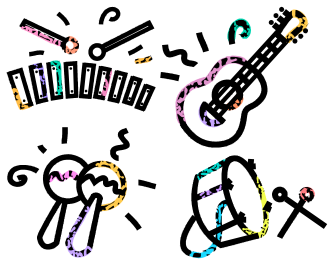
Working Document

Student's name: _____ Group:_____

My scientific investigation process

Music!





To pose a question

How do we obtain high and low sounds?



Imagine an explanation

My hypothesis

I think that:

_____

_____

_____

I think it because:

_____

_____

_____

_____



Plan your process

How much time I have:

_____

Individual or team work:

_____

_____

_____

Material to be foreseen:

_____

_____

_____

_____

_____

Material available to me:

_____

_____

_____

On the following page, describe or draw the experiments you want to carry out in class. This will help you to foresee what material you will need!



Carry out the process

Working Document

As you go along, record the results of your 2 experiments.

Explain your 1st experiment in words or in a drawing.	Results

Explain your 2nd experiment in words or in a drawing.	Results



Analyse and interpret the results.

What do you notice?



Hypothesis confirmed: **yes** ☐ **no** ☐



Reaching a solution

Working Document

Making a SANZA

1. You must make a musical instrument using a plan suggested by your teacher.

2. Once you have built your instrument, answer the following questions.

Which was your favorite tool? _____



Which tool was the most difficult to manipulate? _____

If you had to start your musical instrument over, what would you change? How would you do it?

3. Draw what you see in a top view and in a side view. (1 square = 1 cm)

Top view

Side View



Carry out a trial run

Working Document

Experimentation with your instrument

1. Try to press with equal force on each note of your sanza. What do you notice about the tone of the different notes?

My observations

2. Choose a note and press softly. Listen. Take the same note again and press hard. Listen. What do you notice?

My observations

3. Take the instrument in your hands and play it. Listen to the tone. Place your instrument on the plates of different materials and listen. Play and listen. What do you notice?

My observations

4. Now place your instrument in the different containers put at your disposal. What do you notice? Record your observations.

My observations

THEORETICAL CAPSULES ON SOUND WAVES





Draw a conclusion

Here is what I learned and understood:

My new scientific vocabulary

_____ : _____

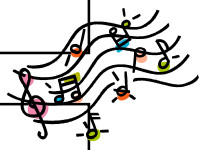
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New question

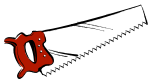
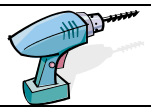
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Working Document

Observation schedule for the teacher

	Observable attitudes and behaviours	Yes	Some omissions or errors	No
	The student followed all the fabrication stages. _____ _____			
	The student used the tools safely. _____ _____			
	The student used the tools adequately. _____ _____			
	The student was precise while making the instrument. _____ _____			
	The student persevered when faced with difficulty working with the tools. _____ _____			