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| **Generic Learning/Lesson Plan** | | | |
| **Sector:** Digital Technologies **Date: June 2016** | | | |
| **Age group/year level:**  Year 2 | | **Subject area:**  Technology | |
| **Length: 45-60 mins** | |
| **Overview of topic:**  Bee-bots - Students use Bee-bots as an introduction to robotics and coding. Using sequences and commands to move Bee-bot to a designated area. | | | |
| **Specific curriculum descriptors and/or outcomes:**  **Digital Technologies Processes and Production Skills** Follow, describe and represent a sequence of steps and decisions (algorithms) need to solve simple problems (ACTDIP004) Linked with: **Digital Technologies Knowledge and Understanding** Recognise and explore digital systems (hardware and software components) for a purpose (ACTDIK001) | | | |
| **Objectives:**  As an introduction to robotics and programming the main objectives of this lesson is to have students understand how the Bee-bots move and how we can sequence the steps by using the keys to make them move. Students collaborate together. | | | |
| **Ascertaining Prior knowledge:**  Bee-bots are new to the school and have not been used before; therefore prior knowledge will be limited.  Students have learnt about sequencing during numeracy lessons and should have some prior knowledge. | | | |
| **Formative assessment:**   * The teacher will ask questions to ensure students understand the task * Observe students using the Bee-Bots to check that sequencing is understood | | | |
| **Summative assessment:**  Not assessed during this lesson. Summative assessment will be undertaken at the end of the unit. | | | |
| **Resources:**  Bee-bots and Grid Mats.  Worksheets, Grid Sheets, Pencils, Technology Workbooks | | | |
| **Safety Concerns:**  N/A | | | |
| **Lesson Plan Body** | | | |
| **Introduction – Warm up/ orientation/ initial engagement:** | **Teaching and learning strategies:** | | **Catering for varied learner needs:** |
| Students seated on the floor.  Discuss what they know about sequencing i.e., directions to get somewhere, following steps in a recipe.  What directions would we use to get from our classroom to the office?  Or library, front gate and other areas around the school.  Test on of the directions by physically following the directions. Do we end up where we should be? If not why? | Collaborative learning  Gradual Release - I do, we do, and you do. | | Hand on activity will engage all students and provide all with the opportunity to participate. |
| **Body of Learning experience and procedures:** | **Teaching and learning strategies:** | | **Catering for varied learner needs.** |
| Explain that just like we can write down directions and follow them, we can also program robots to do the same.  Introduce Bee-bots; explain the buttons and how to use them to make the robot move.  Demonstrate the movements and programme a Bee-bot to follow a set of directions.  Provide students with the Grid sheets and have them work out the directions required and program the Bee-bot to follow the directions.  Grid sheet 2 allows students create their own directions and program the Bee-bot | Students sit in a circle on the floor to ensure all can see.  We Do – together  You Do  Students work in pairs | | Sitting in circle provides an inclusive environment where all students are able to see, ask questions and be visual learners.  Having students work in pairs provides an opportunity for peer tutoring where higher level students are able to assist others.  Extension students can complete the worksheet which provides opportunities to challenge their sequencing skills. |
| **Conclusion – Reflecting on and summarising learning.** | **Teaching and learning strategies:** | | **Catering for varied learner needs.** |
| Regroup on the floor.  Discuss who was able to program their Bee-bot to follow the directions.  What went wrong? Why?  What can we do next time to fix the problem? | Reflecting on what worked and what didn’t will allow the teacher to formatively assess students understanding | |  |