Choose Your Ozo Adventure

Year level band: 5-6

Description: Using *Oz Bots* students use and develop unusual types of data: Redefining "What is data?". (Add a description, no more than two sentences that explains a summary of tasks the teacher will implement to cover the identified outcomes.)

Resources: A narrative the students have written or have studied in class. The OzBot kit, inc. pens, paper, tablets with 9 inch screens or larger, camera availability and iOS 6.0 and Android 2.3 (or newer). You tube video https://www.youtube.com/watch?v=fwIrAzZfvRc

Prior Student Learning: knowledge of block coding ie. Scratch or code.org, use of tablet esp. net working with other technologies. Knowledge of a narrative.

Digital Technologies
By the end of Year 6, explain how the features of technologies influence design decisions and how digital systems are connected to form networks.
Students generate and record design ideas for specified audiences using appropriate technical terms, and graphical and non-graphical representation techniques including algorithms. They plan, design, test, modify and create digital solutions that meet intended purposes including user interfaces and a visual program.
Critical and Creative Thinking
Seek solutions and put ideas into action: assess and test options to identify the most effective solution and to put ideas into action

Year	Content Descriptors
5-6	**Digital Technologies** Producing and implementing: Implement digital solutions as simple visual programs involving branching, iteration (repetition), and user input (ACTDIP020)
	English Plan, rehearse and deliver presentations for defined audiences and purposes incorporating accurate and sequenced content and multimodal elements (ACELY1700)

Element	Summary of tasks
Learning hook	Using the Ozobot pens and paper have students investigate through impromptu experiments with the colour language of the Ozobot. Such that they need to make a small story about what the Ozobot is doing: ie. Going on a bear hunt, chicken little. And a little action at each stage of their story.

Achievement Standards	Digital Technology Producing and implementing: Implement digital solutions as simple visual programs involving branching, iteration (repetition), and user input (ACTDIP020)
Learning Map (Sequence)	• Students examine and identify different parts of their story. • Students design actions for their Ozobots at the different story parts • Students produce blocky algorithm • Students debug algorithm • Students share Ozobot performance with others.
Learning input	Students learn how to calibrate Ozobots and link tablet with Ozobot Students learn Ozobot colour language Explain concept of debugging and rehearsal to create the most effective solution.
Learning construction	Students can work individually or collaboratively with one or more Ozobots. Students are encouraged to experiment with how to express their narratives through algorithms. Students can make costumes for their Ozobots Refine algorithms to produce the most effective solution to their narrative.
Learning demo	Students demonstrate to small groups during the development stage offering positive criticism regarding possible improvements. Students perform to the whole class. Possibly video event to share with others at a later date.
Learning reflection	Students evaluate their learning identifying how they have developed throughout the activities. What they enjoyed, learnt and would like to do in the future.

Assessment:

Formative Assessment:

- Teachers observe students using the Ozobots, creating their algorithms and debugging.
- Use questioning to elicit student understanding of the functions of the Ozobot and their algorithmic thinking.

	Quantity of knowledge			Quality of understanding	
Criteria	**Pre-structural**	**Uni-structural**	**Multi-structural**	**Relational**	**Extended abstract**
Algorithms Programming	No programming shown	Program only contacts a limited number of blocks which are not linked	Program has enough instructions to complete the task but not linked or not linked in the correct sequence – or there are parts that do not work	Algorithm has instructions linked in the correct sequence to achieve the task – the program includes iterations.	Algorithm brings in prior learning and/or independent learning beyond the task including other ways of programing going beyond the scope of the class teaching.
Performance is planned, rehearsed and delivered.	No identifiable links to story.	Performance is planned, with delivered with some links to narrative	Narrative is planned and evidence of rehearsal is clear and is suitable to be shown to the student's peers.	Ozobot programmed correctly using blocks to relate to specific points in the story in the correct order	Program brings in prior learning and/or independent learning beyond the task and possibly includes additional blocks such as spinning, fading and decisions

Teacher/Student Instructions:

Be sure Ozobots and tablets are charged. This task can be done without tablets using only pen and paper utilising the Ozobot colour language

CSER Professional Learning:

This lesson plan corresponds to professional learning in the following CSER Digital Technologies MOOCs:

F-6 Digital Technologies: Foundations

- Unit 7: Algorithms and Programming
- Unit 8: Visual Programming

Further Resources:

Ozobot Lesson Library (new lessons added monthly): http://portal.ozobot.com/lessons

Digital Technologies Hub: www.digitaltechnologieshub.edu.au

CSER: https://csermoocs.adelaide.edu.au