

Science and technology

Working Document

Music!

DESCRIPTION OF THE LEARNING SITUATION	MATERIAL	DURATION
Preparation		
Activity 1: Listening to instruments or to various sounds The teacher suggests an exploration of what produces sounds to the students. He/she demonstrates a few, then lets the students themselves explore, in order to then share their discoveries with the larger group.	Various musical instruments Or Sound recordings	20 minutes
Activity 2: Building a hypothesis The teacher divulges the problem to the students and asks them to give him/her their preliminary explanation orally. The teacher may compose a few him/herself on the board in order to model a complete explanation. Next, he/she asks the students to compose their own explanation in their experiments booklet. The students must next think about the materials required to demonstrate their hypothesis.	Student booklet, page 1	About 30 minutes
Realisation		
Activity 3: Planning the experiments The students plan and describe 2 experiments with the inspiration of the available materials.	Materials suggested in the guide	20 minutes
Activity 4: Carrying out the process The students carry out their experiments and record what they noticed. Throughout the activity, the teacher circulates and helps those students that are having a harder time composing their preliminary explanation. He/she also ensures that the students isolate a single variable during experimentation.	Materials suggested in the guide Student booklet, page 2	30 minutes
Activity 5: Analysis and interpretation of the results The students analyse and interpret their data, then attempt a conclusion giving a new explanation based on facts.	Student booklet, page 2	20 minutes



Preparation		
Activity 6: Familiarisation with the material and tools The teacher presents the various tools that the students will use while making the instrument. He or she reminds the students of the rules for their safe use.	See tools suggested in the guide, page 9	20 minutes
Activity 7: Reading the fabrication plan The students become familiar with the fabrication plan. Since this form of text may be new to the students, the teacher ensures the students use adequate reading strategies or alternately, teaches these strategies.	Fabrication plan	20-30 minutes
Realisation		
Activity 8: Making the instrument Time for action. This part of the situation may be done in workshops, sub-groups, teams of two, etc., to facilitate classroom management. One way to reduce the required number of tools would be to carry this activity out in the form of workshops.	Materials and tools in the guide, pages 9 and 12	2 - 30 minute periods
Activity 9: Thoughts on their work The teacher accompanies the students in their thought process as to their work. Finally, he or she invites the students to draw two views of their instrument. He or she mentions the importance of the precision of the drawing (constraints from the guide, page 14).	Student booklet, page 3	15 to 20 minutes
Integration		
Activity 10: Trying the instrument The teacher leads the students to reflect on the sonority of the instrument that they have just made in order to eventually place the scientific concepts related to sound.	Materials suggested in the guide, page 15 Student booklet page 4	30 minutes
Activity 11: Theory on sound waves The teacher carries out several demonstrations whose objective is to illustrate sound and to help the students to relate these concepts to the conclusions they have reached. The students are invited to record what they have learned as well as make themselves a bank of newly learned scientific words.	Documents chosen by the teacher	30 minutes





