marks*. For the construction, you may give yourself the center (so that your construction does not become too crowded). Also note that the construction of the touching line (tangent) is done using III.16.Porism--all that you need to do here is draw in a radius and construct a perpendicular to it where it touches the circumference of the circle.

Tuesday, April 7

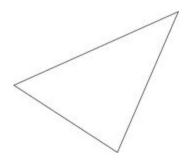
You will notice, in today's lesson, a pattern beginning to develop. Yesterday, you saw how a line was fit into a given circle (IV.1) and then you inscribed a triangle in a given circle (IV.2). Today, you will circumscribe a circle about a given circle (IV.3), and then, in a given triangle, you will inscribe a circle (IV.4). (What do you think will come next?)

Today's lesson is very straightforward:

- 1) Read IV.3 and write it out in two-column.
- 2) Then, give yourself a circle and a triangle like the ones below, and perform the construction with a compass and straight edge. Be sure to show *all necessary construction marks*. Again, to keep the construction clean, you may give yourself the center of the circle.



- 3) Next, read IV.4. You do not need to write it in two-column.
- 4) Then, give yourself a triangle like the one below, and perform the construction with a compass and straight edge. Be sure to show *all necessary construction marks*. NB: It is difficult to get this construction to *look* right. The slightest imprecisions in your angle bisections or perpendicular construction could cause the circle to either fall short of or overshoot the sides of the triangle, so do not be discouraged if this happens to you--just make sure that you have done the steps right and know that it works *in theory*, if not on your paper. If you *did* get it to look right, you can be very proud of yourself for an excellent construction!



Wednesday, April 8

Today, we will be moving at high speeds, covering a record five propositions in a single day. To achieve this goal, we will focus solely on construction, skipping over all proofs. While I encourage you to read the proofs (or, even better, to try to prove them yourself) if you are interested and have time for it, I will not require it, nor will I hold you accountable for the proofs in any way. What I am looking for here is mastery of the actual constructions with compass and straight edge.

Here is the plan:

- Perform the IV.5 construction. (Notice in this proof that Euclid shows the three possible cases. This is mostly for the sake of the *proof*, and does not affect the construction. To keep it simple, you only need to read the first case. Or, even simpler, recall how you described a circle through three points--is this any different?)
- 2) Perform the IV.6 construction with compass and straight edge, making sure to show all construction marks.
- 3) Perform the IV.7 construction with compass and straight edge, making sure to show all construction marks.
- 4) Perform the IV.8 construction with compass and straight edge, making sure to show all construction marks.
- 5) Perform the IV.9 construction with compass and straight edge, making sure to show all construction marks.

Thursday, April 9

Today we are going to jump into the middle of Book II, to proposition 11. Strange, I know, just trust me. We are going to need it for the coming propositions in Book IV. This proposition, II.11, is the construction of the so-called "Golden Ratio." For today, I would like you to do three things:

- 1) Read the two-page explanation that I have written about the Golden Ratio (below).
- 2) Perform the II.11 construction with compass and straight edge, making sure to show all construction marks.
- 3) Use the remaining time to finish any work that you did not complete from the rest of the week.

The Golden Ratio:

We do not yet have the tools *fully* to understand and appreciate the beauty and significance that mankind has found in this ratio for thousands of years, and hopefully we will be able to come back to it once we do (after Books V and VI, which deal with ratio in general); for now, we will do our best to understand it as best we can.

Proposition II.11 is the construction of the Golden Ratio. In it, you are given a line AB

Α______Β

and you are asked to cut it such that the rectangle contained by the whole and one part is equal to the square on the remaining segment.

That is rather difficult to understand, so let's look at the diagram:

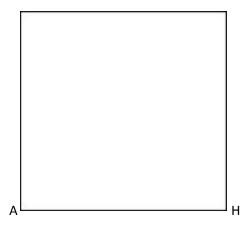
We want to cut it at the exact point H

Α_____ Β

Such that the rectangle contained by AB and HB (imagine drawing a rectangle with length AB and width HB)

A B

is equal in area to the square on AH.

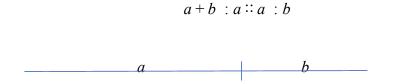


As you will see in Books V and VI, this equality is logically equivalent to the following proportion:

As we will learn in Books V and VI, a ratio is something like a comparison in size; and a proportion is an equality of ratios.

So the proportion above essentially means that the whole AB compares to the part AH, in the same way that the part AH compares to the part HB. If a line has been cut in exactly the right place for this to be true, it has been cut in the Golden Ratio. II.11 is the construction that enables you to cut the line at exactly this place.

Usually the Golden Ratio is stated like this:



The whole line (a+b) has the same relation in respect to larger part (a)

as the larger part (a) has to the smaller part (b).

Mankind has marveled for thousands of years over this perfect ratio. And it has not just been the

mathematicians. Artists have found that this ratio is the most beautiful ratio there is, and have painted their masterpieces on canvasses whose sides are in the Golden Ratio. The Parthenon, a famous temple built by ancient Athenians, has been famously found to be filled with parts that are in the Golden Ratio to one another. Scientists, too, have discovered this ratio again and again in the natural world, most famously perhaps in the beautiful shell of a nautilus. Indeed, this ratio, as mankind has discovered more and more about it, has become more and more mysterious and wondrous, earning it the name "Golden Ratio" and even "*Divine* Section."



Next week, you will see what this golden or divine ratio makes possible for us in Book IV.

<u>Given</u>:

____:

<u>To Prove:</u>

Statements	Reasons
1	1.
2	2.
3	3.
4	4.
5	5.
6	6.
7	7.
8	8.
9	9.
10	10.
11	11.
12	12.
13	13.
14	14.
15	15.
16	16.
17	17.
18	18.
19	19.
20	20.

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April 6-10, 2020

Course: Humane Letters 9

Teacher(s): Mr. McKowen (robert.mckowen@greatheartsirving.org)

Mr. Mercer (and rew.mercer@greathearts irving.org)

Mrs. Hunt (natalie.hunt@greatheartsirving.org)

Weekly Plan:

Monday, April 6

□ Read and annotate William Faulkner's "Acceptance Speech for the Nobel Prize for Literature" (*Documentary History* 424-425).

Read and annotate Brown v. Board of Education (Documentary History 431-436).

☐ Write a 1 to 2 paragraph reflection on one of the two readings.

Write your name in pen on the inside cover of your copy of *The Old Man and the Sea*.

Tuesday, April 7

□ Please read and annotate John F. Kennedy's "Inaugural Address" and "Strategy of Peace" (*DHUS* 445-457).

☐ Write a 1 to 2 paragraph reflection on one of the two readings.

Wednesday, April 8

□ Read and annotate Martin Luther King, Jr. "Letter from Birmingham Jail" and "I Have A Dream Speech" (*DHUS* 462-476).

☐ Write a 1 to 2 paragraph reflection on one of the two readings.

Thursday, April 9

□ Write a five paragraph essay on one of the *DHUS* readings. See page 3 for prompts.

Friday, April 10

□ No School!

Statement of Academic Honesty

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Monday, April 6

Please read and annotate William Faulkner's Speech (424-425) and Brown v. Board of Education (431-436) in your *Documentary History of the United States* (DHUS). Then write a 1 to 2 paragraph reflection in your notebook on one of the two readings.

How to Write a Reflection:

Reflections are opportunities to "think on the page" after studying a piece of writing. It is not a summary of the material, but an investigation of a particular topic. When writing a reflection, focus on a specific moment or sentence that interests you. What are your thoughts in response to the essay/letter/speech? What questions do you have about it? How does it connect to another topic you're familiar with? What did you learn from the writing? You will cite the text at least 3 to 5 times and you may use first person. This is your chance to share what you know and write what you think.

Tuesday, April 7

Please read and annotate John F. Kennedy's "Inaugural Address" and "Strategy of Peace" (445-457) in your *Documentary History of the United States*. Then write a 1 to 2 paragraph reflection in your notebook on one of the two readings.

Wednesday, April 8

Please read and annotate the "Letter from Birmingham Jail" and "I Have A Dream Speech" by Martin Luther King, Jr. (462-476) in your *Documentary History of the United States* (DHUS). When you read these powerful pieces, keep track of the specific allusions, rhetoric, personal experiences, and tone King uses to persuade his audience. Then write a 1 to 2 paragraph reflection on one of the two readings.

Thursday, April 9

Write a five paragraph essay on one of the following three prompts. Although this essay will not undergo the same rigorous process of revision as our previous essays, remember to use the structures we have been working with this year to form your argument, and do your best to avoid errors in grammar, punctuation, and spelling.

Your paper should include a gripping **introduction**, a strong **thesis statement** that introduces an argument, clear **supporting evidence**, incisive **analysis** of quotations from the text, and an elegant **conclusion**.

Each paragraph in the body of your paper should begin with a **topic sentence** that establishes the purpose of the paragraph and end with a **concluding sentence** that provides a transition into the next paragraph.

You may hand write on notebook paper, skipping lines and using your best handwriting, or you may type. Whichever you choose, be sure to put your complete heading and a title on your paper.

- 1. What is the mission for the poet or writer that Faulkner highlights in his Nobel Prize for Literature acceptance speech? How does fear impede this mission? Reflect on the difference between humanity's ability to endure and our ability to prevail. What is the essential difference? Consider these guiding questions as you formulate a limited thesis statement. You do not need to answer every aspect of the prompt!
- 2. John F. Kennedy's inaugural address is largely focused on international relations and responsibilities. After analyzing what he says to American citizens, to citizens of other nations, and to other nations themselves, answer this question: Is there anything that unites his vision of the responsibilities each of these groups bear? In other words, what do you see as a common element in his perception of individual and national responsibilities?
- 3. What is the essential argument in *The Birmingham City Jail "Unwise and Untimely" Letter* and how does Martin Luther King Jr. effectively persuade his audience? Please emphasize one (or two or three) of the following themes in your essay: just and unjust laws, freedom, time, race, love, oppression, extremism.



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April 6-10, 2020 Course: 9 Latin III Teacher(s): Mr. Bascom john.bascom@greatheartsirving.org Supplemental Link: <u>CLC Unit 4 Dictionary</u>

Weekly Plan:

Monday, April 6

Go over *About the language 1: fearing clauses*.

Carefully Review this list of subordinate subjunctive clauses:

Complete 1-5 from the *Uses of the subjunctive* worksheet.

Tuesday, April 7

Briefly review *About the language 1 & Types of Subjunctives* from yesterday.

Complete 6-11 from the *Uses of the subjunctive* worksheet.

Complete the *Sparsus says to Polla that*... worksheet

Wednesday, April 8

Complete the *Pliny and Cicero write to their wives* worksheet.

Thursday, April 9

Reread *heredes principis* I & II.

Time permitting, review stage 38 vocabulary

Friday, April 10

Statement of Academic Honesty

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Monday, April 6

- 1. Go over *About the language 1: fearing clauses*. Specifically:
 - a. Read carefully the example sentences and the explanations for 1 & 2
 - b. Write translations for sentences a-d on looseleaf
- 2. Carefully Review this list of subordinate subjunctive clauses:

Types of Subordinate Subjunctive Clauses

- **a.** cum clause : cum 'when' : cum clauses describe the time.
- *cum rex exiisset, Salvius milites ad se vocavit :* when the king had left, Salvius called the soldiers to himself
- **b.** Indirect question
- *centurio nesciebat quis clamorem audivisset :* the centurion did not know who had heard the clamor.
- c. Purpose clause ut 'so that' ne 'so that...not'
- *deinde ego ad patrem redii ut rem explicarem :* then I returned to my father so that I might explain the matter.
- *in fossa latebam ne hostes me conspicerent :* I was lying in the ditch so that my enemies might not see me.

Purpose clause with the relative pronoun & ubi

- *femina servum misit qui cibum emeret :* the woman sent the servant in order that he might buy food.
- *locum quaerebamus ubi staremus :* we are seeking a place where we might be able to stand.
- d. Indirect command with ut 'so that', 'to' ne 'so that...not', 'to...not'
- *iuvenis amicis persuasit ut contenderent :* the youth persuaded his friends to hurry (so that they might hurry)
- *feminae milites oraverunt ne liberos interficerent :* the women begged the soldiers to not kill the children.
- e. Result clause ut 'so that'
- *tam stultus erat dominus ut omnes servi eum deriderent :* so foolish was the master that all the servants were mocking him.
- 3. Complete 1-5 from the *Uses of the subjunctive* worksheet.

Note: If you are unable to print out the document, number your written translation and reason for the subjunctive on a loose leaf sheet of paper. You do not need to copy down the Latin.

Tuesday, April 7

- 1. Briefly review About the language 1 & Types of Subjunctives from yesterday.
- 2. Complete 6-11 from the Uses of the subjunctive worksheet.
- 3. Recall that an INDIRECT STATEMENT is introduced by **a verb of sense perception** followed by a *subjective accusative* and a <u>verb in the infinitive</u>.
 - Ex. **credo** ancillas cibum <u>parare</u> : I believe that the maids are preparing food.
 - Ex. centurio **dicit** *captivos* <u>dormire</u>. *The centurion says that the captives are sleeping*. *NOTE*: the difference in how indirect statements are constructed (subjective accusative & infinitive) and how indirect questions and commands are constructed (subordinate subjunctive)
- 4. Complete the *Sparsus says to Polla that*... worksheet

Wednesday, April 8

clauses).

- Complete the *Pliny and Cicero write to their wives* worksheet.

NOTE: while you should read the letters carefully and try your best to translate them to yourself, but you do not need to write out a translation, just write out the answers to questions 1-4.

ALSO:

This word appears in the first letter and is not contained in the vocab list or in your dictionary:

- invicem : in turn, one after another

Thursday, April 9

- 1. Reread *heredes principis* I & II. Take your time, read it well, it should take at least 10, probably more like 20 minutes, and specifically:
 - a. take mental note of any vocabulary that you had to look up, recommit these to memory.
 - b. Take mental note of any challenging grammar that you had to pause on and figure out, recommit it to memory.
 - c. pause on challenging sentences that you perhaps did not fully understand and try to hash them out.
 - d. Find and give the line numbers of one fearing clause from *heredes principis I* and one from *heredes principis II*.
- 2. With the remainder of the 30 minutes, review the vocabulary for stage 39.

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April 6-10, 2020

Course: Music

Teacher(s): Mr. Zuno leonardo.zunofernandez@greatheartsirving.org

Weekly Plan:

Monday, April 6

Read <u>Ch 2 - Pitch, Dynamics, and Tone Color</u> (pp. 12-18) for 12 minutes

Summarize: Write a summary for 8 minutes (instructions below).

Check your work: Also, please go through the <u>Week 1 answers</u> and check your work for accuracy. If you have any questions, please let me know so I can explain or clarify.

Tuesday, April 7

Read: <u>Ch 2 - Pitch, Dynamics, and Tone Color</u> (pp. 18-24) for 12 minutes
 Summarize: Write a summary for 8 minutes (instructions below)

Wednesday, April 8

Listen to WRR 101.1 for 15 minutes and follow the next step.

Write a short paragraph on the music you heard on the radio (instructions below).

Thursday, April 9

Please answer the questions about <u>For the Beauty of the Earth</u>.

Please answer the questions about Morning Has Broken.

Friday, April 10 No school!

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Student Signature

Parent Signature



Details for each assignment:

Monday, April 6

1) Read <u>Ch 2 - Pitch, Dynamics, and Tone Color</u> (pp. 12-18) for 12 minutes Look for terms like: *frequency*, *pitch*, and *noise*, as well as *amplitude*, *forte*, *piano*, *mezzo*, *tone color*, and *timbre*.

2) Summarize: For 8 minutes, write a paragraph that summarizes what you learned or reviewed regarding this handout. Please keep summaries for these readings under one section of your notebook/binder, and make sure you write the title above each summary, so you can refer to these later for your final paper. Be sure to include the following terms:

frequency, *pitch*, and *noise*, as well as *amplitude*, *forte*, *piano*, *mezzo*, *tone color*, and *timbre*. Make sure you understand the difference between each of these words. If you are not sure of their meaning after reading the text, do further research on these terms.

3) Check your work: Also, please go through the <u>Week 1 answers</u> and check your work for accuracy. If you have any questions, please let me know so I can explain or clarify.

Tuesday, April 7

1) Read: Ch 2 - Pitch, Dynamics, and Tone Color (pp. 18-24) for 12 minutes

2) Summarize: For 8 minutes, write a paragraph (different from yesterday's) that summarizes what you learned or reviewed regarding this handout. Please keep summaries for these readings under one section of your notebook/binder, and make sure you write the title above each summary, so you can refer to these later for your final paper. Be sure to include a brief summary on each family of instruments: *Strings, woodwinds, brass,* and *percussion*. Also, please write about what an orchestra is and how it is formed.

Wednesday, April 8

1) Listen to WRR 101.1 for 15 minutes and follow the next step.

2) Write a short paragraph on the music you heard on the radio. The radio announcer will often name the piece and composer either before or after it is played on the radio. You have to listen attentively to make sure you catch that piece of information. *Please name the composer and the title of the piece and write a brief 2-3 sentence description of the music you heard: for example, what was the tempo like? Were the melodies beautiful? Were there many instruments playing, and if so, which ones? What was the overall feel of the piece?*

Please find a place where you can focus so you are really listening without distractions for 15 minutes. We will call these summaries for listening your "*Listening Log*." Over the next few weeks, this listening log will continue to grow, and it will become the basis for your final paper.

-If you did the extra practice, please write 2-3 sentence description of what you practiced and how you practiced.

Thursday, April 9

1) Please write numbers for counting the melody (in both the Bass and Treble clefs) of For the Beauty of the Earth. (I will provide an answer key at next week's packet.) Example: 1 + 3 = 4 = Quarter, 2 eights, quarter, quarter. And 1 2, 3-4 = quarter, quarter, half note.

Also, based on what you learned last week:

-What is the meter for this piece? (You learned about *meter* last week).

-What are the most common *rhythms* in this song?

2) Please do the same and answer the same questions for Morning Has Broken.

*A note about the concert review: For obvious reasons, you are no longer required to attend a concert. Instead of doing that, you will gather information from your listening log and your notes from the readings I provide. You will take many notes over the next few weeks, so it is important that you keep these organized. In a week or two, I will assign the final project, which will include listening to a concert with a variety of classical music, and you will write a paper about it. You will be expected to use the terminology provided in the weekly handouts. More details to come.

If you already turned in your concert review, you will still be expected to do all of these assignments, and your final project will be somewhat reduced.

CHAPTER 2

Pitch, Dynamics, and Tone Color

f you have taken a course in physics, you know that sound is produced by vibrations that occur when objects are struck, plucked, stroked, or agitated in some other way. These vibrations are transmitted through the air and picked up by our ears.

For the production of sound in general, almost anything will do — the single rusted hinge on a creaky door as well as the great air masses of a thunderstorm. For the production of musical sounds, the usual objects are taut strings and membranes and columns of air enclosed in pipes of various kinds. These produce relatively simple vibrations, which translate into clearly focused or, as we say, "musical" sounds. Often the membranes are alive: They are called vocal cords.

Sound-producing vibrations are very fast; the range of sound that can be heard extends from around 20 to 20,000 cycles per second. The vibrations are also very small. To be heard, they often need to be *amplified*, either electronically or with the aid of something physical that echoes or *resonates* along with the vibrating body. In a guitar or violin, the resonator is the hollow box that the strings are stretched across.

Musical sounds can be high or low, loud or soft, and can take on different qualities depending on the materials used to produce them. The musical terms for these aspects of sound are pitch, dynamics, and tone color.



Natural objects can serve as resonators for musical instruments. Gourds are a favorite on two continents, used in Latin American maracas and the kalimba, an African "finger piano."

1 Pitch

The scientific term for the rate of sound vibration is <u>frequency</u>. On the level of perception, our ears respond differently to sounds of high and low frequencies, and to very fine gradations in between. Indeed, people speak about "high" and "low" sounds quite unselfconsciously, as though they know that the latter actually have a low frequency — relatively few cycles — and the former a high frequency.

The musical term for this quality of sound, which is recognized so instinctively, is <u>pitch</u>. Low pitches (low frequencies) result from *long* vibrating elements, high pitches from *short* ones—a trombone sounds lower than a flute. Noises, with their complex, unfocused vibrations, do not have pitch. Your college chorus divides up high and low pitches among four different groups of voices: sopranos (high females), altos (low females), tenors (high males), and basses (low males).

The totality of musical sounds serves as a kind of quarry from which musicians of every age and every society carve the exact building blocks they want for their music. We hear this totality in the sliding scale of a siren, starting low and going higher and higher. But musicians never (or virtually never) use the full range of pitches. Instead they select a limited number of fixed pitches from the sound continuum. These pitches are calibrated scientifically (Europeanstyle orchestras these days tune to a pitch with a frequency of 440 cycles), given names (that pitch is labeled A), and collected in *scales*. Scales are discussed in Chapter 3.

2 Dynamics

In scientific terminology, *amplitude* is the level of strength of sound vibrations—more precisely, the amount of energy they contain and convey. As big guitar amplifiers attest, very small string vibrations can be amplified until the energy in the air transmitting them rattles the eardrums.

In musical terminology, the level of sound is called its <u>dynamics</u>. Musicians use subtle dynamic gradations from very soft to very loud, but they have never worked out a calibrated scale of dynamics, as they have for pitch. The terms

)) LISTENING EXERCISE 3

Pitch and Dynamics

High and low *pitch* and loud and soft *dynamics* are heard so instinctively that they hardly need illustration. Listen, however, to the vivid way they are deployed in one of the most famous of classical compositions, the "Unfinished" Symphony by Franz Schubert. Symphonies usually consist of four separate big segments, called movements; musicologists are still baffled as to why Schubert wrote two superb movements for this work and started but never finished the rest.

		PITCH	DYNAMIC
0:00	Quiet and mysterious	Low range	₽₽
0:15	Rustling sounds	Middle range	
0:22	Wind instruments	High	
0:35	Single sharp accent		sf
0:47	Gets louder	Higher instruments added	Long <i>crescendo</i> , leading to <i>f</i> , then <i>ff</i> , more accents
1:07	Sudden collapse		<i>piano</i> followed by <i>diminuendo</i>
1:15	New tune	First low, then high	(Marked pp by Schubert, but usually played p or mp)
1:52	Cuts off sharply; big sound		<i>ff</i> , more accents
	(Similar pitch and dynamic	c effects for the rest of the ex	cerpt)
3:07	Sinking passage	Individual pitches, lower and lower	
3:45	Ominous	Lowest pitch of all	<i>pp</i>

used are only approximate. Like the indications for tempo, the terms used for dynamics are in Italian.

The main categories are simply loud and soft, <u>forte</u> (pronounced fór-teh) and <u>piano</u>, which may be qualified by expanding to "very loud" or "very soft" and by adding the Italian word for "medium," mezzo (mét-so):

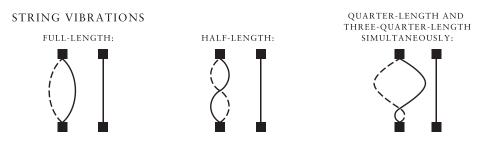
pianissimo	piano	mezzo piano	mezzo forte	forte	fortissimo
þр	Þ	тр	mf	f	ff
very soft	soft	medium soft	medium loud	loud	very loud

Changes in dynamics can be sudden (*subito*), or they can be gradual—a soft passage swells into a loud one (*crescendo*, "growing"), or a powerful blare fades into quietness (*decrescendo* or *diminuendo*, "diminishing").

3 Tone Color

At whatever pitch, and whether loud or soft, musical sounds differ in their general *quality*, depending on the instruments or voices that produce them. **Tone color** and **timbre** (tám-br) are the terms for this quality.

Tone color is produced in a more complex way (and a more astonishing way) than pitch and dynamics. Piano strings and other sound-producing bodies vibrate not only along their total length but also at the same time in halflengths, quarters, eighths, and so on.



The diagrams above attempt to illustrate this. Musicians call these fractional vibrations <u>overtones</u>. They are much lower in amplitude than the main vibrations; for this reason, we hear overtones not as distinct pitches, but somehow as part of the string's basic or fundamental pitch. The amount and exact mixture of overtones are what give a sound its characteristic tone color. A flute has few overtones. A trumpet has many.

Musicians make no attempt to tally or describe tone colors; about the best one can do is apply imprecise adjectives such as *bright*, *warm*, *ringing*, *hollow*, or *brassy*. Yet tone color is surely the most easily recognized of all musical elements. Even people who cannot identify instruments by name can distinguish between the smooth, rich sound of violins playing together; the bright sound of trumpets; and the woody croaking of a bassoon.

The most distinctive tone color of all, however, belongs to the first, most beautiful, and most universal of all the sources of music—the human voice.



The singing voice, the most beautiful and universal of all sources of music: Renée Fleming, star of the Metropolitan Opera in New York, excels in an unusually wide variety of roles and is often heard singing popular standards.

Musical Instruments

To listen to demonstrations of individual instruments, click on Instruments of the Orchestra at **bedfordstmartins.com/listen**

Different voices and different instruments produce different tone colors, or timbres. Enormous numbers of devices have been invented for making music over the course of history and across the entire world, and the range of tone colors they can produce is almost endless.

This section will discuss and illustrate the instruments of Western music that make up the orchestra, and a few others. Later, in our Global Perspectives sections, we will meet some instruments from other musical traditions.

Musical instruments can be categorized into four groups: *stringed instruments* or *strings, woodwinds, brass,* and *percussion*. Musical sound, as we know, is caused by rapid vibrations. Each of the four groups of instruments produces sound vibrations in its own distinct way.

Stringed Instruments

Stringed instruments produce their sound by means of taut strings attached to a *sound box*, a hollow box containing a body of air that resonates (that is, vibrates along with the strings) to amplify the string sound.

The strings themselves can be played with a bow, as with the violin and other orchestral strings; the bow is strung tightly with horsehair, which is coated with a substance called rosin so that the bow grips the strings to produce continuous sound. With guitars and harps, the strings are plucked or strummed by the fingers or a small pick. Strings can be plucked on bowed instruments, too, for special effects. This is called **pizzicato** (pit-tzih-cáh-toe). **7** *The Violin and Its Family* The violin is often called the most beautiful instrument used in Western music. It is also one of the most versatile of instruments; its large range covers alto and soprano registers and many much higher pitches. As a solo instrument, it can play forcefully or delicately, and it excels in both brilliant and songlike music. Violinists also play chords by bowing two or more of the four strings at once, or nearly so.

As with a guitar, the player *stops* the (four) violin strings with a finger—that is, presses the strings against the neck of the violin—to shorten the string length and get different pitches (see the illustrations below). Unlike a guitar, a violin has no frets, so the player has to feel for the exact places to press.

The violin is an excellent ensemble instrument, and it blends especially well with other violins. An orchestra violin section, made up of ten or more instruments playing together, can produce a strong yet sensitive and flexible tone. Hence the orchestra has traditionally relied on strings as a solid foundation for its composite sound.

Like most instruments, violins come in *families*, that is, in several sizes with different pitch ranges. Two other members of the violin family are basic to the orchestra. The viola is the tenor-range instrument, larger than a violin by several inches. It has a throaty quality in its lowest range, yet it fits especially smoothly into accompaniment textures. The viola's highest register is powerful and intense.

The cello, short for *violoncello*, is the bass of the violin family. Cellists play seated, with the instrument propped on the floor between their knees. Unlike the viola, the



The violin family: violin, viola, and cello

Violin and bow \rightarrow





Chinese American cellist Yo-Yo Ma is perhaps this country's preeminent instrumentalist, and certainly the most versatile and most honored and admired. He has assumed the role of a national resource, playing at state occasions such as President Obama's 2009 inauguration. In 1998 he founded the Silk Road Project, a program of intercultural musical exchange along the Silk Road, the ancient trading route between China and the Mediterranean. His complete recordings to date fill ninety CDs!

cello has a rich, gorgeous sound in its low register. It is a favorite solo instrument as well as an indispensable member of the orchestra.

7 Double Bass Also called string bass or just bass, this deep instrument is used to back up the violin family in the orchestra. (However, in various details of construction the bass differs from members of the violin family; the bass actually belongs to another, older stringed instrument family, the *viol* family.)

Played with a bow, the double bass provides a splendid deep support for orchestral sound. It is often (in jazz, nearly always) plucked to give an especially vibrant kind of accent and to emphasize the meter.

7 *Harp* Harps are plucked stringed instruments with one string for each pitch available. The modern orchestral harp is a large instrument with forty-seven strings covering a wide range of pitches. In most orchestral music, the

swishing, watery quality of the harp is treated as a striking occasional effect rather than as a regular timbre.

Woodwind Instruments

As the name suggests, woodwind instruments were once made of wood. Some still are, while others today are made of metal and even plastic. Sound in these instruments is created by setting up vibrations in the column of air in a tube. A series of precisely spaced holes are bored in the tube, which players open or close with their fingers or with a lever device. This channels the air into columns of different lengths, producing different pitches.

Of the main woodwind instruments, *flutes, clarinets,* and *oboes* have approximately the same range. All three are used in the orchestra because each has a quite distinct tone color, and composers can obtain a variety of effects from them. It is not hard to learn to recognize and appreciate the different sounds of these woodwinds.

7 *The Flute and Its Family* The flute is simply a long cylinder, held horizontally; the player sets the air vibrating by blowing across a side hole. The flute is the most agile of the woodwind instruments and also the gentlest. It nonetheless stands out clearly in the orchestra when played in its high register.



Orchestral harp



Flute, recorder, and clarinet

The **piccolo**, the smallest, highest member of the flute family, adds special sparkle to band and orchestral music. The **alto flute** and **bass flute**—larger and deeper flutes are less frequently employed.

The recorder, a different variety of flute, is blown not at the side of the tube but through a special mouthpiece at the end. Used in older orchestral music, the recorder was superseded by the horizontal, or *transverse*, flute because the latter was stronger and more agile. In the late twentieth century recorders made a comeback for modern performances of old music using reconstructed period instruments. The instrument is also popular (in various family sizes) among musical amateurs today. The recorder is easy to learn and fun to play.

7 *Clarinet* The clarinet is a slightly conical tube made, usually, of ebony (a dark wood). The air column is not made to vibrate directly by blowing into the tube, as with the flute. The player gets sound by blowing on a reed—a small piece of cane fixed at one end—in much the same way as one can blow on a blade of grass held taut between the fingers. The vibrating reed vibrates the air within the clarinet tube itself.

Compared to the flute, the clarinet sounds richer and more flexible, more like the human voice. The clarinet is capable of warm, mellow tones and strident, shrill ones; it has an especially intriguing quality in its low register.

The small E-flat clarinet and the large bass clarinet are family members with a place in the modern orchestra. The tube of the bass clarinet is so long that it has to be bent back, like a thin black saxophone. **7 Oboe** The **oboe** also uses a reed, like the clarinet, but it is a double reed—two reeds lashed together so that the air must be forced between them. This kind of reed gives the oboe its clearly focused, crisply clean, and sometimes plaintive sound.

The **English horn** is a larger, lower oboe, descending into the viola range. It is often called by the French equivalent, *cor anglais*; in either language, the name is all wrong, since the instrument is not a horn but an oboe, and it has nothing to do with England.



Orchestras usually have two or three oboes.

7 Bassoon The **bassoon** is a low (cello-range) instrument with a double reed and other characteristics similar to the oboe's. It looks somewhat bizarre: The long tube is bent double, and the reed has to be linked to the instrument by a long, narrow pipe made of metal. Of all the double-reed woodwinds, the bassoon is the most varied in expression, ranging from the mournful to the comical.

The contrabassoon, also called the double bassoon, is a very large member of the bassoon family, in the double bass range.

7 Saxophone The saxophone, invented by the Belgian instrument maker Adolphe Sax, was first used around 1840 in military bands. The instrument is sometimes included in the modern orchestra, but it really came into its own in jazz. Saxophones are close to clarinets in the way they produce sound. Both use single reeds. Since the saxophone tube is wider and made of brass, its tone is even mellower than that of the clarinet, yet at the same time

more forceful. The long saxophone tube has a characteristic bent shape and a flaring bell, as its opening is called.

Most common are the **alto saxophone** and the **tenor saxophone**. But the big family also includes *bass*, *baritone*, and *soprano* members.

Brass Instruments

The brass instruments are the loudest of all the wind instruments because of the rather remarkable way their sound is produced. The player's lips vibrate against a small cup-shaped mouthpiece of metal. The lip vibration itself vibrates the air within the brass tube. All brass instruments have long tubes, and these are almost always coiled in one way or another. This is easy to do with the soft metal they are made from.

7 *Trumpet* The trumpet, highest of the main brass instruments, has a bright, strong, piercing tone that provides the ultimate excitement in band and orchestral



Bassoon, double bass, accordion (not an orchestral instrument!), and violin

19



Two French horns, trumpet, trombone, and tuba

music alike. Pitch is controlled by three pistons, or valves, that connect auxiliary tubes with the main tube or disconnect them, so as to lengthen or shorten the vibrating air column.

7 *French Horn* The French horn has a lower, mellower, thicker tone than the trumpet. It is capable of mysterious, romantic sounds when played softly; played loudly, it can sound like a trombone. Chords played by several French horns in harmony have a specially rich, sumptuous tone.

7 *Trombone* The tenor trombone and the bass trombone are also pitched lower than the trumpet. The pitch is controlled by a sliding mechanism (thus the term *slide*

trombone) rather than a valve or piston, as in the trumpet and French horn.

Less bright and martial in tone than the trumpet, the trombone can produce a surprising variety of sounds, ranging from an almost vocal quality in its high register to a hard, powerful blare in the low register.

7 Tuba The bass tuba is typically used as a foundation for the trombone group in an orchestra. It is less flexible than other brass instruments. And like most other deep bass instruments, it is not favored for solo work.

7 Other Brass Instruments All the brass instruments described so far are staples of both the orchestra and the band. Many other brass instruments (and even whole families of instruments) have been invented for use in marching bands and have then sometimes found their way into the orchestra.

Among these are the *cornet* and the *flügelhorn*, both of which resemble the trumpet; the *euphonium*, *baritone horn*, and *saxhorn*, which are somewhere between the French horn and the tuba; and the *sousaphone*, a handsome bass tuba named after the great American bandmaster and march composer John Philip Sousa.

Finally there is the *bugle*. This simple trumpetlike instrument is very limited in the pitches it can play because it has no piston or valve mechanism. Buglers play "Taps" and military fanfares, and not much else.

Percussion Instruments

Instruments in this category produce sound by being struck (or sometimes rattled, as with the South American maraca). Some percussion instruments, such as drums and gongs, have no fixed pitch, just a striking tone color. Others, such as the vibraphone, have whole sets of wooden or metal elements tuned to regular scales.

7 *Timpani* The timpani (or *kettledrums*) are large hemispherical drums that can be tuned precisely to certain low pitches. Used in groups of two or more, timpani have the effect of "cementing" loud sounds when the whole orchestra plays, so they are the most widely used percussion instruments in the orchestra.

Timpani are tuned by tightening the drumhead by means of screws set around the rim. During a concert, one can often see the timpani player, when there are rests in the music, leaning over the drums, tapping them quietly to hear whether the tuning is just right.

7 *Pitched Percussion Instruments* Pitched percussion instruments are *scale instruments*, capable of playing melodies and consisting of whole sets of metal or wooden bars or plates struck with sticks or hammers. While they add unforgettable special sound effects to many compositions, they are not usually heard consistently throughout a piece, as the timpani are. They differ in their materials.

The glockenspiel has small steel bars. It is a high instrument with a bright, penetrating sound.



Drum kit with cymbals

The **xylophone** has hardwood plates or slats. It plays as high as the glockenspiel but also lower, and it has a drier, sharper tone.

The **marimba**, an instrument of African and South American origins, is a xylophone with tubular resonators under each wooden slat, making the tone much mellower.

The vibraphone has metal plates, like a glockenspiel with a large range, and is furnished with a controllable electric resonating device. This gives the "vibes" an echoing, funky quality unlike that of any other instrument.

Also like the glockenspiel, the **celesta** has steel bars, but its sound is more delicate and silvery. This instrument,

unlike the others in this section, is not played directly by a percussionist wielding hammers or sticks. The hammers are activated from a keyboard; a celesta looks like a miniature piano.

Tubular bells, or **chimes,** are hanging tubes that are struck with a big mallet. They sound like church bells.

7 Unpitched Percussion Instruments In the category of percussion instruments without a fixed pitch, the following are the most frequently found in the orchestra.

Cymbals are concave metal plates, from a few inches to several feet in diameter. In orchestral music, pairs of large cymbals are clapped together to support climactic moments in the music with a grand clashing sound.

The triangle—a simple metal triangle—gives out a bright tinkle when struck.

The tam-tam is a large unpitched gong with a low, often sinister quality.

The snare drum, tenor drum, and bass drum are among the unpitched drums used in the orchestra.

The Orchestra

The orchestra has changed over the centuries, just as orchestral music has. Bach's orchestra in the early 1700s was about a fifth the size of the orchestra required today. (See pages 114, 161, and 232 for the makeup of the orchestra at various historical periods.)

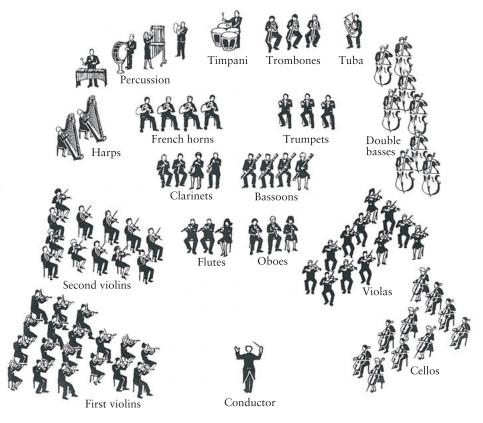
So today's symphony orchestra has to be a fluid group. Eighty musicians or more will be on the regular roster, but some of them sit out some of the pieces on many programs. And freelancers have to be engaged for special compositions in which composers have imaginatively



French horn and timpani



ORCHESTRAL SEATING PLAN



) LISTENING EXERCISE 4

The Orchestra in Action

Take a break from reading now and listen to *The Young Person's Guide to the Orchestra*, a work devised by Benjamin Britten in 1946 to introduce the many tone colors of orchestral instruments. A full chart of this work is given on page 45. For now, the chart below will lead you one by one through the various sections and instruments of the orchestra.

DVD

19-24

1	9 0:00	Full orchestra
	0:42	woodwind choir
	1:11	BRASS choir
	1:42	string choir
	2:07	PERCUSSION
	2:26	Full orchestra
2	0 2:50	Flutes and piccolo
0:3	9 3:29	Oboes
1:4	2 4:32	Clarinet family: bass clarinet (1:42), clarinet (1:57), and E-flat clarinet (1:46)
2:2	4 5:14	Bassoon
2	1 6:11	Violins
0:4	5 6:56	Violas
1:3	4 7:45	Cellos
2:3	2 8:43	Double bass
3:2	9 9:40	Harp
2	2 10:31	French horns
0:4	0 11:11	Trumpets
1:1	6 11:47	Trombones, tuba
2	3 12:48	PERCUSSION
	1 1 4 4 2	Full orchestra
2	4 14:43	Full orchestra

expanded the orchestra for their own expressive purposes. A typical large orchestra today includes the following sections, also called *choirs*.

⁹ *Strings:* about thirty to thirty-six violinists, twelve violists, ten to twelve cellists, and eight double basses.

Y Woodwinds: two flutes and a piccolo, two clarinets and a bass clarinet, two oboes and an English horn, two bassoons and a contrabassoon.

7 *Brass:* at least two trumpets, four French horns, two trombones, and one tuba.

7 *Percussion:* one to four players, who between them manage the timpani and all the other percussion instruments, moving from one to the other. For unlike the violins, for example, the percussion instruments seldom have to be played continuously throughout a piece.

There are several seating plans for orchestras; which is chosen depends on at least two factors. The conductor judges which arrangement makes the best sound in the particular hall. And some conductors feel they can control the orchestra better with one arrangement, some with another. One such seating plan is shown on page 21.

Keyboard Instruments

Though most orchestras today include a pianist, the piano is a relatively new addition to the symphony orchestra. In earlier times, the orchestra regularly included another keyboard instrument, the harpsichord.

The great advantage of keyboard instruments, of course, is that they can play more than one note at a time. A pianist, for example, can play a whole piece on a keyboard instrument without requiring any other musicians at all. Consequently the solo music that has been written for piano, harpsichord, and organ is much more extensive than (accompanied) solo music for other instruments—more extensive and ultimately more important.

7 *Piano* The tuned strings of a piano are struck by felt-covered hammers, activated from a keyboard. Much technological ingenuity has been devoted to the activating mechanism, or *action*.

The hammers must strike the string and then fall back at once, while a damping device made of felt touches the string to stop the sound instantly. All this must be done so fast that the pianist can play repeated notes as fast as the hand can move. Also, many shades of loudness and softness must lie ready under the player's fingers. This dynamic flexibility is what gave the piano its name: *piano* is short for *pianoforte*, meaning "soft-loud."

The list of virtuoso pianists who were also major composers extends from Mozart through Frédéric Chopin to Sergei Rachmaninov. In the nineteenth century, the piano became *the* solo instrument. At the same time, nearly every middle-class European and American household had a piano. Piano lessons served and still serve for millions of young people as an introduction to the world of music.

7 *Harpsichord* The harpsichord is an ancient keyboard instrument that was revived in the 1900s for the playing of Baroque music, in particular.

Like the piano, the harpsichord has a set of tuned strings activated from a keyboard, but the action is much



An organ with five (!) keyboards. The player pulls out the white knobs (stops) to change the sets of pipes that sound.



An elaborately painted eighteenth-century harpsichord, with two keyboards

simpler. There is no damping, and instead of hammers striking the strings, little bars flip up with quills that pluck them. This means, first, that the tone is brittle and ping-y. Second, it means that the player cannot vary dynamics; when a string is plucked in this way, it always sounds the same.

Harpsichord makers compensated for this limitation in dynamics by adding one or two extra full sets of strings, controlled by an extra keyboard. One keyboard could be soft, the other loud. A mechanism allowed the keyboards to be coupled together for the loudest sound of all.

In spite of its brittle tone and its lack of flexibility in dynamics, the harpsichord can be a wonderfully expressive instrument. Good harpsichord playing requires, first and foremost, great rhythmic subtlety.

Another keyboard instrument of early times, the clavichord, has the simplest action of all. Its tone is much too quiet for concert use.

7 Organ Called "the king of instruments," the pipe organ is certainly the largest of them (see page 150). This instrument has to provide enough sound to fill the large spaces of churches and cathedrals on a suitably grand scale. The organ has a great many sets of tuned pipes through which a complex wind system blows air, again activated from a keyboard. The pipes have different tone colors, and most organs have more than one keyboard to control different sets of pipes. A pedal board—a big keyboard on the floor, played with the feet—controls the lowest-sounding pipes.

Each set of tuned pipes is called a *stop*; a moderatesized organ has forty to fifty stops, but much bigger organs exist. One organ in Atlantic City, New Jersey, has 1,477 stops, for a total of 33,112 pipes. A large organ is capable of an almost orchestral variety of sound.



Artists loved to paint the lute—a beautiful instrument and a triumph of woodworking craft. Here Francesco Trevisani (1656–1746) includes also a violin, a recorder, and a harpsichord.

The organ is not a member of the orchestra, but because the grandest occasions call for orchestra, chorus, vocal soloists, and organ combined (e.g., Handel's *Messiah* at Christmastime; see page 146), a major symphony hall has to have its organ—usually an imposing sight.

7 *Electronic Keyboard Instruments* Today *keyboard* or *organ* generally means an electronic instrument. Synthesizers simulate the sound of organs, pianos, and harpsichords—and many other sounds as well.

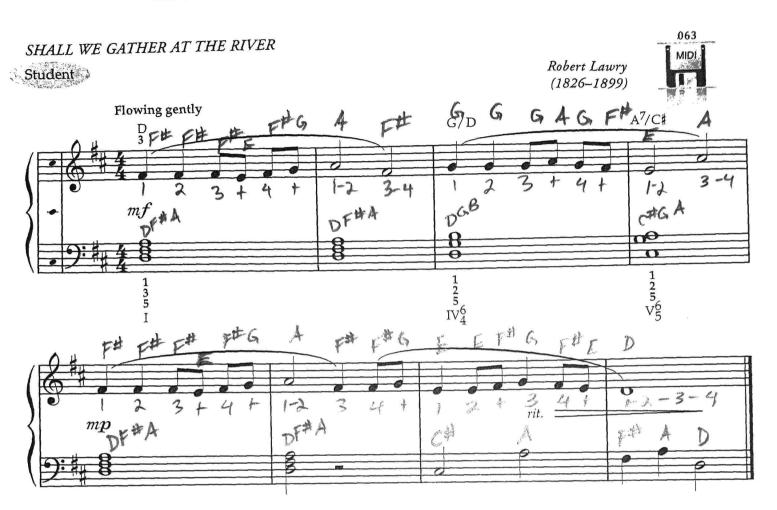
Modern concert music, from the 1960s on, has occasionally used electronic keyboards. On the whole, however, synthesizers have been used more to compose concert music than to play it. And of course electronic keyboards play major roles in today's popular music.

Plucked Stringed Instruments

Plucked stringed instruments figure much less in art music of the West than in Asian countries such as India and Japan, as we shall see. One exception is the orchestral harp; see page 16. The acoustic **guitar** and the **mandolin** are used very widely in Western popular music, but only occasionally in orchestras.

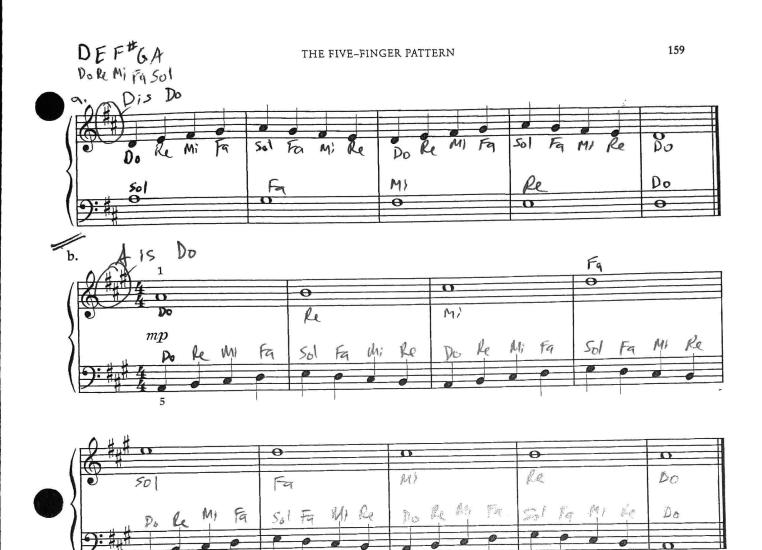
However, a now-obsolete plucked instrument, the lute, was of major importance in earlier times. One of the most beautiful-looking of instruments, the lute sounds rather like a gentle guitar. Large members of the lute family were the **theorbo** and the **archlute**.

Like keyboard instruments, plucked stringed instruments have been revolutionized by electronic technology. **Electric guitars** dominate rock music, though they have only occasionally found their way into concert music.



SHALL WE GATHER AT THE RIVER





In a canon, one melodic line/voice imitates another.

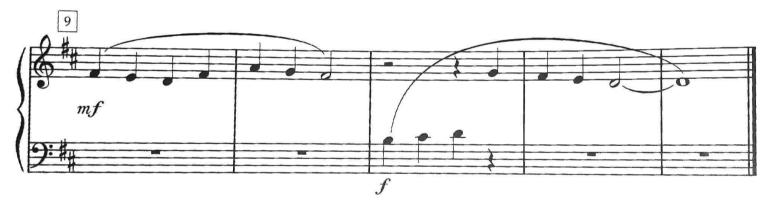
c. Practice this exercise in various major and minor keys of your choice.











Piano 2



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Remote Learning Packet

NB: Please keep all work produced this week. Details regarding how to turn in this work will be forthcoming.

April 6-10, 2020 Course: Physical Education Teacher(s): James.Bascom@GreatHeartsIrving.org John.Bascom@GreatHeartsIrving.org Joseph.Turner@GreatHeartsIrving.org

Weekly Plan:

Monday, April 6

Tuesday, April 7

Wednesday, April 8

Thursday, April 9

Friday, April 10

Statement of Academic Honesty

I affirm that the work completed from the packet is mine and that I completed it independently. I affirm that, to the best of my knowledge, my child completed this work independently

Parent Signature

Student Signature

Monday, April 6

General Mobility Routine (15-20 minutes)

All students are expected to complete Part I. 9th Graders are expected to continue the workout and complete Part II (any middle school student that would like an extra challenge is more than welcome).

Note: no equipment is required for this workout and only a minimum of space. If space is a challenge make modifications as necessary.

PART I:

- 1. Warmup by running for 2 minutes.
- 2. Then begin in a resting squat for 30s
- 3. Bear crawl forwards about 5 feet then straight back.
- 4. Step back into a pushup position
- 5. Perform 5 pushups
- 6. Downdog for 30s
- 7. Updog for 30s
- 8. Return to a pushup position
- 9. Perform 5 pushups
- 10. Stand up & perform 20 jumping jacks, 10 squats, 10 lunges, and 5 burpees
- 11. Return to a resting squat for 30 seconds
- 12. While in resting squat, perform 2 shoulder screws forwards, then 2 backwards, both sides
- 13. Bear Crawl sideways about 5 feet then return straight back
- 14. Step back into a pushup position
- 15. Step your right foot up directly outside your right hand
- 16. Then reach straight up toward the sky with your right hand & hold for 30s
- 17. Return to pushup position
- 18. Step your left foot up directly outside your left hand
- 19. Then reach straight up toward the sky with your left hand & hold for 30s
- 20. Return to pushup position
- 21. 5 pushups
- 22. Step your feet up to your hands and return to a resting squat
- 23. Remaining in the squat, grab your left ankle with your right hand and reach straight up toward the sky with your left hand & hold for 30s
- 24. Remaining in the squat, grab your right ankle with your left hand and reach straight up toward the sky with your right hand & hold for 30s

- 25. Hands down behind you Crab Walk forwards about 5 feet then straight back
- 26. Stand up & perform 20 jumping jacks, 10 squats, 10 lunges, and 5 burpees
- 27. Perform 3 slow Jefferson Curls
- 28. Rolling Bear Crawl x1 revolution one direction
- 29. Back Bridge for about 10-15 seconds
- 30. Rolling Bear Crawl x1 revolution in the opposite direction
- 31. Find a low hanging branch, pullup bar, ledge, rings, etc. to hang from for as long as you can hold

PART II:

- 1. Get into a plank
- 2. Alternate touching opposite elbow and knee for a total of 10 touches
- 3. Gorilla Hop x2 to the right
- 4. Gorilla Hop x 2 back to the left
- 5. Stand and perform 10 steam engine squats (fingers locked behind your head, every time you stand up from a squat touch opposite knee/elbow)
- 6. Hurdler's walk x6 steps forward
- 7. Hurdler's walk x6 steps backward
- 8. Frog Hop x2 forwards
- 9. Frog Hop x2 backwards
- 10. Get into a long lunge position
- 11. Keeping front foot flat on the ground, without touching the back knee to the ground, and trying to keep torso straight up and down slowly lower hips toward the ground. Hold for 15 seconds
- 12. Switch legs and repeat (hold for 15 seconds)
- 13. 3 slow Jefferson Curls
- 14. Rolling Bear Crawl x1 revolution one direction
- 15. Back Bridge for about 10-15 seconds
- 16. Rolling Bear Crawl x1 revolution in the opposite direction
- 17. Find a low hanging branch, pullup bar, ledge, rings, etc. to hang from for as long as you can hold

Tuesday, April 7

- 1. 3 minute run
- 2. 20 squats
- 3. 20 lunges
- 4. 3 minute run
- 5. 10 jump squats
- 6. 10 jump lunges
- 7. 3 minute run
- 8. 10 squats, 10 jump squats
- 9. 10 lunges, 10 jump lunges
- 10. 3 minute run

Wednesday, April 8

Repeat General Mobility Routine (15-20 minutes)

Thursday, April 9

1. 7 minute run

- 2. Set a timer for 8 minutes. Try to continuously do this workout for the duration.
 - 1. 1-3 pushups
 - 2. 5 meter bear crawl forwards
 - 3. 1-3 pushups
 - 4. 5 meter bear crawl backward
 - 5. 1 slow pushup (15-30 second count on the way down)
 - 6. 5 meter crab walk forward
 - 7. 1 slow pushup (15-30 second count on the way down)
 - 8. 5 meter crab walk backwards
 - 9. REPEAT



Remote Learning Packet

NB: Please keep all work produced this week. Details regarding how to turn in this work will be forthcoming.

April 6-10, 2020 Course: 9 Spanish I Teacher(s): Ms. Barrera <u>anna.barrera@greatheartsirving.org</u> Supplemental links: <u>www.conjuguemos.com</u> <u>www.spanishdict.com</u>

Weekly Plan:

Monday, April 6
Capitulo 4A - Adonde vas? Completing conversations with *i*r; and
Answering questions in regards to cinemas from the cultura article.
Tuesday, April 7
Capitulo 4A - Adonde vas? Read and write about an announcement about a cinema.
Using the appropriate interrogative according to what the question is asking.
Wednesday, April 8
Capitulo 4A - Adonde vas? Writing a question according to the answer given.
In Spanish questions knowing the placement of the Interrogative, verb and subject.

Thursday, April 9
Capitulo 4A - Adonde vas? Vocabulary practice with a crucigrama.
Read about after-school and weekend activities at a mall.

Friday, April 10 ☐ No School!

Statement of Academic Honesty

I affirm that the work completed from the packet is mine and that I completed it independently. I affirm that, to the best of my knowledge, my child completed this work independently

Student Signature

Monday, April 6 Write all your complete answers on a loose-leaf paper for all activities below.

Capitulo 4A - Adonde vas? Completing conversations with *i*r and learning answering questions in regards to cinemas.

1. Textbook, p. 185 **Cultura -** Las peliculas. Read and translate the small article then answer the questions in Spanish that are next to Pre-AP.

2. Core Practice 4A-5 Handout: *Las actividades favoritas*. Fill in the blanks with the appropriate conjugated form of *ir* according to who is speaking, 1st person second person, singular, plural, etc. voy, vas, va, vamos vais, van.

Tuesday, April 7

Capitulo 4A - Adonde vas? Read and write about an announcement having to do with an opening of a cinema. Using the appropriate interrogative according to what the question is asking.

1. Textbook, p. 185 - Activity 16. Read the announcement titled *Cine Parque Arauco* then fill in the blank with the appropriate interrogative in the five exercises.

2. Core Practice 4A-6 Handout: La pregunta perfecta. Fill in the blank with the correct interrogative.

Wednesday, April 8

Capitulo 4A - Adonde vas? Writing a question according to the answer given. In Spanish questions knowing the placement of the Interrogative, verb and subject.

1. Guided Practice Activity 4A-3 Handout: *Asking questions*. Writing the interrogative that goes with each group.

2. Guided Practice Activities 4A-4 and 4A-5 Handout. *Asking questions*. Placement and order of the interrogative, verb and subject.

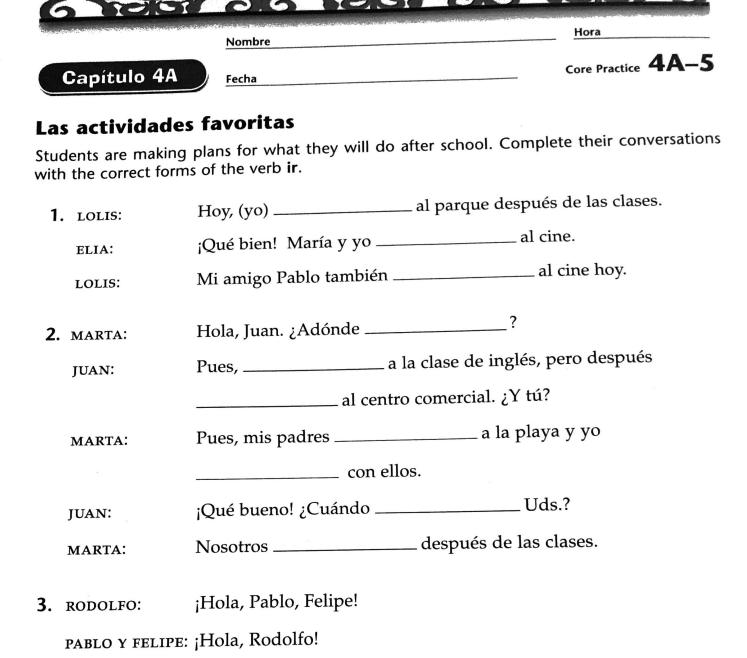
3.Core Practice 4A-7 Handout: *Que haces?* Write your parents' questions in complete sentences according to your answer that is written in the handout.

Thursday, April 9

Capitulo 4A - Adonde vas? Vocabulary practice with a crucigrama. Read about after-school and weekend activities at a mall.

Core Practice Activity 4A-8 Handout: *Crucigrama*. Write your answers for 1 through 20.
 Textbook, p. 188-189 Lectura - *Al centro comercial*. Read pp 188-189 and then answer the 5 questions in Spanish in complete sentences.

3. **Guided Practice Activity 4A-6 and 4A7** Handout: More on *Al centro comercial*. Do Exercises A through F.



RODOLFO: ¿Adónde _____ Uds.?

PABLO: Pues, yo ______ a casa con unos amigos.

 FELIPE:
 Yo no ______ con él. ______ a la mezquita.

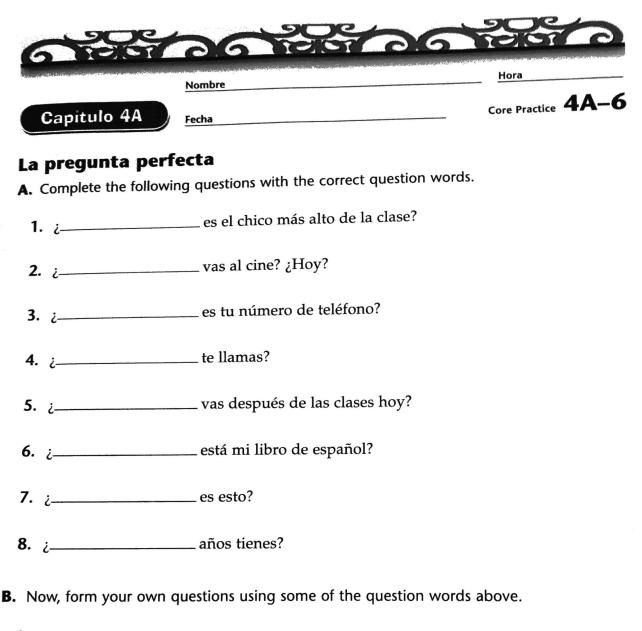
¿Y tú?

RODOLFO: Catrina y yo _____ a la piscina. Ella _____

al gimnasio más tarde.

PABLO: Mi amiga Elena _____ al gimnasio con ella. Creo que ellas _____ a las cinco.

 FELIPE:
 Es muy tarde. Tengo que _____. ¡Hasta luego!



1. ¿	?
2. ¿	?
3. ¿	?
4. ز	?
5. ¿	?
6. ¿	?
7. ¿	?



Asking questions (p. 184)

Fecha

Interrogatives are words that you use to ask questions. Here are some Spanish interrogatives.

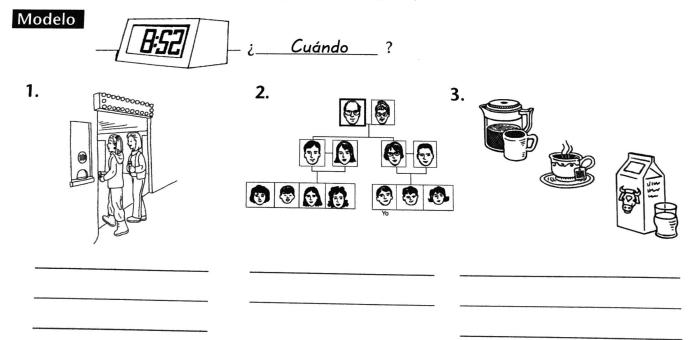
Categories	Interrogatives		
People	¿Quién?	¿Con quién?	
Location	¿Dónde?	¿Adónde?	¿De dónde?
Things or actions	¿Qué?	¿Cuál?	¿Cuántos? / ¿Cuántas?
Reason	¿Por qué?		
Time	¿Cuándo?		
Description (how)	¿Cómo?		

You can change a statement into a question by raising your voice at the end:

¿Margarita va a la biblioteca? In this case, you do not use an interrogative.

These kinds of questions expect the answer will be yes or no. You can add ¿verdad? (right?) to the end to emphasize this: Margarita va a la biblioteca, ¿verdad?

A. Each drawing or group of drawings represents a question category in the chart above. Write the interrogatives that go with each group. Follow the model.



Guided Practice Activities 4A-3



Asking questions (continued)

In Spanish questions with interrogatives, the verb comes before the subject: ¿Adónde va Margarita?

B. Look at the following groups of exchanges. Write in the correct interrogative to complete each exchange. Use the interrogatives listed for each group.

Location: ¿Dónde? ¿Adónde?

- 1. —¿______ van Natalia y Roberto?
 - ---Van a la biblioteca para estudiar.
- 2. —;______ levantas pesas?
 Levanto pesas en el gimnasio.

People: ¿Quién? ¿Con quién?

- 3. —¿_____ hablas mucho por teléfono?
 —Hablo mucho con mi amiga Tina. Ella es muy divertida.
- **4**. —¿______ es su profesor de español?
 - Es la señora Oliveros. Es muy inteligente.

Things: ¿Qué? ¿Cuántos?

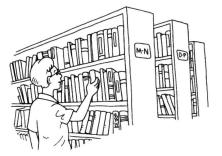
- 5. —¿_____ libros hay en la biblioteca?
 —¡Hay muchos!
- 6. —¿_____ comes para el desayuno?
 —Como pan tostado y tocino.

Reason and Description: ¿Por qué? ¿Cómo?

- **7.** —¿______ estudias tanto?
- Soy muy trabajadora y me gusta leer.
- 8. —¿______ es la clase de matemáticas?
 Es interesante, pero difícil.











Asking questions (continued)

C. Look at each group of phrases. Put them in order to form a question by numbering each group 1, 2, or 3. Then write them in order on the write-on line below. Follow the model. You can also look at the questions in **part B** for examples.

Modelo Paulina / adónde / va 3 1 2 ¿<u>Adónde va Paulina</u>?

1. es / el profesor de español / quién

2. sillas / hay / cuántas

3. Luisa / adónde / va

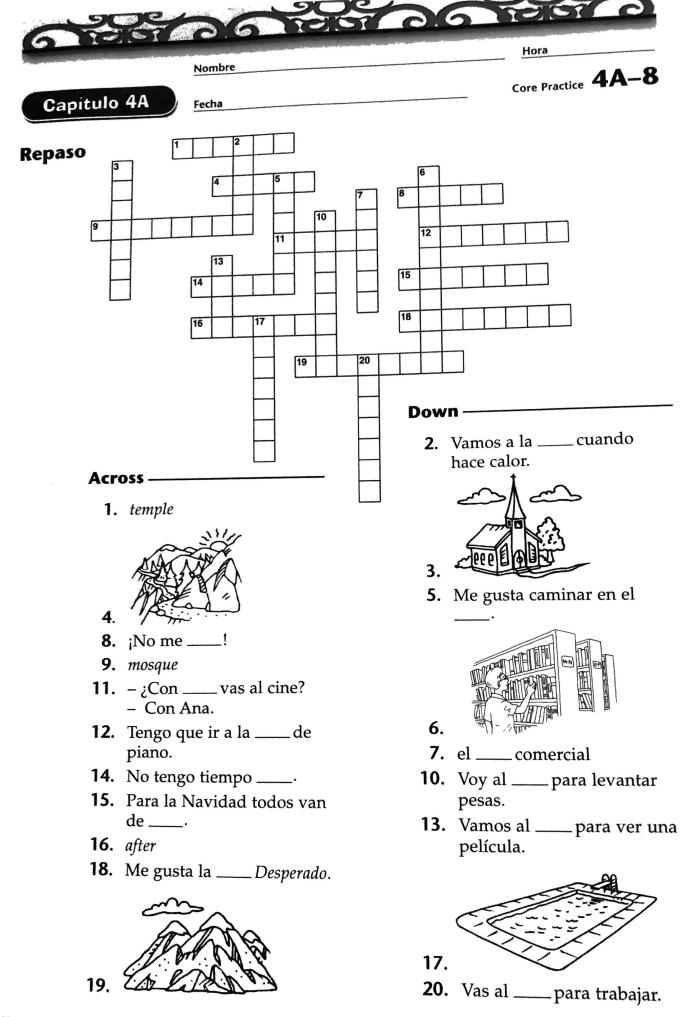
4. cómo / ella / es

5. corren / dónde / ellos

6. con quién / habla / Margarita

Guided Practice Activities - 4A-5 129

	FOG TE	500	
			Hora
Capítulo 4	A Fecha		Core Practice 4A-7
Your answers are g	h your parents about your p iven below. Write your pare	nts' questions in the space	s provided.
tus padres: ¿			?
тú: Voy a	un restaurante.		
tus padres: ¿			?
тú: Voy c	on unos amigos.		
tus padres: ¿			?
тú: Ellos s	se llaman Roberto y Ana.		
TUS PADRES: ¿			?
тú: Rober	to y Ana son de México.		
tus padres: ¿			?
τύ: Pues, I	Roberto es inteligente, tra	bajador y paciente.	
TUS PADRES: ¿			?
тú: Ana es	deportista y estudiosa.		
TUS PADRES: ¿			
	és, nosotros vamos al cin		•
TUS PADRES: ¿			.
	és? Pues, voy a casa. ¡U		





Lectura: Al centro comercial (pp. 188–189)

Fecha

A. List four events that you think would take place at a special-event week in a shopping center near you.

1.	 3.	
2	 4.	

B. According to the reading in your book, what are the dates for the event week at the Plaza del Sol? Write the answers in English below, next to the days of the week you are given.

Monday,	Friday,
Tuesday,	Saturday,
Wednesday,	Sunday,
Thursday,	

C. Look at the word bank below. Choose which expression in English best matches with the words you are given and write it in the spaces provided.

Andean musicYoga classEvening of tangoPhotography show	Evening of jazz w Yoga performance
--	---------------------------------------

1. Música andina

2. Clase de yoga	2.
-------------------------	----

3. Noche de jazz

- 4. Exposición de fotografía _____
- **5.** Exhibición de yoga
- 6. Noche de tango
- **D.** Read the description of Andean music and answer the questions that follow.

El grupo Sol Andino toca música andina fusionada con bossa nova y jazz el lunes a las 8.00 P.M. Abierto al público.

- **1.** Circle the name of the group in the paragraph above.
- 2. What does this group fuse with its brand of Andean music?

and _____

3. Can the public attend this show?



Lectura: Al centro comercial (continued)

E. Read the description of the yoga class and answer the questions that follow.

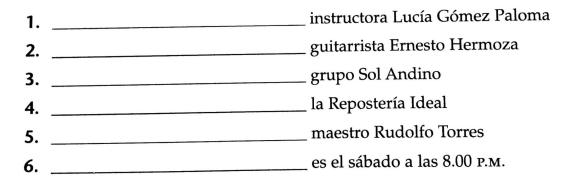
La práctica de yoga es todos los martes desde las 7.00 hasta las 9.00 P.M. La instructora Lucía Gómez Paloma enseña los secretos de esta disciplina. Inscríbase al teléfono 224-24-16. Vacantes limitadas.

- 1. How long does the yoga class last? _____
- 2. What does the sequence of numbers 224-24-16 stand for?
- 3. Can anyone attend this class? _____
 - Why or why not? _____

F. After looking through the readings in your textbook, you know that four events are

Música andina Clase de yoga Sábado flamenco Clase de repostería

explained in detail. These events are listed below. You must choose which event goes with the descriptions you are given. Write the name of the event in the space provided.



SOC	6	SOC O		Por P
	Nombre			Hora
Capítulo 4A	Fecha		(Core Practice 4A–5

Las actividades favoritas

Students are making plans for what they will do after school. Complete their conversations with the correct forms of the verb **ir**.

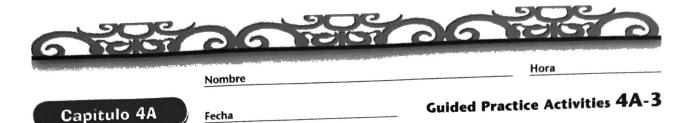
1	LOLIS:	Hoy, (yo) voy al parque después de las clases.
	ELIA:	¡Qué bien! María y yo <u>vamos</u> al cine.
	LOLIS:	Mi amigo Pablo también <u>va</u> al cine hoy.
2.	MARTA:	Hola, Juan. ¿Adónde?
	JUAN:	Pues,voya la clase de inglés, pero después
	MARTA:	voy al centro comercial. ¿Y tú? Pues, mis padres van a la playa y yo voy con ellos.
	JUAN:	¡Qué bueno! ¿Cuándo Van Uds.?
	MARTA:	Nosotros vamos después de las clases.
3.	RODOLFO:	¡Hola, Pablo, Felipe!
	PABLO Y FELIPE:	¡Hola, Rodolfo!
	RODOLFO:	¿Adónde Uds.?
	PABLO:	Pues, yovoy a casa con unos amigos.
	FELIPE:	Yo no <u>voy</u> con él. <u>Voy</u> a la mezquita.
		¿Y tú?
	RODOLFO:	Catrina y yo <u>vamos</u> a la piscina. Ella <u>va</u>
		al gimnasio más tarde.
	PABLO:	Mi amiga Elenava al gimnasio con ella. Creo que
		ellas a las cinco.
	FELIPE:	Es muy tarde. Tengo que ir ¡Hasta luego!

Gramática y vocabulario en uso **71**

GREET	26125726	
en e	Nombre	Hora
Capitulo 4A	Fecha	Core Practice 4A–6
La pregunta perfe	ecta	
A. Complete the followin	g questions with the correct question words.	
1. ¿Quién	es el chico más alto de la clase?	
2. ¿Cuándo	vas al cine? ¿Hoy?	
3. ¿Cuál	es tu número de teléfono?	
4. ¿Cómo	te llamas?	
5. ¿Adónde	vas después de las clases hoy?	
6. ¿Dónde	está mi libro de español?	
7. żQué	es esto?	
8. ¿————————————————————————————————————	años tienes?	

B. Now, form your own questions using some of the question words above.

1. ¿	Answers will vary. Do not repeat questions from part A.	?
2. ¿		?
3. ¿		?
4. ¿		?
5 . ¿		?
6. ¿		?
7. ¿		?



Asking questions (p. 184)

 Interrogatives are words that you use to ask questions. Here are some Spanish interrogatives.

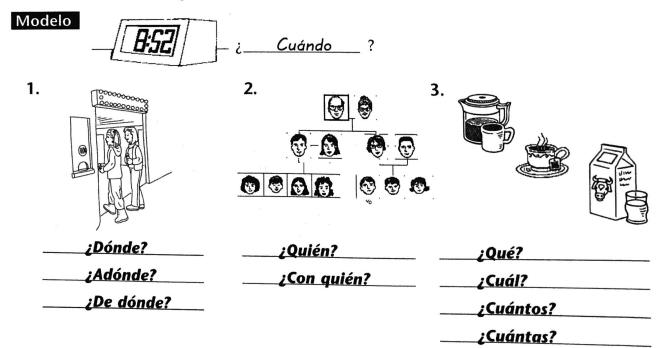
Categories	Interrogatives			
People	¿Quién?	¿Con quién?		
Location	¿Dónde?	¿Adónde?	¿De dónde?	
Things or actions	¿Qué?	¿Cuál?	¿Cuántos? / ¿Cuántas?	
Reason	¿Por qué?			
Time	¿Cuándo?			
Description (how)	¿Cómo?			

You can change a statement into a question by raising your voice at the end:

¿Margarita va a la biblioteca? In this case, you do not use an interrogative.

These kinds of questions expect the answer will be *yes* or *no*. You can add ¿verdad? (*right?*) to the end to emphasize this: Margarita va a la biblioteca, ¿verdad?

A. Each drawing or group of drawings represents a question category in the chart above. Write the interrogatives that go with each group. Follow the model.





Capitulo 4A

Fecha

Guided Practice Activities **4A**-**4**

Asking questions (continued)

 In Spanish questions with interrogatives, the verb comes before the subject: ¿Adónde va Margarita?

B. Look at the following groups of exchanges. Write in the correct interrogative to complete each exchange. Use the interrogatives listed for each group.

Location: ¿Dónde? ¿Adónde?

- —¿<u>Adónde</u> van Natalia y Roberto?
 —Van a la biblioteca para estudiar.
- 2. —¿ <u>Dónde</u> levantas pesas?
 Levanto pesas en el gimnasio.

People: ¿Quién? ¿Con quién?

- 3. —¿ <u>Con quién</u> hablas mucho por teléfono?
 —Hablo mucho con mi amiga Tina. Ella es muy divertida.
- 4. —¿ Quién es su profesor de español?
 Es la señora Oliveros. Es muy inteligente.

Things: ¿Qué? ¿Cuántos?

- <u>Cuántos</u> libros hay en la biblioteca?
 Hay muchos!
- 6. —¿ Qué comes para el desayuno?
 —Como pan tostado y tocino.

Reason and Description: ¿Por qué? ¿Cómo?

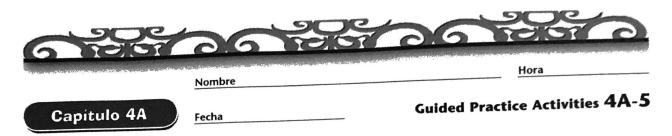
- 7. —¿ Por qué _____ estudias tanto?
 - Soy muy trabajadora y me gusta leer.
- 8. —¿______ es la clase de matemáticas?
 Es interesante, pero difícil.











Asking questions (continued)

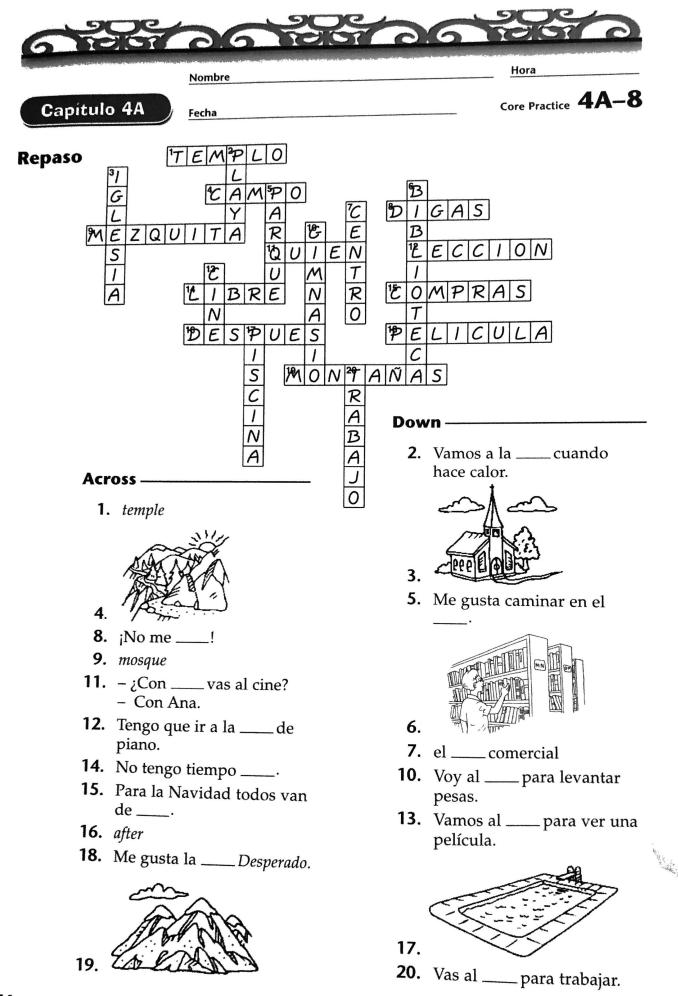
C. Look at each group of phrases. Put them in order to form a question by numbering each group 1, 2, or 3. Then write them in order on the write-on line below. Follow the model. You can also look at the questions in **part B** for examples.

Modelo Paulina / adónde / va 2 3 1 ¿ Adónde va Paulina ? 1. es / el profesor de español / quién 2 3 1 ¿Quién es el profesor de español? 2. sillas / hay / cuántas 2 3 1 ¿Cuántas sillas hay? 3. Luisa / adónde / va ¿Adónde va Luisa? 4. cómo / ella / es 1 3 2 ¿Cómo es ella? 5. corren / dónde / ellos 2 1 3 ¿Dónde corren ellos? 6. con quién / habla / Margarita **7 2 3** ¿Con quién habla Margarita?

	DG TEIST O	GTOSTO
	Nombre	Hora
Capitulo 4A	Fecha	Core Practice 4A – 7

¿Qué haces?

¿Qué ha	ces?
You are talki Your answer	ing with your parents about your plans for the evening. They have lots of questions. They are given below. Write your parents' questions in the spaces provided.
Answers n	nay vary. Adónde vas esta noche? ?
TUS PADRES	: 2
тú:	Voy a un restaurante.
TUS PADRES	i i
TÚ:	Voy con unos amigos.
TUS PADRES	i i?
TÚ:	Ellos se llaman Roberto y Ana.
TUS PADRES:	i?
TÚ:	Roberto y Ana son de México.
TUS PADRES:	i——?
TÚ:	Pues, Roberto es inteligente, trabajador y paciente.
TUS PADRES:	ż?
TÚ:	Ana es deportista y estudiosa.
TUS PADRES:	i Qué van a hacer después de ir al restaurante?
τύ:	Después, nosotros vamos al cine.
TUS PADRES:	¿?
TÚ:	¿Después? Pues, voy a casa. ¡Uds. hacen muchas preguntas!



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6	والمحافظ والمحافظ والمحافظ والمرابط المحافظ والمراكب محافظ والمحافظ والمحافظ والمحافظ والمحافظ والمحافظ والمحاف والمحاف	Hora
	Nombre	
Capitulo 4A	Fecha	Practice Activities 4A-6
Lectura: Al centr	o comercial (pp. 188–189)	event week in a shopping

 A. List four events that you think would take place at a special structure of the special

1.	Λ	
2.	 4.	t at the

B. According to the reading in your book, what are the dates for the event week at the Plaza del Sol? Write the answers in English below, next to the days of the week you are given.

1	lanuary 11	Friday, January 15
Monday,	January 11	
Tuesday,	January 12	Saturday, January 16
	January 13	Sunday, January 17
Thursday,	January 14	

C. Look at the word bank below. Choose which expression in English best matches with the words you are given and write it in the spaces provided.

	Andean music Evening of tango	Yoga class Photography show	Evening of jazz Yoga performance	
1.	Música andina	Andean music		
2.	Clase de yoga	Yoga class		
3.	Noche de jazz	Evening of jazz		
4.	Exposición de fotografía	Photography show		
5.	Exhibición de yoga	Yoga performance		
6.	Noche de tango	Evening of tango		

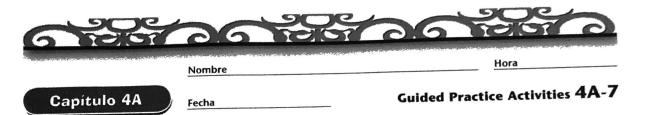
D. Read the description of Andean music and answer the questions that follow.

El grupo Sol Andino toca música andina fusionada con bossa nova y jazz el lunes a las 8.00 P.M. Abierto al público.

- 1. Circle the name of the group in the paragraph above.
- **2.** What does this group fuse with its brand of Andean music?

bossa nova _____ and ___jazz

3. Can the public attend this show? ______ **yes**_____



Lectura: AI centro comercial (continued)

E. Read the description of the yoga class and answer the questions that follow.

La práctica de yoga es todos los martes desde las 7.00 hasta las 9.00 P.M. La instructora Lucía Gómez Paloma enseña los secretos de esta disciplina. Inscríbase al teléfono 224-24-16. Vacantes limitadas.

- 1. How long does the yoga class last? <u>two hours</u>
- **2.** What does the sequence of numbers 224-24-16 stand for? **telephone number**
- 3. Can anyone attend this class?
 no

 Why or why not?
 limited openings

F. After looking through the readings in your textbook, you know that four events are

Música andina Clase de yoga Sábado flamenco Clase de repostería

explained in detail. These events are listed below. You must choose which event goes with the descriptions you are given. Write the name of the event in the space provided.

- 1. Clase de yoga instructora Lucía Gómez Paloma
- 2. Sábado flamenco guitarrista Ernesto Hermoza
- 3. *Música andina* grupo Sol Andino
- 4. *Clase de repostería* la Repostería Ideal
- 5. Clase de repostería maestro Rudolfo Torres
- 6. **Sábado flamenco** es el sábado a las 8.00 р.м.