



## BotSTEM – Erasms+ KA2 Project

2017-1-ES01-KA201-038204

### Good practice template

<b>1. Title of the activity / practice</b>	<b>Testing Timers</b>
<b>2. Origin of the activity</b>	<p>This activity form part of the CREST AWARDS. The CREST Awards scheme is the British Science Association’s flagship programme for young people, around 40’000 students in the UK gain CREST Awards every year. It is the only nationally recognised accreditation scheme for STEM project work (science, technology, engineering and mathematics) subjects, providing science enrichment activities to inspire and engage 5-to-19-year olds.</p> <p>CREST is delivered by educators (teachers, technicians, club leaders, home educators etc.)</p>
<b>3. Age of the students</b>	5-7
<b>4. Target group (type of the learners, size of the group)</b>	<p>General curriculum Small group of 3-4</p>
<b>5. School subjects + topics concerned</b>	Interdisciplinary and cross-curricular, involving technology, mathematics (concept of time), design
<b>6. Educational goals of the practice</b>	<p>This activity is designed to get children thinking about how sand timers work Through this activity you will support your group to:</p> <ul style="list-style-type: none"> <li>• Compare real sand timers and observe what variables effect the time they measure</li> <li>• Experiment with different hole size and quantities of sand in their own sand timer</li> <li>• Test their sand timer and reflect on how it could be improved</li> </ul> <p>Group work</p>
<b>7. Duration</b>	60 min
<b>8. Place</b>	Classroom / lab / outdoors / at home, etc.



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<p><b>9. Short description of the activity</b></p>	<ol style="list-style-type: none"> <li>1. Introduce the activity by reading the story on the activity card together. Cosmic and Gem are practising for sports day. Uncle Astro thinks that they can use sand to make a timer.</li> <li>2. Discuss how to make sure they carry out the task safely.</li> <li>3. Let the children look at real sand timers first. Then encourage them to explore different cups and sizes of hole before they try to make their one-minute timer.</li> <li>4. Talk together about what they have found out. Can they explain why they have different answers to how much sand you need? What would they change to improve their timer?</li> <li>5. Children can create labelled pictures or photographs of their timer. Encourage them to add as much detail as possible including design features and the amount of sand.</li> </ol> <p>Children can use clocks to test their timer. If they find this difficult, let them compare their timer with a manufactured timer.</p> <ol style="list-style-type: none"> <li>6. There are follow up activities for children who have finished or who want to do more finding out at home and earn a bonus sticker.</li> </ol>
<p><b>10. Evaluation</b></p>	<p>Questions, Rubric for group work, peer evaluation, teacher's observation</p>
<p><b>11. Materials / Resources / technical requirements</b></p>	<p>Sand timers</p> <ul style="list-style-type: none"> <li>• Dry paper cups (washed used ones will be fine)</li> <li>• Dry sand</li> <li>• Covering for tables</li> <li>• Sharp pointed pencil to make holes</li> <li>• Stopwatch or clock with second hand</li> <li>• Water, sugar, salt etc (optional)</li> </ul>
<p><b>12. Tips for educators / theoretical background (if applicable) or curriculum context</b></p>	<p>Specific cards and organisers in: <a href="http://www.crestawards.org/testing-timers-profi-amserydd/">http://www.crestawards.org/testing-timers-profi-amserydd/</a></p>